Evaluating the effectiveness of an unconditional social cash transfer programme for the ultra poor in Malawi

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Note to readers

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Malawi Social Cash Transfer Programme Endline Impact Evaluation Report

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Acronyms

3ie	International Initiative for Impact Evaluation
CES-D	Center for Epidemiological Studies Depression Scale
CPI	Consumer Price Index
CSR	Centre for Social Research
CSSC	Community Social Support Committee
DC	District Commissioner
DD	Difference-in-differences
DFID-UK	Department for International Development-United Kingdom
DSWO	District Social Welfare Office
EU	European Union
FAO	Food and Agriculture Organization
FGD	Focus group discussion
FISP	Farm Input Subsidy Programme
GoM	Government of Malawi
HAZ	Height-for-age z-score
IDI	In-depth interview
IE	Impact Evaluation
IHS3	Third Integrated Household Survey
IPW	Inverse Probability Weighting
IRB	Internal Review Board
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KII	Key informant interview
MDHS	Malawi Demographic and Health Survey
MIS	Monitoring Information System
MoGCDSW	Ministry of Gender, Children, Disability and Social Welfare
MoFEPD	Ministry of Finance, Economic Planning and Development
NCST	National Committee for Science and Technology
NFE	Non-Farm Enterprise
NSO	National Statistics Office
PCA	Principal Component Analysis
PMT	Proxy Means Test
PtoP	From Protection to Production
RIMA	Resilience Index Measurement and Analysis Model
SCT	Social Cash Transfer
SCTP	Social Cash Transfer Programme (Malawi)
SD	Standard Deviation
SPG	Squared Poverty Gap
TA	Traditional authority
UNC	University of North Carolina at Chapel Hill
UNGASS	United National General Assembly Special Session
UNICEF	The United Nations Children's Fund
UNIMA	University of Malawi
VC	Village cluster
WAZ	Weight-for-age z-score
WHO	World Health Organization
WHZ	Weight-for-height z-score

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Executive Summary

This report is the Endline Impact Report for the Malawi Social Cash Transfer Programme (SCTP) Impact Evaluation. It provides impact estimates of the SCTP on a range of indicators covering the six main objectives of the programme, as described below. The analysis is based on a mixed methods approach. The *quantitative* design consists of Baseline (conducted in June-August 2013), Midline (conducted November 2014-January 2015), and Endline (conducted October-November 2015). Half of village clusters (VCs) in the study sample were randomized out to a delayed-entry control group; the final sample consists of 1,678 households from 14 VCs in the treatment group, and 1,853 households from 15 VCs in the control group. The *qualitative* study also included baseline, midline and endline data collections, each conducted shortly after the quantitative surveys. The study consists of an innovative 'embedded' longitudinal design in which 16 treatment households from the quantitative sample were selected for in-depth interviews (IDIs) of caregivers and adolescents; key informant interviews (KIIs); and beneficiary and non-beneficiary focus group discussions (FGDs). This report should be read in conjunction with the Baseline and Midline Evaluation Reports. Detailed descriptions of the sampling design and survey instruments are presented in the baseline report.

At the time of the midline data collection, households had received between five and six payments, and so had been in the programme for approximately one year. Endline data collection was conducted about one year after midline—as such, the results reported here should be interpreted as two-year impact results (representing 12, bimonthly payments), even though the endline survey was actually conducted 30 months after baseline. Table 1 summarizes the magnitude and statistical significance of a set of key indicators in each of the six programme objective areas. Because the value of the transfer is significantly higher among poorer households, we also report impacts among households in the bottom half of the baseline consumption distribution (i.e., the poorest 50 per cent of households). As can be seen from this table, after two years of operation, the SCTP has already been able to have a far-reaching impact on beneficiary households; as this report documents, these impacts tend to be higher among the poorest households, highlighting the important fact that *the value of the transfer matters considerably for both the range and depth of impact one can expect from the programme*.

Consumption, food security and material needs: The SCTP has achieved its primary objective of ensuring food security and improving consumption among the ultra-poor labour constrained. The program impact on total per capita annual household consumption is Malawi Kwacha (MWK) 10,380 which represents an increase of 23 per cent over baseline; this increase is 53 per cent amongst the poorest households. Consistent with this is a strong improvement in food security, demonstrated by an increase of 15 per cent in the number of meals per day, and program households 20 percentage points (pp) less likely to worry about food. Diet diversity has also improved, with significant increases in the budget share devoted to meats, fish and poultry products. One respondent in the qualitative interview explained,

> *To say the truth, things have changed, our food consumption has changed. We are able to buy maize with the money and with the business running, we also buy good relish[1] like fish, [and we are] able to buy salt.*

Finally, the program has also generated strong positive impacts on the material well-being of children. The proportion of children in program households with a pair of shoes, access to a blanket and a change of clothes has risen from just 12 per cent at baseline to 50 per cent. The program increases the likelihood of possession of shoes among children ages 5 to 17 by 32 pp, a 10 per cent increase over baseline.

Economic productivity and asset accumulation: The SCTP has had noticeable impacts on the ownership of both agricultural and non-agricultural assets. The endline program impact on non-

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[1] Relish is a local term for a sauce or stew that is eaten for most meals (together with some carbohydrate). Meat-based relish is considered preferable, but can be unaffordable for many Malawians, who instead make primarily vegetable-based relish.

agricultural asset expenditure was MWK228. The endline impact of MWK174 on agricultural asset expenditure represents more than 80 per cent of the baseline expenditure of MWK211. The 6.5 pp impact on the ownership of any agricultural asset means that almost every treatment (T) household involved in crop production owns at least one agricultural asset, particularly hand hoes. The impact on the overall quantity of crop produced is an increase of 62 kilograms, and there are significant impacts on livestock based wealth. These impacts indicate that an important part of the SCTP cash is being put to productive good use.

The qualitative interviews illustrate the multitude of ways that recipients put the money 'to work' to not just ensure food security, but to actively improve their capacity to earn. This quote from Christina sums up the situation nicely,

> *This money has impacted my life, because I didn't even have that toilet. It came because of the SCTP money. Even this shade has come because of the money, the poles used on it were bought with that money. I was even able to employ those that did the work and I paid them with the same money. To mean without the SCTP, the toilet couldn't be there, the shade couldn't be there and even the beer brewing business could not have been there. It has impacted. It even expanded to the chickens, kitchen utensils like buckets, even this tobacco right here.*

Health and nutrition of young children: Compared to household economic and consumption impacts, the impacts on young child health and nutrition are less pronounced. Part of the challenge here is that SCTP households actually have relatively few children under the age of five, given their unique demographic structure. Nevertheless, there are strong impacts on treatment seeking behaviour for children with fever and on wasting of children aged 6-59 months in beneficiary households. Specifically, the programme increased the likelihood that a child sought treatment for a fever by 12 pp, and decreased the likelihood that a child experienced wasting by about 3 pp.

Schooling and child labour: We find strong effects of the program on children's school participation across all age ranges. These effects do not merely reflect increased enrolment, but increased *regular* participation in school (i.e. participation without extended withdrawal during the school year). We do not observe strong effects on grade progression, but these effects may materialize in the longer run. Although program effects on children's participation in household chores and economic activities are limited, the program results in increased engagement in hazardous activities (exposure to dust, fumes, or gas, and exposure to extreme heat, cold or humidity). A possible explanation is the increase in household investment in productive activities.

The qualitative interviews with adolescents reveal the nuanced ways in which the SCTP affects schooling outcomes. In several cases respondents noted how the cash transfer not only helped with direct school costs and freed up time from ganyu, but even more importantly, allowed them to concentrate in school because they could eat breakfast in the morning. In other cases however, youth stated that the household was so destitute that the cash was not enough to allow them to return to school, and in several instances, young women ended up marrying as a result. These stories illustrate on the one hand the multi-faceted ways in which the cash supports schooling for some, but on the other hand the fact that for some, poverty is so deep that even this support is not enough to overcome the financial constraints faced by households.

Safe transition to adulthood: The evaluation study includes a novel module administered to young people between the ages of 13-19 (at baseline, 15-22 at endline), to understand their health, well-being and transition to adulthood. Based on these face-to-face interviews with young people, the results show that respondents in SCTP households were more likely to delay their first sexual encounter at midline (6 pp), reduce experience of forced sex by endline (10.7 pp) and decrease poor mental health by endline (1.5 points). In addition, among females in the poorest households, there was a significant reduction in first pregnancy at midline.

Well-being of care-givers: The final programme objective is to improve the well-being of caregivers of orphans and vulnerable children. We find that the programme has had a significant positive impact

on their physical health, with a 6 pp reduction in morbidity, a 12 pp increase in the use of curative care, and an 11 per cent reduction in stress along with a 22 per cent increase in perceived quality of life.

Table 1: Summary of Impacts in Programme Objective Areas

	Midline Impacts		Endline Impacts	
Objective Area	**All households**	**Poorest 50 per cent of households**	**All households**	**Poorest 50 per cent of households**
Consumption, food security				
Consumption (MWK)	5,019.13	6,592.25**	10,380**	12,565**
Food consumption (MWK)	2,450.53	3,760.81**	7,921**	9,923**
Meals per day (pp)	0.17**	0.17**	0.29**	0.32**
Worried enough food (pp)	-0.11	-0.09**	-0.20**	-0.23**
Ultra Poverty (pp)	-3.3	N/A	-14.8**	N/A
Ultra Poverty Gap (pp)	-9.4**	N/A	-12.6**	N/A
Economic productivity				
Livestock (index value)	0.236**	0.362***	0.545***	0.846***
Crop production (kg)	12.82	10.64	62.42**	63.25**
Agricultural assets (pp)	1.40	0.10	6.50**	5.70**
Agricultural assets (MWK)	152.70**	198.00**	174.32**	187.46**
Non-agricultural assets (MWK)	287.62**	492.16***	228.34**	338.00**
Health, nutrition of young children				
Weight-for-age (sd)	-0.07**	0.00	0.01	0.06
Weight-for-height (sd)	0.02	-0.07	0.05	0.06
Height-for-age (sd)	-0.10**	0.11	-0.12	-0.01
3+ meals per day (pp)	0.08	0.12	0.09*	0.15***
Illness (pp)	0.01	-0.00	0.03	-0.01
Curative care, diarrhoea (pp)	0.09**	0.12**	0.10	0.02
Curative care, fever (pp)	0.22**	0.23**	0.12**	0.10
Curative care, cough (pp)	0.04	0.11**	0.04	0.04
Schooling, work, material needs of children aged 6-17				
Enrolment (pp)	0.11***	0.12***	0.09***	0.09**
Regular enrolment (pp)	0.13***	0.13***	0.13***	0.14***
Hours in economic activities	N/A	N/A	-0.01	-0.24
Hours in household chores	N/A	N/A	0.07	0.09
Hazardous work (pp)	N/A	N/A	0.09***	0.113***
Material needs (blanket, pp)	0.17***	0.17***	0.29***	0.31***
Material needs (shoes, pp)	0.20***	0.19***	0.32***	0.34***
Safe transition to adulthood				
Sexual debut (pp)	-0.062***	-0.053*	-0.024	0.004
First sex forced (pp)	-0.009	N/A	-0.107**	N/A
Early pregnancy (pp)	-0.015	-0.035*	0.019	0.047
Mental health (scale points)	-0.141	-0.076	-1.019	-1.562**
Health				
Chronic illness (pp)	-0.04**	-0.03**	-0.04	-0.5**
Morbidity (pp)	-0.07**	-0.07**	-0.06**	-0.5

Curative care (pp)	0.09**	0.12**	0.12***	0.12***
Caregiver Stress (scale points)	-0.89	-0.81	-1.56***	-1.48*
Life better in a year (pp)	0.14	0.14	0.18**	0.18**

Notes: Text in parenthesis next to objective area indicate units for impact interpretation; some impacts for the poorest 50 per cent at baseline were unable to be estimated due to small sample sizes, or those not collected at midline are denoted with "N/A"; * 10% significance ** 5% significance; *** 1% significance.

Tracking the money: Using the comprehensive estimates of impact in this report, we monetize all statistically significant estimates and deflate to annualized August 2013 MWK and obtain a total implied spending of MWK 44,283. The average annual transfer received by households during the last 12 months is MWK 26,169. Dividing the total implied spending by the amount received implies a multiplier effect of 1.69. In other words, beneficiary household have been able to translate the each Kwacha received into an additional 0.69 of spending. The increased income must come through an increased ability to earn income. The results shows increased ownership of agricultural tools and use of inputs, which might help explain the pathway through which households have raised their incomes. We note that the size of the multiplier estimated in Malawi is similar to that for two unconditional cash transfer programs in neighbouring Zambia. These results speak directly to arguments that such programs foster dependency, or that cash transfers are not used wisely and so must be provided with 'conditions'. On the contrary, the results of the SCTP strongly suggest that unconditional cash transfer programs to the ultra-poor can be an important part of an inclusive growth strategy even in very poor countries.

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1. Introduction

This document outlines endline results from the impact evaluation of the Malawi Social Cash Transfer Programme (SCTP). The impact evaluation was implemented by the University of North Carolina at Chapel Hill (UNC) and the Centre for Social Research of the University of Malawi (CSR UNIMA), with technical support on analyses provided by UNICEF Office of Research—Innocenti (OoR) and the UN Food and Agriculture Organization (FAO). This report describes the impacts of the programme on individuals, households, and communities, 28 months after baseline data was collected. At the time of endline, most beneficiaries had received 12 payment instalments (equalling approximately 24 months of transfers) so results can be interpreted as two-year impacts of the programme on beneficiaries.

2. Background

2.1 Description of the Malawi Social Cash Transfer Programme

The Government of Malawi's (GoM's) SCTP (locally known as the *Mtukula Pakhomo*) is an unconditional cash transfer programme targeted to ultra-poor, labour-constrained households. The programme began as a pilot in Mchinji district in 2006. Since 2009, the programme has expanded to reach 18 out of 28 districts in Malawi. The programme has experienced impressive growth beginning in 2012, and most notably over the last two years. By December 2015, the SCTP had reached over 163,000 beneficiary households

The SCTP is administered by the Ministry of Gender, Children, Disability and Social Welfare (MoGCDSW) with additional policy oversight provided by the Ministry of Finance, Economic Planning and Development (MoFEPD). UNICEF Malawi provides technical support and guidance. Funding for the programme from 2007-2012 was largely provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). In 2011, the German Government (through Kreditanstalt für Wiederaufbau, or KfW) and the GoM signed an agreement to provide substantial funding for paying arrears in existing areas. In 2013, Irish Aid signed an agreement to expand into one new district, and in 2014, KfW and the European Union (EU) topped-up donor contributions to enable full coverage in the seven existing districts, as well as scale-up into eight additional districts. Also in 2014, GoM launched a "government-funded" district (Thyolo) and the World Bank committed to providing resources to expand into two additional districts. The SCTP was launched in these 11 newly funded districts starting in mid-2014 through early 2015, bringing coverage to 18 districts.

Eligibility criteria are based on a household being ultra-poor (unable to meet the most basic urgent needs, including food and essential non-food items such as soap and clothing) and labour-constrained (defined as having a ratio of 'not fit to work' to 'fit to work' of more than three). Household members are defined as 'unfit' if they are below 19 or above 64 years of age, or if they are age 19 to 64 but have a chronic illness or disability, or are otherwise unable to work.[2]

Beneficiary selection is done through a community-based approach with oversight provided by the local District Commissioner's (DC's) Office and the District Social Welfare Office (DSWO). Community members are appointed to the Community Social Support Committee (CSSC), and the CSSC is responsible for identifying households that meet these criteria and creating a list. These lists are to include roughly 12 per cent of the households in each Village Cluster (VC), and after further screening, the list if narrowed in order to achieve a target coverage rate of 10 per cent. The ultra-poor eligibility condition is implemented through a proxy means test (PMT).

The transfer amount varies based on household size and there is a 'schooling bonus' determined by the number of children in the household who are of primary and secondary school age. Transfer amounts were updated just prior to the start of this evaluation in 2012. Due to inflation and decline of the value of the real transfer, transfer amounts were increased again in May 2015. The transfer

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[2] Social Cash Transfer Inception Report, Ayala Consulting. July 2012.

amounts are shown in Table 2.1.1. These are paid every two months in cash at a pre-announced pay-point, usually at a central location within the VC. Beneficiaries are required to physically be at the pay point to receive their payment. Under special circumstances a designate is allowed to collect the money. Missed payments can be recouped at the next payment cycle.

Table 2.1.1: Structure and Level of Transfers (Current MWK)

	2013 to May 2015	After May 2015
1 Member	1,000	1,700
2 Members	1,500	2,200
3 Members	1,950	2,900
4+ Members	2,400	3,700
Each primary school child[1]	300	500
Each secondary school member[2]	600	1,000

[1]Provided for household residents age 21 or below in primary school. [2] Provided for household residents age 30 or below in secondary.

2.2 Malawi SCTP Impact Evaluation— Objectives, Locations and Timeline

The Malawi SCTP Impact Evaluation has been contracted to UNC and CSR UNIMA and consists of a baseline survey with two follow-up surveys. The baseline and first follow-up (midline) are funded by UNICEF, the German Government through KfW, Irish Aid and FAO; the International Initiative for Impact Evaluation (3ie) and the European Union (EU) (through UNICEF) are providing additional funding for the second follow-up (endline) survey. GoM has provided significant in-kind contributions and support to all three rounds.

Objectives

The objectives of the SCTP are to reduce poverty and hunger, and to increase school enrolment rates in these ultra-poor households. The first evaluation of the programme, the 2007-2008 impact evaluation of the pilot project in Mchinji, demonstrated that the Malawi SCT Pilot Scheme had a range of positive outcomes including increased food security, ownership of agricultural tools and curative care seeking.[3] Since that time, the programme has some changes in targeting and operations, and significant expansion. This evaluation was requisitioned in order to measure impacts on a number of key indicators through a larger-scale evaluation.

There are four broad research areas for evaluation: 1) Welfare impact on children and their caretakers, 2) Behaviour change within the household, 3) Access to and linkages with other social services[4], and 4) Impact on the familial environment for children. The objectives of the evaluation are to answer the questions listed below. These questions were identified by the Ministry and development partners and were seen as important to understanding if the program was meeting its primary objectives. The question of the economic impacts of the programme were particularly deemed important for addressing concerns about sustainability.

1. Does the SCTP improve consumption, reduce food insecurity and increase diet diversity?
2. Does the SCTP affect economic productivity and wealth accumulation?
3. Does the SCTP affect health and nutrition of young children?
4. Does the SCTP affect schooling and child labour among older children?

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[3] Miller, C., Tsoka, M., & Reichert, K. (2010). Impacts on children of cash transfers in Malawi. In S. Handa, S. Devereux, & D. Webb, *Social protection for Africa's children.* London: Routledge Press.
[4] The quantitative component includes modules on access to other interventions, such as school feeding, fertilizer input subsidy, and credit and loans. The community questionnaire asks about the quality of health and education services.

5. Does the SCTP affect the safe transition into adulthood among youth?
6. Does the SCTP affect the health and well-being of caregivers?

Study locations

The MoGCDSW had plans to conduct retargeting in existing programme areas, and to expand the SCTP to cover 18 districts, starting in 2012. The districts scheduled for scale-up in early 2013 were Salima and Mangochi, so the MoGCDSW took this opportunity to integrate an impact evaluation into the planned expansion activities. Subsequently, the research team worked with MoGCDSW, Ayala Consulting and development partners to randomly select two study Traditional Authorities (TAs) in each district (Maganga and Ndindi TAs in Salima, and Jalasi and M'bwana Nyambi TAs in Mangochi).

Timeline

The study began with a Planning Meeting and an Inception Workshop (September 2012 and February 2013, respectively) where several key stakeholders met to organize the planning and execution of the Impact Evaluation (IE). UNC and CSR UNIMA collaborated with GoM, UNICEF, FAO and other key stakeholders to coordinate planning and field activities for both baseline and midline. For the endline, UNICEF OoR supported the training and analysis alongside UNC and CSR. The Baseline Report includes a full description of the planning and study design, including selection of study areas and assignment to treatment (T) and control (C) status.[5] A summary is included for the readers' convenience in Annex A.

Baseline surveys were conducted from July – September 2013, and the qualitative interviews were fielded in November 2013. While midline was originally planned for 12 months after baseline, the first payments were not administered until March and April 2014. After discussion between the evaluation team, GoM, and UNICEF, the decision was taken to conduct the midline follow-up in November 2014, at 17 months, in order for there to be an adequate number of payments and time for early impacts to be observed. Household, youth and community surveys were administered from November 2014 – January 2015. Midline qualitative interviews were done in February and March 2015. Endline data collection was conducted in October – November 2015, with qualitative data collection following in March 2016. Table 2.2.1 below describes the timing of evaluation activities.

Table 2.2.1: Timeline for Key Events for Malawi SCTP Impact Evaluation

Event	Stakeholders	Timeframe
Planning		
Planning Workshop	UNC, CSR, GoM, KfW, UNICEF, Ayala	September 2012
Inception Workshop	UNC, CSR, FAO, GoM, KfW, Irish Aid, UNICEF, Ayala, ILO, USAID	February 2013
Baseline		
Enumerator Training	UNC, CSR, FAO	June 2013
Quantitative Data Collection	UNC, CSR	July – September 2013
Research Assistant Training (Qual)	UNC, CSR, FAO	November 2013
Qualitative Data Collection	UNC, CSR	November 2013
Data Entry and Cleaning	CSR, UNC	July – October 2013
Data Analysis	UNC	November 2013 – January 2014
Results Workshop	UNC, CSR, FAO, GoM, KfW, Irish Aid, UNICEF, Ayala, ILO, USAID	February 2013
1st Payments	GoM, Ayala, Beneficiaries	March – April 2014

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[5] See the Malawi SCTP Baseline Report (2014) available at: https://transfer.cpc.unc.edu/wp-content/uploads/2015/09/Malawi-SCTP-Baseline-Report.pdf

Table 2.2.1: Timeline for Key Events for Malawi SCTP Impact Evaluation (continued)

Midline Follow-up		
Enumerator Training	UNC, CSR, FAO	November 2014
Quantitative Data Collection	UNC, CSR	November 2014 – February 2015
Research Assistant Training (Qual)	UNC, CSR	February 2013
Qualitative Data Collection	UNC, CSR	February – March 2015
Data Entry and Cleaning	CSR, UNC	November 2014 – February 2015
Data Analysis	UNC, UNICEF OoR	March – April 2015
Results Workshop	UNC, CSR, FAO, GoM, KfW, Irish Aid, UNICEF, Ayala, ILO, USAID	May 2015
Endline Follow-up		
Enumerator Training	UNC, UNICEF OoR, CSR	October 2015
Quantitative Data Collection	UNC, UNICEF OoR, CSR	October – November 2015
Research Assistant Training (Qual)	UNC, CSR	March 2016
Qualitative Data Collection	CSR UNC	March 2016
Data Entry and Cleaning	CSR, UNC	October – December 2015
Data Analysis	UNC, UNICEF OoR	January – April 2016
Results Workshop	UNC, CSR, EU, FAO, GoM, KfW, Irish Aid, UNICEF Malawi and OoR, Ayala, ILO, USAID	May 2016

3. Conceptual Framework[6]

The conceptual framework for the Malawi SCTP is based upon research and observed patterns and experiences from several national SCT programmes. The SCTP provides an *unconditional* cash transfer to households that are labour-constrained and ultra-poor. These households, even at very low levels of consumption, will spend almost all of their income each month. We therefore expect that, among the beneficiary population, virtually all of the cash transfer will be spent at the initial stages of the programme, and the spending will be directed to basic needs such as food, clothing and shelter. Once immediate basic needs are met, and possibly after a period of time, the 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 to attend school.

Figure 3.1.1 brings together these ideas into a conceptual framework that shows how the SCTP can affect household activity, the causal pathways involved, and the potential moderating and mediating factors (moderators and mediators). The diagram is read from left to right, that is, from inputs to impacts. The key point to recognize here is that *any potential impact of the programme on both vulnerable adults and children must work through the household, through spending or time allocation decisions* (including use of services).We expect a direct effect of the cash transfer on household consumption (food security, diet diversity), on the use of services and possibly even on productive activity after a period of time. Specifically, receiving an additional steady income will allow for increased spending on food and for purchase of other basic goods, such as clothing. As the more immediate needs are satisfied in the earlier stages of the program, the additional income stream may be invested in productive activities – such as hiring agricultural labourers, purchasing livestock, or investing in assets for income generation – that will multiply the effect of the grant by increasing the amount of additional money available to the household.

This, in turn, has an effect on health and practices of adult/productive members of the household. Having additional calories available, as well as reduced stress that comes with a steady income will theoretically improve health of adults in the household, resulting in productivity increases. Purchases of certain assets or trainings for specific skills will have the potential to increase individual

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[6] This section is adapted from the Malawi SCTP Baseline Evaluation Report.

productivity as well. Having a monthly source of income would also mitigate the possibility of not meeting basic needs for the household in any given month, thus allowing household members to change their income generating practices and their time use, either by taking on higher financial risks, such as starting a small enterprise, or by switching away from employment that is harmful to one's health. While the complex interplay between increased consumption and productivity is not reflected in the graph (since all arrows are one-directional), improved health and increased productivity, in turn, lead to a higher income and contribute to higher consumption.

Sociological and economic theories of human behaviour suggest that the impact of the cash may work through several mechanisms (*mediators*), such as the degree to which the household is forward-looking and the expectations the household has about the quality of life in the future (which could determine investment and other choices with longer-term implications). Similarly, the impact of the cash transfer may be smaller or larger, depending on local conditions in the community. These *moderators* include access to markets and other services, prices and shocks. Moderating effects are shown with lines that intersect the direct causal pathways between the cash transfer and outcomes to indicate that they can influence the strength of the direct effect.

Figure 3.1.1: Conceptual Framework for the Impact Evaluation of the Malawi SCTP
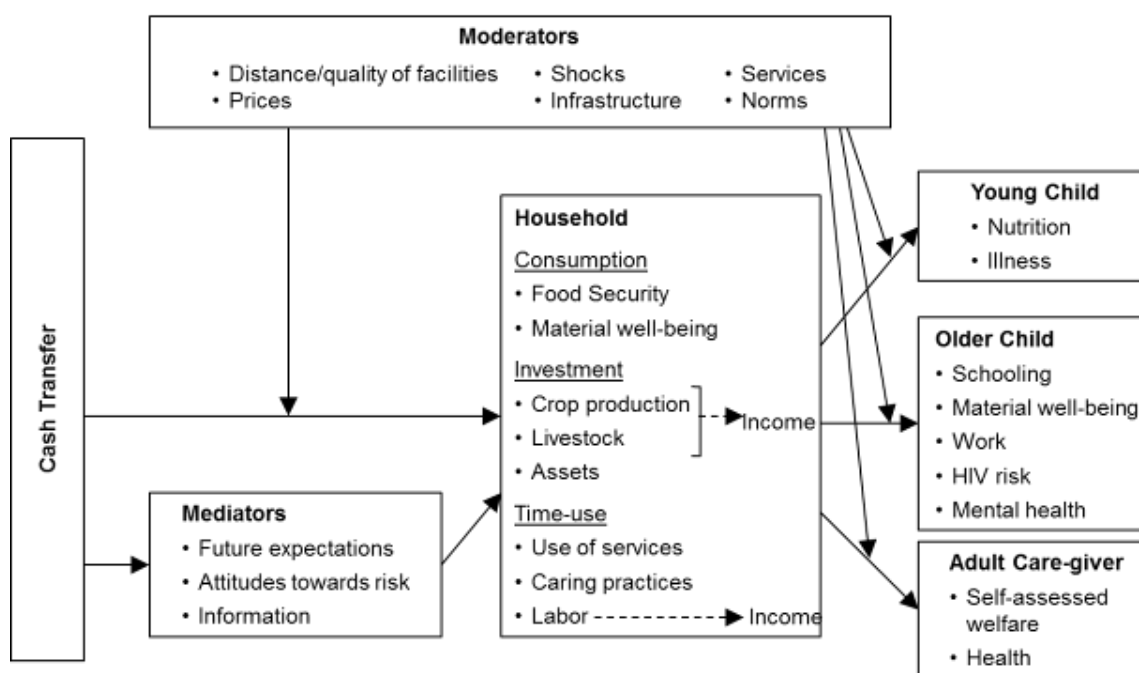
At the far right of the diagram is the effect on young children and youth, and here we focus on young children under age five and youth ages 13-19, since these are important demographic groups for public policy. The grant theoretically will impact the nutritional status of both young and older children through increased food consumption at the household level, therefore improving health and cognitive abilities, and reducing illness through ability to resist disease and the reduction in exposure to diseases caused by malnutrition. For older children, an additional source of income in the household is expected to have multiple positive effects. First of all, the grant can be directly used for school fees and other schooling costs, thus prolonging the child's education. The increases in income generated through processes described in the paragraph above would also have the same results. Secondly, higher income may free older children from the necessity of contributing to a household's income, which would both a) enable children to return to or stay in school instead of working; and b) keep children from potentially harmful labour. Similarly, increases in household income and decreases in the child's vulnerability would reduce the likelihood that older children, especially girls, would turn to prostitution or "sugar daddies" for income, reducing the risk of HIV and other sexually

transmitted diseases, and reducing the likelihood of violence committed against them (similar effects hold for adult women in the household). Finally, we expect similar stress reductions as we do in adults based on decrease in stressors that accompany extreme poverty and income instability.

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. In Figure 3.1.1, we list some of the key indicators along the causal chain that we will analyse in the evaluation of the SCT. These are consistent with the long time frame of the project and are in most cases measured using established items in existing national sample surveys, such as the Malawi Demographic and Health Survey (MDHS)[7] and the Third Integrated Household Survey (IHS3).[8]

The main risk and a key requirement for a cash transfer programme such as the SCTP to generate impacts is for the value of the transfer to be sufficiently large enough as a share of the target population's consumption. If a certain transfer value is not met, it is unlikely that the grant would be used for anything other than supplementing food consumption on the most basic level, and the programme will therefore miss out on the multiplicative effects that enabling additional income generation would provide. Using administrative data from the SCTP management information system, we have merged in actual payment information to our evaluation sample and calculated the size of the transfer received by beneficiaries. Based on experience from around the world, including several major African cash transfer programmes, a 'rule of thumb' is that the transfer should deliver at least 20 per cent of pre-programme consumption in order to generate widespread impacts. With the recent increase of the transfer size (in May 2015), we calculate that the transfer represents about 23 percent of median pre-program consumption, which is an appropriate level. As mentioned in the midline report, the GoM must be vigilant in maintaining the real value of the transfer in the face of inflation, otherwise the impacts the SCTP is able to generate will be eroded. Similarly, GoM must be careful in its targeting and building awareness of the programme, as a grant of this size will only have an effect on the poorest of households and is not likely to have these long-reaching effects if wealthier households are enrolled. A targeting analysis conducted at baseline and presented at the baseline workshop indicates that SCTP targeting is very effective at reaching the poorest households, thus mitigating this risk.

There is a host of other risks that could interrupt the conceptual framework chain; we endeavour to provide some of the main potential issues and examples of a few others here. Even if the grant is sufficient to both supplement consumption needs and to invest in further income-generating activities or education, and is targeted and received correctly, households may not choose to spend money in productive ways. A common fear of providing unconditional grants is that money will be spent on harmful products or activities, such as alcohol or tobacco, or otherwise spent on social occasions. Evidence on SCTs so far[9] and on this project in particular (seen in the midline report) does not support this risk -- recipients do not on average increase spending on recreational items – but it nonetheless theoretically remains a risk. Even if the money is spent on food, recipients may not have enough knowledge of healthy nutrition or the household priorities may be biased in such a way that the most vulnerable members of the household, such as children, do not reap nutritional and health benefits. For instance, a caretaker may increase their own consumption and not that of children. Another potential risk is that if an income generating activity is undertaken, it will be one that is harmful to health or one that requires more labour from youth in the household, thus decreasing health and

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[7] National Statistical Office (NSO) and ICF Macro. 2011. Malawi Demographic and Health Survey 2010. Zomba, Malawi, and Calverton, Maryland, USA: NSO and ICF Macro.
[8] National Statistics Office, Republic of Malawi. Integrated Household Survey 2010-2011: Household Socio-Economic Characteristics Report. September 2012.
[9] Evans, D.K. & Anna Popova, forthcoming, Cash Transfers and Temptation Goods, Economic Development & Cultural Change available at http://www.journals.uchicago.edu/doi/full/10.1086/689575.

schooling benefits. Once again, most of these risks are not borne out by evidence, but must nonetheless be considered and monitored.

4. Study Design, Sampling, Data Collection and Analysis

4.1 Study Design

The impact evaluation for Malawi's SCTP uses a mixed methods, longitudinal, experimental study design, combining quantitative surveys, qualitative interviews and group discussions, and simulation models to demonstrate wider community economic impacts.[10] The quantitative survey design consists of a cluster-randomized longitudinal study with baseline surveys (household, community and business) which began in July 2013 and two follow -up surveys (household and community) – the midline survey was conducted starting in November 2014 and the endline survey was conducted starting in October 2015.

The qualitative survey is an embedded longitudinal study of 16 treatment households, which includes three main components: in-depth interviews (IDIs) with the caregiver and a young person (aged 13-19 at baseline) from each household at baseline, midline and endline; key informant interviews (KIIs) with community members at midline and endline; and focus group discussions (FGDs) in each study TA at baseline, midline and endline. Insights from these qualitative interviews and discussions with community members provide complementary data to that obtained through the surveys and will allow us to examine certain topics in more depth, in particular, the role and evolution of social networks and the mechanisms and dynamics that shape outcomes related to the cash transfer programme.

Baseline data collection was conducted to allow the study team to accurately describe characteristics of beneficiary households before receiving any cash transfers. Midline and endline data has been compared to data collected at baseline using a difference-in-differences (DD) approach to assess the full impacts of the SCTP. Data collected on the control group allows the researchers to identify which impacts over time are directly attributable to the cash transfer, controlling for outside influences. This is done by taking the overall changes experienced by beneficiaries and subtracting the changes also experienced by control households. The difference in these two are attributed to the programme and considered programme impacts.

Further details on the sampling and randomization procedures are provided in the baseline report which is available at https://transfer.cpc.unc.edu/?page_id=1258.

4.2 Sampling

Quantitative sample

The longitudinal impact evaluation includes 3,531 SCTP-eligible households located in 29 VCs across four TAs in two districts. There are 14 VCs (1,678 households) in the treatment (T) group and 15 VCs (1,853 households) in the control (C) – or delayed-entry— group. Data was also collected at baseline on and 821 non-eligible households to enable FAO to build a local economy simulation model.[8]

The study districts, Salima and Mangochi, were selected for the study in order to integrate with GoM's SCTP expansion plans. The study design uses both random selection (for the selection of study areas at the TA and VC level) and random assignment (to determine T and C VCs), the most rigorous approach available according to evaluation literature.[11] This randomization was done in

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[10] The FAO, with direct funding from the Department for International Development-United Kingdom (DFID-UK), built a simulation model to predict the potential of the SCTP to generate local economy-wide effects. Those results are reported separately in: Thome, K., Taylor, J.E., Tsoka, M., Mvula, P., Davis, B. and Handa, S., Local Economy-wide Impact Evaluation (LEWIE) of Malawi's Social Cash Transfer (SCT) Programme, PtoP project report, FAO - March 2015.

[11] Shadish WR, Cook TD, Campbell DT. Experimental and Quasi-Experimental Designs for Generalized Causal Inference. Boston: Houghton-Mifflin. 2002.

cooperation with GoM, and was a transparent process open to the public, and the assignment to T-C status was public and attended by local community leaders.

A detailed assessment of the randomization process was presented in the project baseline report which is publically available at https://transfer.cpc.unc.edu/?page_id=1258. We have reproduced a summary of key indicators from that report and show them in Table 4.2.1. At baseline we tested for balance in over 200 indicators and found statistical differences in less than 5 percent, indicating that the randomization did lead to statistically equivalent samples.

Table 4.2.1: Baseline Sample Household Characteristics Summary (by Treatment and Control)

Baseline Indicators	Full Sample (Per cent)	Treatment (Per cent)	Control (Per cent)	Diff T-C	p-value
Household Members					
Total Household Members (mean)	4.5	4.5	4.5	0.0	0.69
	(2.3)	(2.3)	(2.3)		
Children (0-17 years) (mean)	2.7	2.7	2.8	-0.1	0.47
	(1.0)	(2.0)	(2.0)		
Adults (18-64 years) (mean)	1.1	1.1	1.2	0.0	0.69
	(0.7)	(1.0)	(1.0)		
Elderly (>64 years) (mean)	0.6	0.7	0.6	0.1	0.16
	(2.0)	(0.7)	(0.7)		
Dependency ratio	2.5	2.7	2.7	0.0	0.87
	(1.7)	(1.7)	(1.7)		
Household Head Characteristics					
Age (mean)	58.0	59.1	57.0	2.2	0.17
	(19.0)	(20.0)	(19.7)		
Female	83.5	82.8	84.2	-1.4	0.36
Married/cohabitating	29.3	29.7	28.9	0.8	0.82
Separated/divorced	24.8	23.1	26.5	-3.4	0.11
Widowed	43.3	44.6	42.0	2.6	0.46
No education	71.62	71.6	71.64	0.0	0.99
Poverty Measures (individuals)					
Poor	85.2	83.8	86.5	-2.7	0.02
Ultra Poor	60.4	59.9	60.8	-0.9	0.60
Food Security					
Meals per day	1.9	1.9	1.9	0.0	0.56
	(0.6)	(0.6)	(0.6)		
Worry that did not have enough food in past 7 days	83.0	83.7	82.4	1.3	0.62
Quality of life index**	17.7	17.2	18.3	-1.0	0.34
Stress Index***	14.9	14.8	15.0	-0.2	0.60
N N	3531	1678	1853		

Notes: *Questions were asked on a 1-5 scale. 1 being the least likely and 5 being the mostly likely for the event to occur.
**Index was created from 8 positive statements concerning one's quality of life. Scores range from 8-40, 40 representing the highest perception of one's quality of life.
*** Index created from 4 negative statment ranked 1-5 concerning stresses in one's life. Scores range from 4-20, 4 representing the least stress felt.

Qualitative sample

After treatment and control VCs were assigned, the qualitative sample of 16 households was selected from treatment VCs for IDIs of the caregiver and a young person. We used a stratified sampling approach to facilitate comparison across sex and orphan status, resulting in a sample that was half male and half orphaned. Geographically, our sample covers two districts, Salima and Mangochi, and four TAs (Salima – Maganga and Ndindi TAs; Mangochi – Jalasi and M'bwana Nyambi TAs). Four households were selected from each TA. We determined the sample size based on our previous experience, guidelines for longitudinal qualitative research, and feasibility. A prerequisite for selection of a household was that the household had to have at least one youth aged 13-19 years of age (at the time of baseline) who had completed the Young Person's Module in the quantitative survey. This allows for a richer analysis of the youth IDIs, as the qualitative interview could be linked to information on behaviour and attitudes of this same youth from the quantitative survey. These households were then sorted based on gender and age of caregiver and young person, and other characteristics of the young person. Sixteen households were selected on the basis of having a balance of characteristics among the youth respondents, including female/ male, orphan/ non-orphan, had sex/ never had sex, and currently enrolled in school/ not currently enrolled in school. Alternate households with similar characteristics were selected to match each of the 16 selected, in case participants refused the IDI or were unavailable. The final 16 households used in the qualitative survey are fairly similar to the typical beneficiary household with the exception that they are slightly larger, with a mean household size of 6.1 compared to an overall mean of 4.5. In these households, 87 percent of caregivers were female, mean age was 52, and 38 percent were widows.

FGDs at baseline were held with knowledgeable community members using the *Stages of Progress* methodology. (See the Baseline report for more details.) FGDs at midline and endline were held with two separate groups (beneficiaries and non-beneficiaries) in each of the four TAs, for a total of eight FGDs. The groups were divided into programme beneficiaries and community members not receiving the transfer in order to allow participants to speak freely, without stigma or judgement from the other group. FGD participants were community members aged 18 and above who have detailed knowledge of the community and were invited by the local village heads. The number of FGDs was determined by the fact that we wanted to cover each TA to account for general geographical and cultural differences that could affect the impacts, perceptions, and operations of the SCTP. The specific locations within the TAs were driven by the fact that, for logistical purposes, the FGDs were conducted during the same time period as the IDIs; therefore, FGDs were held in the same VCs where the IDIs were given.

4.3 Data Collection

While the midline was originally scheduled to begin in July 2014 (12 months after baseline), payments had not begun in T areas until March 2014. The research team recommended that data collection occur after a minimum of 10 months' worth of transfers (or five payment cycles). Therefore, survey teams began field work for the midline on 29 November 2014 and this continued through 23 January 2015. In addition, youth modules were administered in February to capture data on the youth who were away for holiday or seasonal work during the main survey period. Qualitative IDIs, KIIs and FGDs for midline were conducted from 23 February to 12 March 2015. Endline data collection was scheduled for approximately 12 months after the start of midline data collection. Because of concerns and plan of Government to enrol the control group into the SCTP, data collection was moved up slightly, starting on 11 October, 2015 and continuing through 18 November, 2015. Qualitative IDIs, KIIs and FGDs for endline were conducted from 6 – 27 March 2016.

Survey instruments

The endline consists of six major components:

1. Household Survey administered to the main respondent for the household;
2. Young Person's Module for up to three youth ages 15-22 in the household (age at endline);

3. Anthropometric Measures for children ages 6 months to 71 months in the study households;

4. Community Survey given to a group of knowledgeable community members to gather information on community norms, resources, pricing and access to services;

5. IDIs for caregiver and one youth from 16 treatment households;

6. KIIs and FGDs with knowledgeable community members to discuss impacts, perceptions, and operations of the SCTP. Beneficiary and non-beneficiary FGDs were held separately.

Survey instruments were reviewed for ethical considerations and approved by the UNC Internal Review Board (IRB) and Malawi's National Commission for Science and Technology (NCST), National Committee for Research in Social Sciences and Humanities (UNC IRB Study No. 14-1933; Malawi NCST Study No. RTT/2/20). Instrument topics are described in Annex B, Figure B.1.1). Instruments are available online at: https://transfer.cpc.unc.edu/?page_id=196

Enumerators were selected from a pool of experienced candidates, and put through a thorough, 10-day long training. Qualitative research assistants were trained separately in qualitative interview techniques, and both teams were extensively instructed on ethics of human subjects research. More information on training and selection of enumerators and research assistants, as well as on electronic data capture can be found in Annex B.2.

Fieldwork

Quantitative data collection was done from 28 September – 9 October 2015. As household and youth response rates were high, it was decided that an additional tracking exercise at the end of data collection was not needed to re-visit households or youth. Qualitative IDIs, KIIs and FGDs were done from 6 – 27 March 2016.

General conditions: Field conditions varied greatly. Generally, the field teams were well received by the local communities. Local people, especially Group Village Heads and Village Headmen were cooperative and quite willing to provide support to the field teams in locating households within their villages. In some locations, households were close together and easy to reach. However, other locations were quite challenging to navigate. In many areas in Mangochi, there was no mobile network reception, and many households in these TAs were several kilometres from a passable road, making organizing team logistics and sharing anthropometric equipment between enumerators on the same team a difficult task. In each district, the five teams gathered in evenings to review and troubleshoot any issues encountered, as well as utilize mobile internet hotspots to upload/transmit data. Due to the advanced start of fieldwork for the quantitative survey, rains did not pose as large a challenge as they had in the midline survey.

4.4 Data Processing and Analysis

Survey data

As data entry was conducted using computer tablets in the field, data entry occurred in real time during the household visits using the CSPro data entry program. Tablets were programmed with data transfer software that allowed supervisors to upload the data from their team to a secure server housed at UNC at the end of each day. CSR employed a data manager, Nick Shawa, who worked alongside UNC's data manager, Frank Otchere, to track the uploaded data, perform quality control, and to export the data into the analysis software. Shawa also circulated in the field to give technical support to supervisors and troubleshoot problems with data entry, uploading, or with the tablets themselves.

To ensure data quality, several measures were employed: 1) the data entry program itself had quality control and logic measures embedded to prevent enumerators from making certain common errors; 2) at the end of each day, supervisors reviewed the questionnaires from all team members before uploading; 3) once data was uploaded to the server, Shawa did basic checks for completeness and other obvious errors; 4) UNC analysts produced error reports for commonly noted errors, which were sent back to the supervisors for corrections; and 5) once the full data set was received, a final round of

quality and completeness review was conducted, and responses which contradicted baseline data were investigated and cleaned.

The evaluation team at UNC conducted the main impact analysis from February – November 2016, in cooperation with UNICEF OoR.

Quantitative Analysis Methodology

The impact evaluation seeks to answer the main evaluation question at the population level in the SCTP intervention areas. Assessing program impact requires evaluators to estimate what would have happened if SCTP had not been implemented. This requires having a comparison group, which is a group with characteristics as similar as possible to the SCTP intervention areas but without the SCTP interventions. This study employs a randomized control design, the preferred option for assessing impact, which means that areas were randomly assigned to be either in treatment or comparison (delayed treatment) groups. The study then employs a difference-in-differences (DID) design to compare the two groups. This design estimates program impact by comparing changes in the program group between the baseline (2013) and midline (2014/2015), and between the baseline and endline (late 2015) to changes in the comparison group over the same time period, controlling for household- and community-level differences between the two groups. This methodology nets out changes that may have occurred due to other factors through the control group, thus resulting in more accurate estimates of program impact, as seen in Figure 4.4.1.

Figure 4.4.1 Difference-in-Difference Design
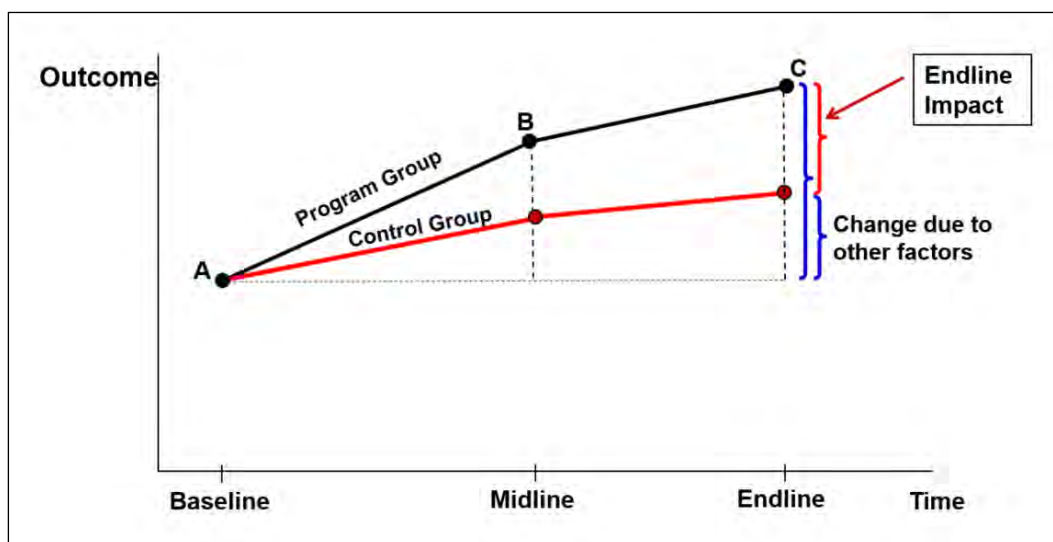
The validity of the impact estimates obtained by this design depends on what is called "the parallel assumption"[12], which basically means that it is assumed that the change in the comparison group provides a good approximation of the change that would have occurred in the SCTP areas if the program had never been implemented. Although the randomized nature of the study allows us to be comfortable with that assumption, we also include individual and household characteristics that are not expected to be influenced by the program in the impact estimation models to control for differences between the program and the comparison groups. These include, for example, the beneficiary's age, sex, level of education and marital status, and the demographic composition of the household. All these variables are measured at baseline, that is, prior to program commencement.

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[12] It is also called the "parallel trends assumption."

Impact Estimation Models

In order to answer the evaluation questions we use the following DID model:

$$Y_{ijt} = \beta_0 + \beta_1 P_j + \beta_2 T1_t + \beta_3 T2_{tj} + \beta_4 P_j * T1_t + \beta_5 P_j * T2_t + \beta_6 X_{ijt} + \lambda_j + \varepsilon_{ijt} \qquad (1)$$
$$(1)$$

Where Y_{ijt} is the outcome of interest for individual i who lives in community j at time t. P_j is a binary variable set to 1 if community j is in the SCTP program area, and to 0 if it is in the comparison area. $T1_t$ is a dummy (binary) variable for time of the observation, set to 1 if the observation is from the midline survey, and to 0 if it is from the baseline or the endline. $T2_t$ is a binary variable set to 1 if the observation is from the endline survey, and to 0 if it is from the baseline or the midline. $P_j * T1_t$ and $P_j * T2_t$ are the interaction terms of the program and the time variables. X_{ijt} represents a set of observed individual and household characteristics described above. λ_j represents a full set of community (cluster) dummies included in the model to control for unobserved characteristics of the communities that do not change in the evaluation interval (these are the controls for fixed-effects). And, ε_{ijt} is the usual error term.

In this model there are two coefficients of interest: First, β_4, the coefficient of the first interaction term, which is the DID program impact at midline. Its estimated value $(\widehat{\beta_4})$ is interpreted as the additional change in the outcome achieved between baseline and midline as a result of the community receiving the SCTP, relative to the change occurring in the comparison group, controlling for differences in the observed characteristics, X_{ijt}, and for fixed unobserved differences between the households and communities. The second coefficient of interest is β_5, the coefficient of the second interaction term, which is the DID program impact at endline. Its estimated value $(\widehat{\beta_5})$ is interpreted as the additional change in the outcome achieved between baseline and endline as a result of the community receiving the SCTP intervention.

Model (1) is estimated with regression analysis methods applied on pooled data from the panel of households included in both the baseline, midline and endline surveys. Standard errors are corrected for clustering at the cluster (community) level and we use sampling weights in the estimation to correct for general attrition.

Qualitative interview data

For the qualitative component of the evaluation, all IDIs, KIIs and FGDs were audio recorded and detailed written summaries were written while in the field. Recordings were then transcribed and translated verbatim by the research assistant who conducted the interview. This method allowed for the research assistants to provide contextual information necessary for interpretation, as well as keeping the translated meaning as close as possible to the original meaning. Transcriptions of recordings and translations were overseen and verified by Maxton Tsoka and Peter Mvula of CSR. Summaries were received by the UNC research team while research assistants were in the field March. Transcriptions and translations were completed and received in April 2016.

For the purpose of this report, the analysis was based primarily on the field summaries prepared during the fieldwork, as the transcripts were not complete when initial analysis began. We used the summaries to develop analytic matrices to describe and compare participants' experiences.[13] We identified illustrative quotes in the transcripts to include in the report. FGD summaries were separated by community and analysed from beneficiary and non-beneficiary standpoints and coded for impacts and operational issues.

5. Attrition

Attrition occurs when households from the baseline sample are missing in the follow-up surveys. There are different reasons for households not responding in subsequent survey waves. Migration, death, separation, or the dissolution of households can cause attrition and make it difficult to locate a household in the second or third wave of data collection. Attrition can cause problems for an evaluation because it not only decreases the sample size (leading to less precise estimates of programme impact), but it could also introduce bias into the sample of analysis. If attrition is *selective*, it could lead to incorrect programme impact estimates, or it could change the characteristics of the sample and therefore, it could affect the representativeness of the impact results.

There are two types of attrition: differential and overall. *Differential* attrition occurs when the treatment and control samples differ in the types of households or individuals who leave the sample. Differential attrition can create biased samples by reducing or eliminating the balance between the T and C groups achieved at baseline. Since we will conduct the analysis using the households present in all three waves of the survey, it is also important to examine for *overall* attrition, which is the total share of observations missing at the follow-up surveys from the original baseline sample. Overall attrition can change the characteristics of the remaining sample of analysis and render it non-representative of the population from which it was obtained. Overall attrition can affect the ability of the study's findings to be generalized to the population of interest. Ideally, both types of attrition should be null or small.

We investigated attrition at endline by testing for similarities at baseline between (1) treatment and control groups for all households included in the *panel* of households, that is, for the households interviewed at baseline and in *both* follow-up surveys (differential attrition) and, (2) all households in the panel and the households who were missing in either the midline or the endline survey (overall attrition).

Fortunately, *we do not find evidence of differential attrition*, meaning that we preserve the balance between the T and C groups found in the baseline survey. However, there is evidence of overall attrition in the sample.

5.1 Differential Attrition

Table 5.1.1 shows the "in the panel" and attrition rates by evaluation group and by T-C status within each district. We were able to retain most of the baseline households across the three waves of surveys: 93.5 per cent of the baseline households were also re-interviewed in the midline and endline surveys. Consequently, overall attrition in the total sample is low, at 6.5 per cent, and it is balanced between the T (6.0 per cent) and C (6.8 per cent) groups. The attrition rates are also similar by district – only slightly higher in Mangochi – and by evaluation status. To further explore differential attrition, we test 197 household and individual outcome measures and background variables for statistical differences at baseline between the T and C groups that remain in the panel of households, and found that only six indicators (3 per cent) are statistically different at five per cent significance. And two of these indicators have very low prevalence (for 'purchased any calf or cow in the last 12 months', less than 1 per cent of households reported a purchase in T and C groups.) These results demonstrate that, on average, households that remained in the panel sample had similar characteristics at baseline regardless of whether they were from the T or C group. The balance in the panel sample between treatment statuses allays the concern that attrition introduced selection bias.[14] See Annex C.1 for the results testing mean differences on the 197 indicators.

Table 5.1.1: Household "In the Panel" and Attrition Rates by T - C Status and District

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[14] Even in experimental design studies where randomization generated balance between the groups, it is typically expected to find around five per cent of indicators with differences between the groups. The results presented here are in line with accepted norms.

		In Panel Rate (Per cent)	Attrition Rate (Per cent)	N
Total sample		93.5	6.5	3,531
Treatment group		94.0	6.0	1,678
Control group		93.2	6.8	1,853
District	Status			
Salima	Treatment	95.1	4.9	800
Salima	Control	93.4	6.6	975
Mangochi	Treatment	92.9	7.1	878
Mangochi	Control	92.8	7.2	878

5.2 Overall Attrition

About 93.5 per cent of the households from baseline remain in the panel sample. Even though we have a low attrition level, we further explore overall attrition by testing 197 outcome and background variables for differences at baseline between the group of households that remained in the panel and the households who were missing in either the midline or the endline follow-up surveys. We found statistical differences in 55 of the 197 indicators (27.9 per cent) which indicate that overall attrition may affect the study results--see Annex C.2 for the results of the mean comparisons between groups for overall attrition. The implication is that the final analysis sample at endline may not be fully representative of the population of households in the program. In order to deal with this potential problem, we used an Inverse Probability Weighting (IPW) procedure to correct the sampling weights for general attrition—this procedure essentially re-weights the final sample so that it 'looks like' the original sample at baseline, and is thus fully representative of the SCTP population. To implement the IPW, we estimated a model of being in the panel of households using household background and outcome measures as explanatory variables, and corrected the baseline sampling weights using the predicted probabilities of being in the panel obtained from that model. In addition, we included several control variables in the DD regression models to increase the precision of our estimates, as is standard practice in large scale social science evaluations such as this. The control variables included were household size and demographic composition, main respondent's age, education and marital status, and a set of cluster-level prices.

5.3 Attrition in the Qualitative Sample

The caregiver and one youth, aged 13-19 from 16 households were interviewed at baseline, for a total of 32 participants. At midline, three female youth had left their homes for marriage, and one went to live with relatives. One male youth left home to attend secondary school in another district. While these five youth were no longer in the SCTP households at follow-up, the research team was able to trace all of them for the follow-up interviews. One caregiver, a grandmother, had passed away shortly before midline interviews and the youth had gone to live at his aunt's house. Both the youth and the aunt were interviewed at midline. Therefore, at midline, 32 interviews were conducted, and 31 of those were with the same baseline participants, the only exception being the deceased participant. Our team had similar success with retention at endline; while six youth (three boys, three girls) were no longer living at the households where they were initially recruited, the interviewers were able to track and interview all of them. Of note, among the six who had left their households, all three females had married while all three males had left to study (two in secondary, one in madrasa). Three females who had married had returned home by endline and were interviewed in their original households. Overall, 32 interviews were conducted at endline with the same 32 respondents from midline.

6. The Intervention: Malawi SCTP Operational Performance

Operational performance was examined through both quantitative surveys, as well as through FGDs with beneficiaries and non-beneficiaries. All study households – both T and C– were asked about child and adult service referrals over the past year to gain insight into the local service environment and understand successes and opportunities for programme linkages. Specifics on knowledge of the SCTP targeting and eligibility requirements were examined quantitatively and qualitatively with both beneficiaries and non-beneficiaries.

Survey questions and guided group discussions regarding programme operations were administered only to beneficiaries, since they were the only ones likely to have direct experience with programme administration. Beneficiary (T) households answered survey questions about their interactions with programme staff, transfer amounts received, experiences collecting their payments, understanding of the targeting process, and how the transfer funds are used. Beneficiary FGDs examined how participants felt about potential social stigma from being in the programme, as well as perceptions of conditions.

6.1 Description of Malawi SCTP Intervention

Coverage of payments

Figure 6.1.1 describes the coverage of study beneficiaries receiving payment across the two years of the evaluation. The coverage is high, with an average coverage rate of 96 per cent over the life of the evaluation. Since the baseline survey, all eligible beneficiary households in T villages were enrolled in the programme and were eligible to receive 12 payments between March 2014 to December 2015. Overall, the programme delivered a total of 28,297 successful payments to beneficiary households in treatment districts – 17,021 in Mangochi and 11,276 in Salima; 12,889 of these were processed since the midline evaluation – 7,914 in Mangochi and 4,975 in Salima.

Figure 6.1.1 Per cent of Eligible Treatment Households Receiving Transfers by Payment Session
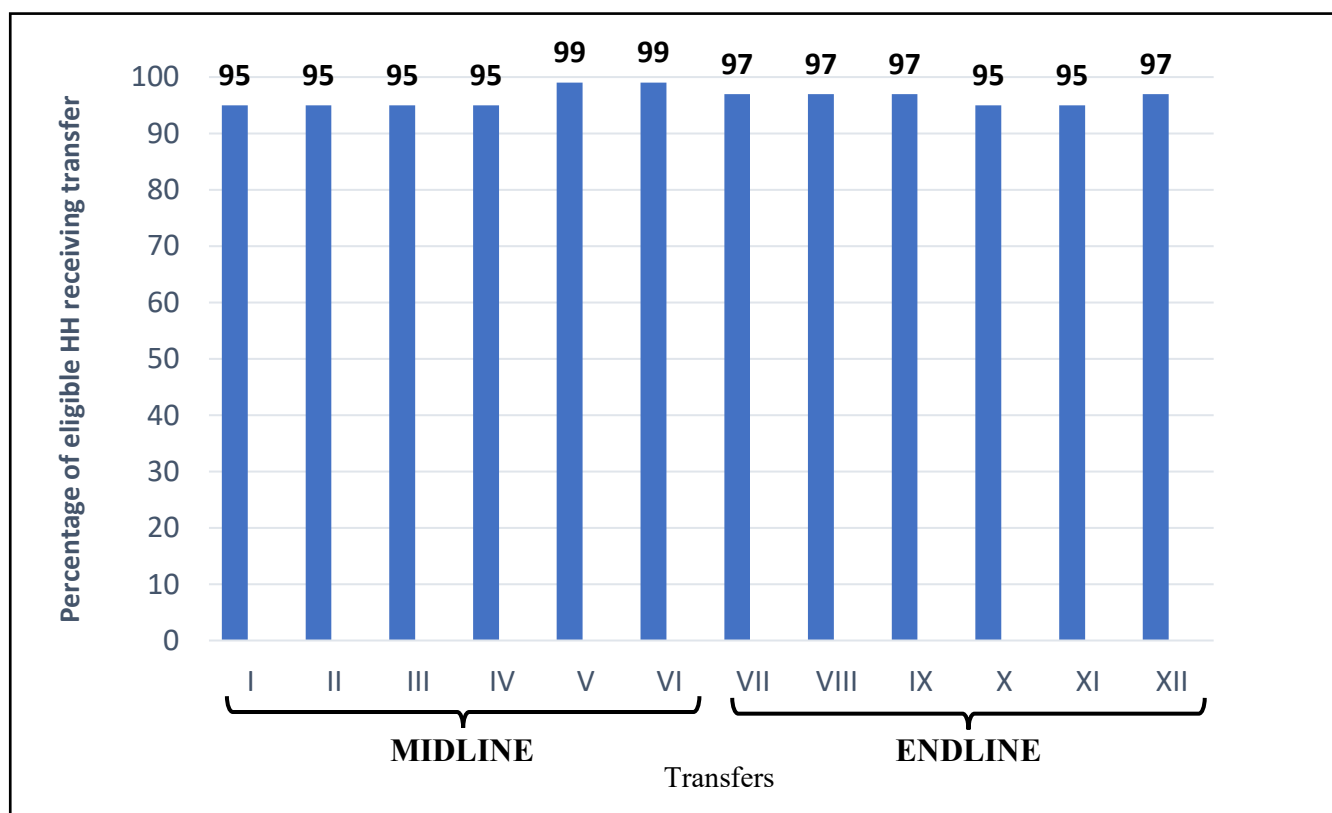
Transfer amount

The transfer amount for beneficiary households varies based on household size and the number of children enrolled in primary and secondary school. As of May 2015, the nominal values of the transfer for all households were increased. Table 6.1.1 shows the transfer amounts both prior to this change as well as May 2015 by number of household members and the additional value for enrolled children.

Table 6.1.1: Structure and Level of Transfers (Current MWK)

	2013 to May 2015	After May 2015
1 Member	1,000	1,700
2 Members	1,500	2,200
3 Members	1,950	2,900
4+ Members	2,400	3,700
Each primary school child[1]	300	500
Each secondary school member[2]	600	1,000

[1]Provided for household residents age 21 or below in primary school. [2] Provided for household residents age 30 or below in secondary.

Enrolment of controls and anticipation effects

When designing this impact evaluation, the control group was intended to be a 'delayed', or 'late-entrant' group, meaning that these households would begin to receive payments after the study period, or 24 months from baseline (September 2015). Due to the delayed start in payments, the evaluation timeline was pushed back by a few months, and the study period ran through the end of November 2015. Despite the study delays, GoM began enrolment activities in the control VCs in July 2015. There were two main drivers behind enrolling C households prior to the end of the study: 1) GoM had made commitments to the control VCs to begin payments by October 2015, and 2) households were suffering from poor harvest and GoM felt ethically obligated to start payments as early as possible before the rains began, which meant beginning enrolment in July 2015. Enrolment occurred in July in Salima and August in Mangochi. To maintain the integrity of the C group, the research team worked with GoM and communicated with the districts to organize for data collection to begin in C VCs so they would be completed in October before payments began. We were successful in completing data collection in a timely manner, and at the time of endline survey, only 0.2 per cent (3 households) of these late-entrant households had received their first payment, meaning that almost every household in the C group had not received a transfer at the time of the endline interview.

Despite the fact that payments were not made before endline data collection, given that enrolment into the programme took place before the evaluation was completed, we were concerned about possible anticipation effects influencing the results due to possible changes in the behaviour of C households as a result of expecting transfer payments. As such, we included a set of questions to collect information from these households about their programme enrolment, expected timing of payments, and whether they made (or delayed) any purchases, payments or decisions because they expected to receive the transfer in the near future. Tables 6.1.2 and 6.1.3 below present their responses. Table 6.1.2 shows which months these control households were told they would receive their first transfer.

Table 6.1.2: Control Group Enrolment (Per cent)

	N	Per cent
Number of households in control group	1,785	
Control households aware of SCTP		99.9
Control households enrolled in SCTP		94.5
Told when would receive first transfer payment		81.5
September		1.0
October		98.0
November		0.3
December		0.1
Control households that received 1st payment prior to endline survey		0.2
Amount expect to receive	1,672	
0 to 1,000 MWK		1.4
1,000 to 3,000 MWK		2.3
3,000 to 5,000 MWK		5.7
5,000 to 10,000 MWK		11.9
10,000 to 20,000 MWK		13.2
20,000 to 40,000 MWK		3.9
Don't know		61.6

Table 6.1.3 shows that the large majority of households did not modify their purchasing behaviour; only a very small percentage of households (3 per cent), made a purchase or consumption decision sooner than planned because they were aware they would be receiving the cash transfer. Similarly, only 9.9 per cent of households postponed a purchase, payment or decision until receiving the SCT transfer. The majority of those households (about two thirds of them) postponed a purchase or decision related to buying agricultural inputs or livestock, repairing the house or paying for education. It is possible that these decisions were taken to avoid incurring additional debt. Interestingly, those who made a purchase sooner also did so for education and agricultural inputs. The fact that more households claimed to delay rather than anticipate some form of purchases would lead to an over-estimate of program impacts in these domains—educational spending, agricultural inputs and livestock. This should be kept in mind when assessing impacts in these domains.

Table 6.1.3: Control Group Anticipation Effects of SCTP (Per cent of Households)

	N	Per cent
How long in future expect to receive payments	1,672	
0 to 6 months		1.6
6 months to 1 year		3.5
1 to 2 years		2.8
2 to 5 years		28.5
Longer/for rest of life		26.7
Don't know		36.8

Table 6.1.3: Control Group Anticipation Effects of SCTP (Per cent of Households) (continued)

	N	Per cent
Postponed any purchase/payment/decision until SCT payment	1,672	
Yes		9.9
No		90.1
What was postponed	169	
Buying food		9.7
Buying clothes		11.0
Repairing/improving house		7.1
Buying livestock		15.9
Buying agricultural inputs		21.3
Paying for education		19.6
Using healthcare		0.4
Repaying a debt		1.5
Marriage		0.0
Having a birth or fostering additional children		0.0
Starting a business		9.4
Saving money		0.0
Buying assets/durable goods		3.2
Made purchase/payment/decision sooner anticipating SCT payment	1,672	
Yes		3.0
No		97.0
What was done sooner	53	
Buying food		11.6
Buying clothes		4.7
Repairing/improving house		8.1
Buying livestock		7.7
Buying agricultural inputs		23.5
Paying for education		17.4
Using healthcare		4.7
Repaying a debt		4.5
Marriage		0.0
Having a birth or fostering additional children		0.0
Starting a business		10.6
Saving money		2.7
Buying assets/durable goods		4.5

Notes: Multiple responses were permitted for what was postponed or done sooner

6.2 Programme Administration

Linkages with other services

All households were asked a series of questions regarding knowledge of availability of social support services in their communities, and whether adults or children in their households had received referrals to, and subsequently used, any social support services in the last 12 months. While just over one-third of households were able to list *any* child support or protection service available in their community at midline, this increased to over half of households being able to list any services at endline. At midline, only 1.7 per cent of all households (1.8 per cent of T households and 1.5 per cent of C households) reported that a child was referred for child protection/support services (e.g., disability, nutrition, etc.). At endline, these numbers increased across the board as 4.0 per cent of all

households (3.9 per cent of T households and 4.1 per cent of C households) reported that a child was referred. Of those households reporting a child referral, most were referred by a community health worker (T 38.9 per cent; C 74.8 per cent) or a community leader (T 36.3 per cent; C 12.5 per cent) and these children were referred to health (T 44.8 per cent; C 62.5 per cent), school (T 37.6 per cent; C 6.4 per cent), and food (T 41.8 per cent; C 13.2 percent) services.[15] Only one per cent of households reported that an adult had been referred for support services and received those services in the last 12 months prior to midline, and this number, like for children, increased to about four per cent at endline.

Payment procedures

Payment Amounts, Frequency and Expected Duration

Table 6.2.1 shows the amount households reported receiving for their last payment and expectations about future payments across survey rounds. The majority of households in the T group had received their most recent payment one or two months prior to the endline interview (65 per cent). Whereas, at midline, approximately 56 per cent of households received between MWK6,000 and MWK9,999, and 39 per cent reported receiving MWK2,000 to MWK5,999, at endline, the majority of households (45 per cent) reported receiving MWK10,000 to MWK51,000 and 33 per cent reported receiving MWK 6,000 to MWK9,999. Given that the transfer amounts were increased in May 2015 (after midline data collection and prior to endline), we would expect to see households reporting higher transfer values. It is also possible that households reporting very large amounts for their most recent transfer may have been collecting back payments because of missing a previous transfer disbursement.

Participants seemed to understand that the payments are meant to be bimonthly, as over 85 per cent of respondents expected to receive their next payment within two months. However, beneficiaries had somewhat mixed expectations about how long into the future they would continue to receive payments, with 40 per cent expecting support to continue for the next two to five years at midline and 56 per cent expecting a similar timeframe at endline. Approximately 20 per cent across both rounds believe they would receive payments for longer, or the rest of their life; less than half the percentage of households that reported 'don't know' at midline reported the same at endline (34.5 and 16.2 respectively).

Table 6.2.1. Payment Amounts and Expectations of Frequency and Duration

	Midline		Endline	
	N	Per cent	N	Per cent
Amount of last payment (nominal, MWK)	1,561		1,582	
0-1,999		1.9		0.04
2,000-5,999		39.2		21.4
6,000-9,999		55.9		33.0
10,000-51,000		3.0		45.3
When next payment is expected	1,560		1,582	
Don't know		4.8		5.8
Next 2 months		89.8		86.5
Next 2-6 months		5.3		7.6
How long in future beneficiaries expect to receive payments	1,555		1,582	
0-6 months		2.4		0.3
6 months - 1 year		1.2		0.2
1-2 years		4.0		4.0
2-5 years		39.9		56.0
Longer/for the rest of their life		18.0		23.3
Don't know		34.5		16.2

Notes: Payment amounts represent a bimonthly distribution of transfers, and in some cases include the payment of arrears for payments not picked up on previous payment dates.

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[15] Numbers in parenthesis indicate values at midline and endline, respectively.

Designating Representatives

About 75 per cent of households had identified someone to represent them at the payment point in the case that the main beneficiary was unable to collect the payment themselves (Table 6.2.2), and, by endline, 50 per cent of respondents reported having sent their representative to collect a payment on their behalf. Under programme rules, if a beneficiary misses picking up their payment at the specified payment date, they are either able to go to the District Commissioner's (DC's) office to collect the payment, or they may receive it with the next payment. The vast majority of beneficiaries understood this, with only 8 per cent believing that the payment would be lost and only 2 per cent were unsure of how to collect missed payments. This is an improvement over midline, where it was noted that the understanding of missed payments differed significantly between the two districts. At midline in Salima, *less than half of the sample of beneficiaries knew for certain that they could recoup the payment* (45 per cent), whereas by endline this *increased to 80 per cent;* in Mangochi across both survey rounds, over 90 per cent knew that the missed payment would be carried over to the next payment period.

Table 6.2.2: Designation of Representatives and Knowledge of Procedures for Collecting Missed Payments

	Midline		Endline	
	N	Per cent	N	Per cent
Has designated a representative	1,562	78.9	1,582	75.2
Ever sent representative to collect payment	1,251	38.1	1,230	50.7
Think that they can receive missed payments in the future	1,250		1,230	
Yes		72.7		89.1
No		11.6		8.5
Don't know		15.8		2.4
Salima district	643		655	
Yes		44.7		79.4
No		28.1		16.4
Don't know		27.2		4.2
Mangochi district	607		575	
Yes		90.8		95.9
No		0.9		3.1
Don't know		8.3		1.1

Corruption and Security Concerns Are Limited

Very few participants reported knowing anyone who 1) paid money to staff at the payment point when collecting a payment (less than one per cent), 2) being asked for a monetary gift (less than one per cent), 3) hearing of anyone having to pay money or give a gift to a community chief or village elder when receiving a payment (2 per cent), or 4) having to pay money to anyone in the community when collecting a payment (one per cent).

Nearly all respondents reported being generally happy with the way they are treated by programme staff at the collection point (90 per cent), and being happy with their treatment by SCTP representatives (95 per cent).

Cost of participation: Transportation and time costs

Table 6.2.3 presents information on the cost of transportation, travel and wait times and difficulties receiving payments. Respondents reported spending between less than one hour to more than a day travelling to and from the payment point, with most only having to travel less than one hour round trip (47 per cent) and a quarter reported spending one to two hours travelling. Reported wait times at the SCTP payment point were lengthy: 69 per cent of beneficiaries waited between four and nine hours to collect their most recent payment (up from 52 per cent at midline). Only five per cent reported losing a transfer disbursement for missing the payment period, up from just three per cent at midline.

Table 6.2.3: Transportation and Time Costs of Collecting Most Recent SCTP Payment

	Midline		Endline	
	N	Per cent	N	Per cent
Transportation expenditures for last payment	1,562		1,582	
Nothing		95.7		87.1
50 - 1,200 MWK		2.6		11.8
Don't know		1.6		1.0
Total travel time to payment point and back	1,563		1,582	
Less than 1 hour		42.8		47.2
1 to 2 hours		26.4		25.5
2 to 3 hours		16.7		13.4
3 to 10 hours		11.3		8.0
10 to 20 hours		0.3		0.3
One day or more		2.6		5.5
Wait time at payment point	1,412		1,527	
Less than 1 hour		10.2		6.0
2 hours		13.9		8.4
3 hours		21.5		16.8
4 to 9 hours		52.0		68.8
One day or more		2.4		0.0
Lost payment because missed payment period	1,558	3.1	1,582	5.6

Reporting of problems

Programme participants were also asked about their awareness of who to contact in the case of a payment problem (Table 6.2.4). Almost 80 per cent knew of someone to contact if they had problems with payment or any other part of the SCTP, up from 60 per cent at midline. The grievance system enhancements in the SCTP Monitoring Information System (MIS) completed after midline may have sparked this improvement.

Table 6.2.4: SCTP Contacts for Reporting Problems

	Midline		Endline	
	N	Per cent	N	Per cent
Aware of someone to contact in case of problems	1,561		1,582	
Yes		59.0		78.3
No		29.3		20.3
Don't know		11.7		1.4

6.3 Cash Transfer Payments and Transfer as a Share of Baseline Consumption

Table 6.3.1 presents the total transfer amount households received from all six two-month payments between baseline and midline, and between midline and endline, representing annual transfer amounts. On average, the total annual transfer amount received by households was MWK25,622 and the average monthly per capita (PC) value of the transfer was MWK559. The transfer share is expressed as the transfer amount divided by baseline consumption (see Annex G for an explanation of how transfer amounts and the transfer share were derived). The transfer represented 20 per cent of baseline consumption among all beneficiary households (on average). However it is important to note that for 64 per cent of households, the transfer share is actually less than 20 percent of baseline consumption. This is important because cross-country evidence from the Transfer Project suggests that maintaining a transfer size that is at least 20 per cent of baseline consumption is important in generating wide-ranging program impacts. The transfer share is highest among the poorest 50 per cent of households where it is 27 per cent. This suggests that programme impacts are likely to be larger among the poorest households.

Table 6.3.1: Average Transfer Payment and Transfer Share

	Midline				
	Total	Poorest 50 per cent	Small hhld	Large hhld	Female head
Household Size	4.47	5.49	2.68	6.39	4.49
Real hhld total annual transfer (MWK)	22,310	24,300	19,016	25,855	22,486
Real PC total monthly transfer (MWK)	520	413	678	350	521
Real transfer share	0.18	0.25	0.19	0.17	0.19
Proportion of hhlds with transfer share < 20 per cent	0.68	0.45	0.65	0.71	0.67
N	1,649	818	843	806	1,361
	Endline				
Household Size	4.67	5.58	2.75	6.48	4.71
Real hhld total annual transfer (MWK)	25,622	28,180	21,347	29,663	25,697
Real PC total monthly transfer (MWK)	559	467	730	396	551
Real transfer share	0.20	0.27	0.20	0.20	0.20
Proportion of hhlds with transfer share < 20 per cent	0.64	0.39	0.63	0.64	0.61
N	1,157	615	553	604	954

Notes: Transfer values expressed in real August 2013 national prices, MWK. Small households contain four or fewer members. Descriptive statistics are corrected for multi-stage survey design.

Figure 6.3.1 displays the distribution of the transfer share by whether the household was consuming above or below (poorest 50 per cent) the median baseline consumption level. Notice that for the poorest households (dotted line) the graph is shifted noticeably to the right—the transfer share is much larger among these households.

Figure 6.3.1: Distribution of Transfer Share by Baseline Consumption

Distribution of Transfer Share by Baseline Poverty Level
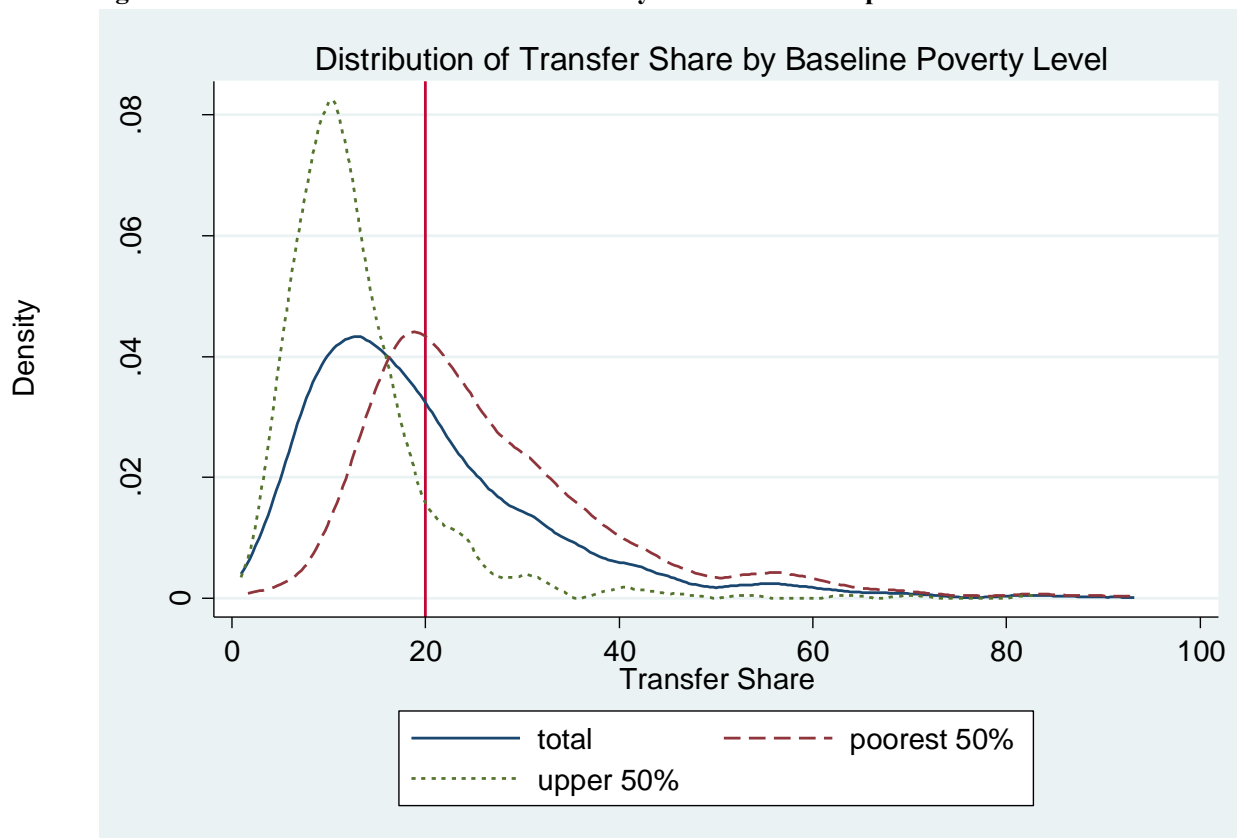
Figure 6.3.2 shows the distribution of the transfer share by baseline household size (left) and by sex of the household head (right). The left panel of the figure shows that the transfer share among the poorest households is always greater than 20 per cent up to a household size of approximately 10 people. Only households with three to seven members have a transfer share that is at least 20 per cent. Hence the formula for the transfer size, which is linked to the number and age of members, and the dependency in a complex way, somehow 'favours' households with between 3 and 7 members. This relationship is worth exploring as it appears to be an unintended consequence of the benefit formula.

Figure 6.3.2: Transfer as Share of Baseline Consumption
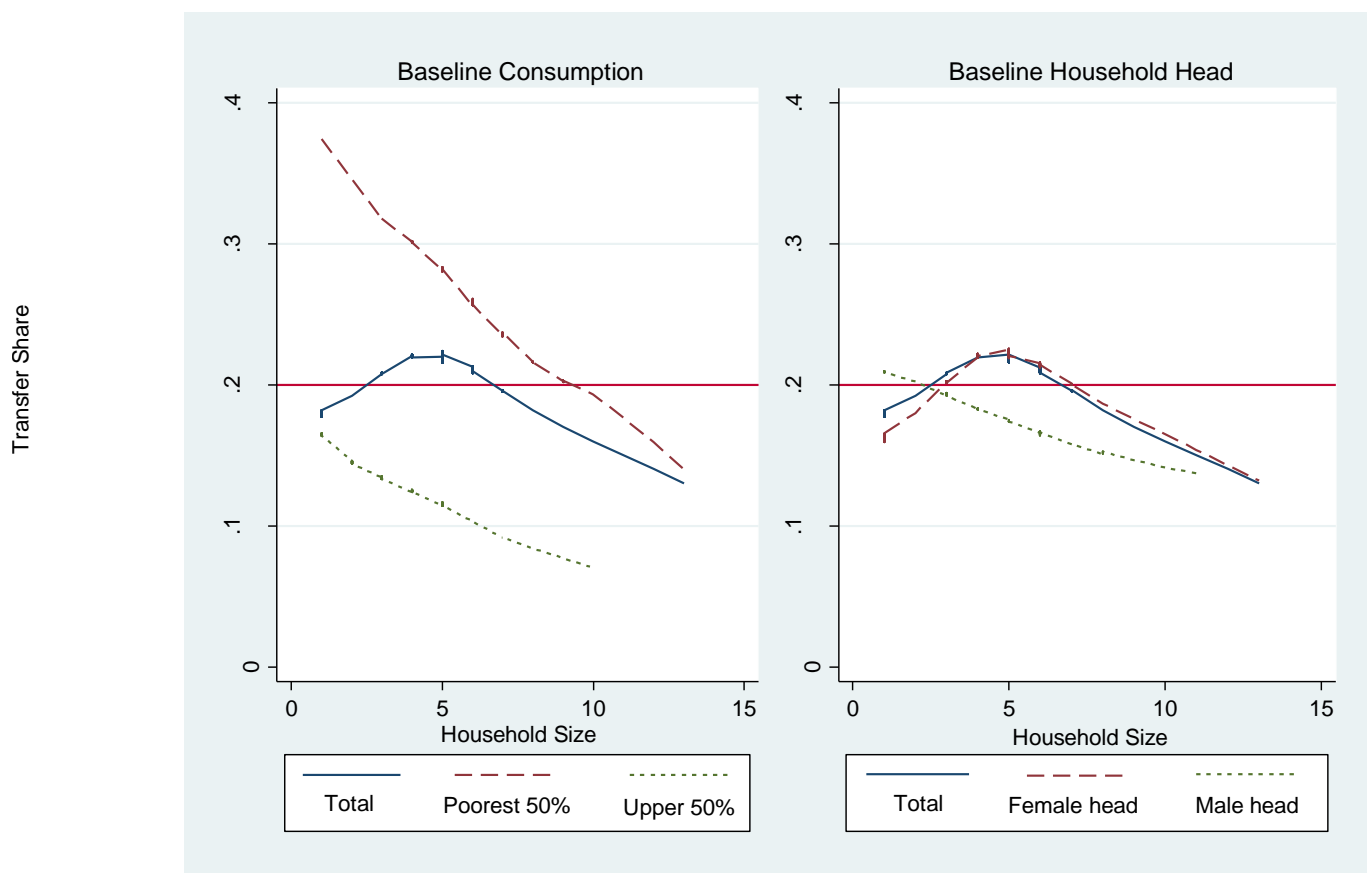
6.4 Perceptions of Beneficiary Responsibilities and Programme Rules

Understanding of eligibility criteria

Both T and C households were asked about their awareness of the SCTP and who they thought was eligible to receive the transfer. Nearly all T and C sample households were aware of the SCTP and respondents felt that the programme eligibility criteria were clear (Table 6.4.1). The majority of both groups believed that very poor households and the elderly were eligible.

Slightly more than half of T households at midline thought that caring for orphans was an eligibility requirement (52 per cent), but this decreased to only 39 per cent at endline. Despite the fact that the programme is targeted to ultra-poor households that are labour-constrained, with considerations for disability, old age, chronic illness, and not being able to work, few (12 per cent) T households in the sample mentioned that having few able bodied members was an eligibility requirement. However, 24 per cent identified chronic illness and 19 per cent identified handicaps as criteria for programme eligibility.

When beneficiaries in the sample were asked about why they believed their own household to be eligible for the SCTP, 84 per cent responded that it is because they are very poor, 45 per cent responded it is because there were elderly, and 15 per cent responded it is because they are caring for orphans. Only six per cent thought they met eligibility requirements specifically because household members were unable to work, but as stated above, 10 per cent cited chronic illness and five per cent cited disability as reasons for their selection into the programme.

Table 6.4.1: Understanding SCTP Eligibility Criteria

	Midline						Endline					
	Total		Treatment		Control		Total		Treatment		Control	
	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent	N	Per cent
Aware of SCTP	3,357	97.3	1,602	100.0	1,755	94.8	3,394	100.0	1,609	100.0	1,785	100.0
Perceived eligibility criteria	3,357		1,602		1,755		3,394		1,609		1,785	
Caring for orphans		45.6		52.4		39.0		33.7		39.4		28.1
Caring for children		11.6		13.1		10.0		12.6		14.8		10.5
Chronically ill		22.0		23.4		20.7		22.8		24.3		21.3
Widowed		14.3		18.0		10.8		13.6		15.0		12.1
Unable to work		7.6		9.7		5.7		9.5		12.0		7.1
Handicapped		20.1		21.8		18.5		19.7		19.2		20.1
Elderly		58.0		62.8		53.3		61.1		66.8		55.6
Very poor		83.6		88.1		79.4		90.7		92.2		89.2
Not enough to eat		8.5		11.0		6.1		13.9		16.7		11.1
Think eligibility criteria are clear	3,255		1,599		1,656		3,393		1,609		1,784	
Strongly disagree		9.4		9.3		9.5		5.0		2.1		7.8
Disagree		4.8		2.0		7.6		3.2		1.8		4.5
Neutral		11.9		3.9		20.0		8.2		5.1		11.3
Agree		25.2		25.9		24.5		25.1		22.9		27.3
Strongly agree		48.8		58.9		38.4		58.5		68.2		49.1
Beneficiary perception about why they were selected			1,602						1,609			
Caring for orphans				20.0						15.0		
Caring for children				8.0						10.8		
Chronically ill				8.1						9.5		
Widowed				9.7						9.9		
Unable to work				3.8						5.9		
Handicapped				7.0						4.8		
Elderly				37.3						45.1		
Very poor				81.0						83.9		
Not enough to eat				8.3						12.1		

Perceptions of beneficiary responsibilities and conditions

Treatment households were asked about their perceptions of beneficiary responsibilities and programme rules (Table 6.4.2). Seventy-three per cent of beneficiary households thought that they must follow certain rules in order to continue receiving payments – this is slightly less than the 80 per cent who believed there were rules at midline. Of those households that believed there were programme conditions, most believed that they were required to use funds to provide adequate food and nutrition for children (77 per cent), purchase school supplies (57 per cent), or invest in farm or non-farm business (53 per cent). Over half of these households reported being informed about specific rules of the SCTP by a SCTP programme representative (i.e., at a community awareness session), and about one-third by staff at the payment point. Over two-thirds of households who thought there were programme rules believed that they would be kicked out of the SCTP for failing to comply with rules, and half reported thinking that someone was checking to see if cash transfer households are following the rules.

Table 6.4.2: Perceptions of SCTP Conditions

	Midline		Endline	
	N	Per cent	N	Per cent
Believe that SCTP households must follow rules	1,562	80.9	1,593	73.0
Rules	1,270		1,188	
Enrolment/attendance in primary school		27.2		34.0
Enrolment/attendance in secondary school		8.7		6.8
Purchase of school supplies		70.2		57.3
Immunization/obtain under-five health card		3.2		1.1
Growth monitoring		8.7		5.1
Adequate food and nutrition for children		57.4		76.7
Clean and appropriate clothing for children		34.5		40.1
Birth certificate for children				0.4
Invest in farm or non-farm business		59.4		52.6
Pay off debt		5.0		2.8
Who informed you of rules (if anyone)	1,270		1,188	
SCTP representative		52.2		62.2
Payment point staff		33.3		31.2
Consequences for not following rules	1,270		1,188	
Nothing		31.6		17.2
Kicked out of programme		64.8		70.6
Other		1.9		12.2
Believe adherence to SCTP rules is monitored	1,270	26.4	1,188	50.0

Notes: Respondents were allowed to list up to three rules; 'Other' includes go to jail and penalty fine.

Use of transfer funds

Lastly, households were asked about how they use of the transfer. The main respondents were generally reported to be the main decision maker for how the transfer payment is used (86 per cent), and most make these decisions alone (55 per cent), but transfer funds were reported to benefit all household members in about nine out of 10 households. Most households used transfer funds to purchase food (94 per cent); other common uses included purchasing clothing and shoes (45 per cent),

paying formal government education fees (43 per cent), and paying for rent or shelter (38 per cent). Just over one-fourth of households used transfer funds to purchase livestock and other agricultural inputs (See Chapter 13). Very few households reported saving transfer funds (two per cent). The use of funds for clothing, shoes, and schooling align with the high percentage of households who believed purchasing school supplies and clothing for children was a requirement for continuation in the programme. Male-headed households were less likely to use the funds for government education or clothing (32 per cent and 37 per cent, respectively), but were more likely to use the funds to purchase livestock (29 per cent).

Table 6.4.3: Beneficiary Use of SCTP Funds

	Midline		Endline	
	N	Per cent	N	Per cent
Main respondent is main decision maker for transfer use	1,602	87.2	1,609	85.7
Who is consulted about transfer use	1,562		1,582	
Main respondent decides alone		61.4		54.6
Spouse		17.0		19.6
Other adult family member		15.1		14.1
Children		2.6		2.6
All family members		2.5		7.9
Someone else in community		1.8		1.3
Transfer funds benefit all household members	1,602	92.9	1,609	87.0
Main things transfer payment is used for	1,602		1,609	
Food		87.3		93.9
Meat/fish/poultry		7.8		10.1
Buying food prepared outside of household		2.7		5.0
Cell phone/airtime		1.3		0.9
Livestock		23.9		25.8
Agricultural inputs		20.7		18.9
Formal government education		43.4		37.8
Other education		9.2		7.4
Healthcare		20.1		23.8
Shelter/rent		39.8		23.3
Clothing/shoes		44.5		45.0
Investment/small business		6.6		5.8
Formal social occasions such as weddings/funerals				0.2
Savings/village savings and loan (VSL)		1.1		2.0

Notes: Multiple responses allowed for use of transfer funds

6.5 Summary

The analysis of the operations module has revealed that, by and large, the programme is operating successfully and beneficiaries are satisfied with the services received. A few areas of improvement, however, are noted in the analysis. First among these is the wait time at payment points, which routinely exceeded four hours, a major cost for participants.

There are also some informational issues that the programme may need to address. The fact that over 70 per cent of respondents believed there are conditions associated with the programme is also a

concern; this (false) perception may make household feel forced to spend the transfer in a sub-optimal manner given their particular circumstances. For example, the expenditure results show significant impacts on clothing and food, precisely the areas where there are perceived conditions, yet there are no significant impacts on health expenditure.

7. Impacts on Consumption, Poverty and Food Security

7.1 Welfare

The overarching objective of the SCTP is to mitigate the effects of poverty by ensuring food security and maintaining consumption. This section covers the impacts of the programme on food and non-food consumption expenditure, food security, children's material's needs.

Measurement of welfare

To measure welfare and analyse the impacts of the SCTP on poverty, we use the total annual per capita consumption reported by a household. We follow the same method used to construct annual consumption at baseline and mid-line[16], which was adjusted slightly from the methods used by IHS3 in the construction of consumption and poverty figures. A detailed explanation of construction of annual consumption can be found in Annex D of the Malawi SCTP Midline Impact Evaluation Report.

Our estimates of poverty use the national poverty and ultra-poverty lines provided by the National Statistics Office (NSO). Data from the Integrated Household Panel Survey (IHPS) conducted in 2010/2011 and 2013 developed new poverty lines for 2013 that corresponded to internal estimation of inflation between these periods. The IHPS report "Methodology for poverty analysis in Malawi 2010-2013" explains that changes are due to updates in prices and unit conversions. Therefore, we use these updated poverty lines in this report instead of those used in the baseline report that were derived from the 2010 IHS3 poverty figures. The poverty line used in this report is MWK85,852 (baseline was MWK54,392) and the ultra-poverty line is MWK53,262 (baseline was MWK33,746). We use these 2013 lines for all the analyses and have deflated consumption at midline and endline to make poverty figures comparable to the baseline. To do so, we use temporal and regional price deflators reported by the NSO in the IHPS report. Between August 2013, November 2014 and October 2015 the average overall inflation rate was 23 and 40 per cent in the rural areas of Salima and Mangochi respectively. We note that annual consumption excludes the use-value of durable goods, as these were not collected at baseline and this represents less than one per cent of total consumption of SCTP households.

7.2 Poverty and Consumption

Both follow-up surveys were conducted during the lean season relative to the baseline. As a result, at endline, mean consumption was 22 per cent lower than at baseline among the C group but only 9 per cent lower among the T group, indicating an important protective effect of the SCTP. The endline was conducted a little earlier than the midline but at a time when food stores would have just begun to run out. As a result, mean consumption among the C group was only 4 per cent less than at baseline. On the other hand among the T group consumption was 20 per cent higher than at baseline, indicating a very large effect of the program on consumption. The average total per capita consumption at midline for treatment households was MWK36,876 (US$ 0.31per person per day) compared to MWK31,302 (US$0.26 per person per day) for control households. By endline these were US$0.45 and US$0.35 per person per day for T and C households respectively.

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[16] Malawi SCTP Baseline Report, Appendix E. 2014.

Consumption

Figure 7.2.1 shows the distribution of per capita consumption at baseline and the two follow-ups with the inflation adjusted ultra-poverty line (vertical line). This graphical display shows how the cash transfer has produced a positive right shift in per capita consumption for treatment households in comparison to control households, with this shift getting larger over time.

Figure 7.2.1: Distribution of Per Capita Consumption at Baseline, Midline and Endline
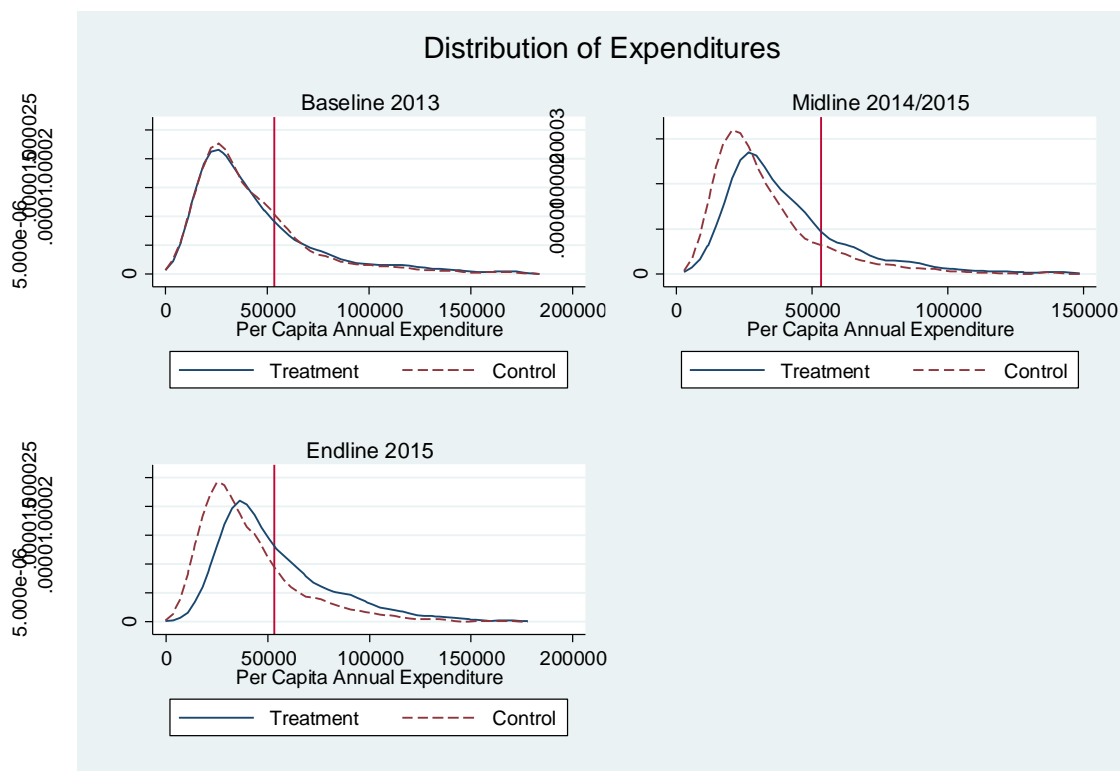
Note: The vertical line is set at the ultra-poverty line of MWK53,262 (August 2013 prices).

At midline, the program had increased consumption by MWK4,149 but by endline this effect has more than doubled to MWK10,293 and is now statistically significant. This implies a 23 per cent increase in baseline consumption, which is in line with the average transfer size as a share of baseline consumption. The largest component of consumption affected by the program is food, where the effect is MWK8,475, which represents 76 per cent of the total consumption impact of the program. The other components of consumption most affected by the program are clothing (MWK697), furnishings (MWK567) and miscellaneous goods and services (MWK430)) which combined account for an additional 16 per cent of the total program impact. The other component that is significantly affected by the program is education, with an increase of MWK203.

Table 7.2.1: Impacts on Household Consumption Expenditures

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Per capita expenditure	10,292.66*** (4.16)	4,149.40 (1.43)	6,143.27** (2.59)	45,840.45	53,882.40	41,196.31
Food expenditures	8,475.40*** (4.29)	2,460.54 (1.04)	6,014.86*** (3.08)	35,519.83	41,189.23	31,008.63
Alcohol and tobacco expenditures	-19.50 (-0.86)	-30.21 (-0.61)	10.71 (0.24)	87.18	69.98	64.13
Clothing expenditures	697.35*** (7.33)	734.30*** (6.01)	-36.94 (0.36)	376.02	1,082.86	277.73
Housing expenditures	-255.01 (-0.54)	-549.68* (-1.72)	294.67 (0.80)	5,251.64	5,448.51	5,468.47
Furnishings	567.30*** (4.53)	651.90*** (5.97)	-84.60 (0.58)	1,244.23	1,653.29	1,003.86
Health expenditures	-11.78 (-0.04)	448.03 (1.44)	-459.81 (1.54)	1,490.46	1,767.47	1,756.67
Transport expenditures	87.35 (0.50)	10.30 (0.08)	77.04 (0.69)	466.29	465.48	300.53
Communication expenditures	-0.14 (-0.00)	-7.23 (-0.28)	7.09 (0.20)	49.91	84.75	83.07
Recreation expenditures	-0.57 (-0.19)	-4.05 (-1.29)	3.48 (1.19)	4.48	3.94	1.08
Education expenditures	202.72*** (3.20)	197.70*** (3.54)	4.017 (0.07)	330.94	504.19	328.53
Hotels and restaurants expenditures	119.69 (1.59)	-38.27 (-0.66)	157.97** (2.31)	312.20	465.25	223.40
Misc Goods & Services expenditures	429.84*** (4.27)	275.06*** (3.75)	154.77* (1.80)	707.28	1,147.47	680.19
N	9,766	9,766		1,559	1,538	1,706

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t–statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table 7.2. shows consumption impacts for the poorest 50 percent of households at baseline. These follow the same patterns as for the overall sample, but the impacts on total and food consumption are 25 percent larger, and impacts on education are also higher among this sub-sample. These results may not be surprising as the transfer represents a much larger share of overall pre-program consumption for this group of households.

Table 7.2.2: Per Capita Consumption Expenditures (MWK) – Poorest 50 Per Cent at Baseline

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Per capita expenditure	12,473.17*** (8.67)	6,380.19*** (4.71)	6,092.99*** (3.69)	23,277.49	45,561.03	32,805.32
Food expenditures	10,304.78*** (8.74)	4,180.27*** (3.83)	6,124.52*** (4.45)	17,601.23	35,180.09	25,026.99
Alcohol and Tobacco expenditures	-0.566 (-0.03)	38.24 (1.16)	-38.80 (1.46)	26.45	34.28	32.63
Clothing expenditures	807.39*** (10.51)	801.74*** (10.43)	5.65 (0.07)	128.06	1,057.83	205.26
Housing expenditures	-146.85 (-0.47)	-430.18** (-2.10)	283.33 (1.05)	3,332.96	3,882.71	3,733.92
Furnishings	613.00*** (5.11)	715.70*** (5.73)	-102.69 (0.60)	724.34	1,389.31	801.56
Health expenditures	89.12 (0.37)	459.30** (2.10)	-370.18 (1.13)	579.84	1,670.90	1,580.12
Transport expenditures	32.30 (0.24)	63.19 (0.88)	-30.89 (0.22)	68.82	401.89	298.74
Communication expenditures	-29.70 (-0.62)	-35.04* (-1.83)	5.34 (0.14)	28.00	69.34	87.39
Recreation expenditures	4.19 (1.44)	3.64 (1.37)	0.55 (0.15)	0.53	4.30	0.96
Education expenditures	273.21*** (2.95)	273.02*** (5.47)	0.19 (0.00)	274.08	571.32	339.14
Hotels and restaurants expenditures	125.33** (2.13)	39.17 (0.79)	86.15 (1.34)	67.76	298.09	149.23
Misc goods & services expenditures	400.97*** (4.19)	271.14*** (3.86)	129.83* (1.70)	445.42	1,000.98	549.37
N	5,007	5,007		791	782	877

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance

To understand how patterns of consumption have shifted, Table 7.2.3 reports the program impact on broad consumption shares. This gives us a sense of whether consumption has increased in the same pattern as before the program, or whether the program has induced any shifts across consumption areas, perhaps because households spend the transfer differently than before. We observe increases in the share devoted to clothing, furnishings and miscellaneous goods, and these come at the expense of a decline in housing/utilities.

Table 7.2.3: Household Consumption Shares

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Food share	0.018	-0.009	0.027***	0.764	0.760	0.748
	(1.47)	(-0.96)	(3.00)			
Food/Bev share	0.018	-0.009	0.027***	0.764	0.760	0.748
	(1.47)	(-0.96)	(3.00)			
Alc/Tobacco share	-0.000	-0.000	0.000	0.001	0.001	0.001
	(-0.25)	(-0.88)	(0.73)			
Clothing/Footwear share	0.013***	0.018***	-0.005***	0.007	0.021	0.006
	(6.51)	(7.53)	(2.74)			
Housing/Utilities share	-0.042***	-0.036***	-0.006	0.128	0.102	0.143
	(-4.21)	(-3.27)	(0.56)			
Furnishings share	0.006***	0.014***	-0.007**	0.029	0.031	0.025
	(2.97)	(4.60)	(2.47)			
Health share	-0.006	0.004	-0.011*	0.030	0.033	0.039
	(-1.06)	(0.74)	(1.92)			
Transport share	0.001	0.000	0.001	0.007	0.008	0.006
	(0.60)	(0.29)	(0.54)			
Communication share	0.000	-0.000	0.000	0.001	0.002	0.002
	(0.19)	(-0.10)	(0.25)			
Recreation share	-0.000	-0.000	0.000	0.000	0.000	0.000
	(-0.68)	(-0.80)	(0.22)			
Education share	0.003	0.005***	-0.002	0.010	0.011	0.010
	(1.52)	(3.31)	(1.48)			
Hotels and restaurants share	0.002	-0.000	0.002*	0.005	0.007	0.004
	(1.45)	(-0.47)	(1.97)			
Misc Goods & Services share	0.006***	0.005**	0.001	0.017	0.022	0.016
	(2.81)	(2.70)	(0.68)			
N	9,766	9,766		1,559	1,528	1,706

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

In the qualitative interviews, several participants described using the SCTP money to improve the conditions of their houses, in particular, fixing the roof, making bricks to replace mud walls, and even putting in glass windows. This included purchasing the supplies as well as paying for labour. Lucy was an older caregiver whose house had been seriously impacted by rains between baseline and midline. Between midline and endline she had managed to improve the condition of her house substantially. Here she details how she managed her SCTP funds to achieve this goal,

Interviewer: So what is it that has changed in this regard from February 2015?

Participant: My house was leaking a lot but I have managed to buy iron sheets. I now have an iron roofed house. That is the change. This has been possible because of *Mtukula Pakhomo*. I am very thankful.

Interviewer: When did you have your house iron roofed?

Participant: This year. I was saving some of the money after receiving and then I would buy one iron sheet at a time so for me this has been the change and my children are now sleeping in a good place.

Interviewer: Can you tell me more about sleeping in a good place.

Participant: What I mean is that the house no longer leaks such that they are no longer sleeping on a wet place. They are sleeping in a dry place.

Table 7.2.4 shows impacts on budget shares of food groups and these reveal a significant increase in the budget share allocated to meats (including poultry and fish) and a small increase in the share to non-alcoholic beverages which comes from a decline in the budget share to cereals. This pattern indicates an improvement in diet diversity as a result of the program.

In addition to increased food consumption in general and less worry about food (see qualitative findings on this, below), many youth and caregiver participants in the qualitative cohort described having a more diverse diet since being in the program. Christina, a caregiver, explained this in the context of her household,

> *Participant:* To say the truth, things have changed, our food consumption has changed. We are able to buy maize with the money and with the business running, we also buy good relish like fish, [and we are] able to buy salt.
>
> *Interviewer:* How do you differentiate with before?
>
> *Participant:* There is change. The kind of food is the same yes, but maybe in the past we could just cook relish without tomatoes or oil but now we are able to put oil, tomatoes and the quality is better now. We would even lack salt and beg, which is not the same.

In Christina's case, with the money from the SCTP she had started cultivating tobacco and brewing beer and had diversified her household's diet with the money she made through these businesses. George, a youth participant who lived with his grandmother, described both increased quantity and quality of food since being in the program,

> *Interviewer:* How else has wellbeing been affected?
>
> *Participant:* We are now eating better food.
>
> *Interviewer:* What food apart from Nsima[17], which you have already mentioned?
>
> *Participant:* Relish.
>
> *Interviewer:* What type of relish?
>
> *Participant:* Dried fish.
>
> *Interviewer:* What else?
>
> *Participant:* Cabbages.

Another youth participant, Jafar, indicated that his family was eating more meat since being in the program, which he said had helped him to gain weight,

> *Interviewer:* Since the last time you got visited, has there been any changes or improvement in your life?
>
> *Youth participant:* My life has changed, it has given me the encouragement on my school studies.
>
> *Interviewer:* Tell me more about this?
>
> *Youth participant:* I used not to eat food in the morning, but now I do eat in the morning, [before] we lacked good quality food but now we do eat fish, beans and good vegetables.
>
> *Interviewer:* Is there any other food that you are managing to eat now?
>
> *Youth participant:* We are managing to eat goat meat now.

In this quote we can also see the relationship between food and education, whereby Jafar felt better

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[17] Nsima is a maize flour-based paste that is a staple dish in Malawi, usually eaten with a relish, or a meat- or vegetable-based sauce.

about going to school when he had a meal in the morning.

Table 7.2.4: Program Impact on Food Shares

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Cereals	-0.047**	-0.017	-0.030	0.529	0.474	0.527
	(-2.26)	(-0.63)	(1.51)			
Roots, tubers	0.006	0.007	-0.001	0.045	0.031	0.033
	(0.66)	(0.78)	(0.19)			
Nuts	0.008	-0.009	0.017	0.116	0.078	0.047
	(0.68)	(-0.68)	(1.40)			
Vegetables	-0.018	0.006	-0.024	0.150	0.150	0.170
	(-0.93)	(0.35)	(1.40)			
Meats	0.033***	0.009	0.025**	0.047	0.098	0.070
	(3.25)	(0.78)	(2.53)			
Fruits	-0.007	-0.013	0.007	0.029	0.085	0.084
	(-0.46)	(-0.71)	(0.40)			
Beverages (non alcoholic)	0.013*	0.014*	-0.000	0.019	0.020	0.018
	(1.90)	(1.73)	(0.05)			
Spices, sugars, fats	0.008	0.005	0.003	0.056	0.054	0.046
	(1.65)	(0.95)	(0.89)			
Other	0.003	-0.000	0.003*	0.008	0.011	0.007
	(1.66)	(-0.26)	(1.91)			
N	9,769	9,769		1,559	1,528	1,704

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Poverty

Table 7.2.5 reports programme impacts on individual poverty figures including headcount, poverty gap, and poverty gap squared. Individuals are poor if their household per capita consumption is lower than the poverty line. The ultra-poor are identified as those households whose per capita consumption is lower than the food poverty line. The programme has had a strong impact on all three indicators of poverty. For example, recipient households, and therefore, individuals in these households, are 15 pp less likely to be living below the ultra-poverty line. The poverty gap represents the average consumption shortfall relative to the poverty line and the squared poverty gap measures the severity of poverty by giving more weight to individuals farther away from the line. The programme has significant impacts on the ultra-poor poverty gap, by 13 pp and on the ultra-poor squared poverty by 11 pp indicating the program is reaching the very poorest.

Table 7.2.5: Individual Poverty Figures

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Exp per cap < ultra pov line *(N=9,766)*	-14.889*** (-6.81)	-3.470 (-1.39)	-11.419*** (3.85)	82.191	68.364	83.310
Gap poor *(N=9,025)*	-10.866*** (-6.67)	-6.026** (-2.75)	-4.840** (2.53)	60.618	50.041	60.661
Gap ultra poor *(N=7,336)*	-12.560*** (-5.35)	-9.250*** (-3.44)	-3.310 (1.44)	46.535	34.154	45.682
Severity poor *(N=9,025)*	-12.182*** (-6.19)	-7.540*** (-2.97)	-4.643** (2.19)	40.729	28.632	40.500
Severity ultra poor *(N=7,336)*	-11.104*** (-4.98)	-8.146*** (-3.25)	-2.957 (1.43)	26.231	14.859	25.338

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance

7.3 Food Security

In addition to the programme impacts on measures of poverty and consumption, we also analysed household welfare in terms of food security and these impacts are shown in Table 7.3.1. We asked households whether they worried they would not have enough food in the previous seven days. At baseline, 84 per cent of households felt food insecure in the previous week which declined to 75 per cent at midline and to 70 per cent at endline, while in the control group, the percentage of respondents that worried about having enough food in the last week actually increased over time. Specifically, we find a significant programme impact of -20 pp in this indicator. We also find significant impacts on the average number of meals eaten per day (0.29) and the proportion eating more than one meal per day is now larger among T households (94 per cent) relative to C households (82 per cent). The bottom panel of the table shows the results for the poorest households. In addition to eating more meals per day, these households are significantly less likely (-23 pp) to worry about having enough food over the past 7 days than they were at baseline.

Table 7.3.1: Food Security – Enough Food and Meals per Day

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
All Households						
Worried about having enough food for past 7 days	-0.204*** (-3.20)	-0.113** (-2.39)	-0.091** (2.10)	0.839	0.698	0.899
Number of meals eaten per day	0.294*** (5.92)	0.184*** (4.18)	0.110** (2.32)	1.906	2.227	1.954
Eats more than 1 meal per day	0.136*** (4.20)	0.077*** (3.09)	0.059** (2.42)	0.794	0.936	0.816
N	9,769	9,769		1,559	1,528	1,704
Poorest Households						
Worried about having enough food for past 7 days	-0.230*** (-4.54)	-0.092** (-2.57)	-0.138*** (3.38)	0.864	0.721	0.946
Number of meals eaten per day	0.324*** (5.07)	0.190*** (3.88)	0.134** (2.22)	1.800	2.181	1.878
Eats more than 1 meal per day	0.156*** (3.25)	0.061* (1.95)	0.094*** (2.81)	0.722	0.924	0.777
N	5,008	5,008		791	782	877

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parentheses. * 10% significance ** 5% significance; *** 1% significance.

The most commonly mentioned impact of the program was increased food consumption. Across all participants in the qualitative cohort there was discussion of having more food since being in the SCTP; more food was frequently cited as the main impact of the program. This included more food at meal time, more meals per day, and, specifically among youth in school, having breakfast before going to school. One caregiver, Agnes, described this impact,

> *In the past we used to have trouble getting food for the household because we had no money to use to buy it but now with the* Mtukula Pakhomo *money I am able to buy and provide this household with maize food. In the past we used to eat once in a day but now we are able to eat three times a day.*

While Agnes identified increased food and eating more meals per day as a major impact of the program, she also recognized that food was still a struggle for her household as the money did not provide for all of their needs,

> *My daily struggle is food. When the money from* Mtukula Pakhomo *is finished I struggle to get food, to provide for this household.*

In addition to the recurring theme of having more food, participants also discussed worrying less about food, as reflected by caregiver Hadija,

> *I should be honest, my worry about the food has lessened due to* Mtukula Pakhomo *but the only thing that really worries me is the housing condition. I just need to renovate it properly and I am thinking of saving the next cash transfer and use it to do this. I will hire labour to take off this old roof and fix it with the new one.*

Again, even with the relief of worry about food, Hadija continued to worry about the condition of her home. As a 70 year old grandmother, she could not work herself and was reliant on paying others to fix and maintain the house. Nevertheless, the lightening of the worry related to food was salient.

In addition to caregivers discussing their own level of worry, they also discussed their perceptions of how their children worried less about food,

> *Participant:* The children are now happier than they were before we were getting the money.

> *Interviewer:* How can you compare their lives now and before you were receiving the money?

> *Participant:* Now they are happy, before the money they used to struggle.

> *Interviewer:* Can you explain what you mean by struggling?

> *Participant:* Back then they used to worry about what they are going to eat. Now they are happy whenever they hear that I am going to receive the money.

> *Interviewer:* Why are they excited to know you are going to receive money?

> *Participant:* Because they know that once the money is in we can buy food, sometimes good food such as fish or meat.

This caregiver, Dorica, extends beyond her own worry and identifies how she perceives that her children experience less worry about food. She also reflects on how they are able to eat a more diverse range of foods, in particular fish or meat.

Table 7.3.2 shows program impacts on indicators that are actually used by the program in targeting. These all relate to grain stores and how long they either lasted last season or will last in the current season. It is important to highlight that none of these indicators are affected by the program. This is likely because the program does not radically affect agricultural production or post-harvest storage mechanisms. However the program clearly does affect access to food as given by the results in the previous table.

Table 7.3.2: Food Security – Impacts on Maize Stores

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Number of months maize in granary will last	-0.067 (-0.31)	0.116 (0.71)	-0.183 (0.94)	1.175	1.978	1.970
Maize will last at least 3 months	-0.014 (-0.68)	-0.016 (-0.86)	0.003 (0.30)	0.089	0.018	0.008
Number of months maize in granary lasted	-0.092 (-0.37)	0.016 (0.08)	-0.108 (0.41)	3.927	3.405	3.196
Maize lasted at least 3 months	-0.001 (-0.02)	0.016 (0.41)	-0.017 (0.34)	0.487	0.403	0.365
N	9,769	9,769		1,559	1,528	1,704

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables used. * 10% significance ** 5% significance; *** 1% significance.

Figures 7.3.1-7.3.3 show how these food security measures align with different levels of consumption over time. Households with higher per capita consumption are less likely to worry about having enough food, and at both midline and endline we see that treatment households are trending towards being less worried about food even at lower consumption levels. Additionally, the other graphs show

that treatment households are eating slightly more meals per day on average at endline, and they are more likely than at baseline to be eating two or more meals per day, especially at lower levels of consumption.

Figure 7.2.1: Food Worry by Per Capita (PC) Consumption
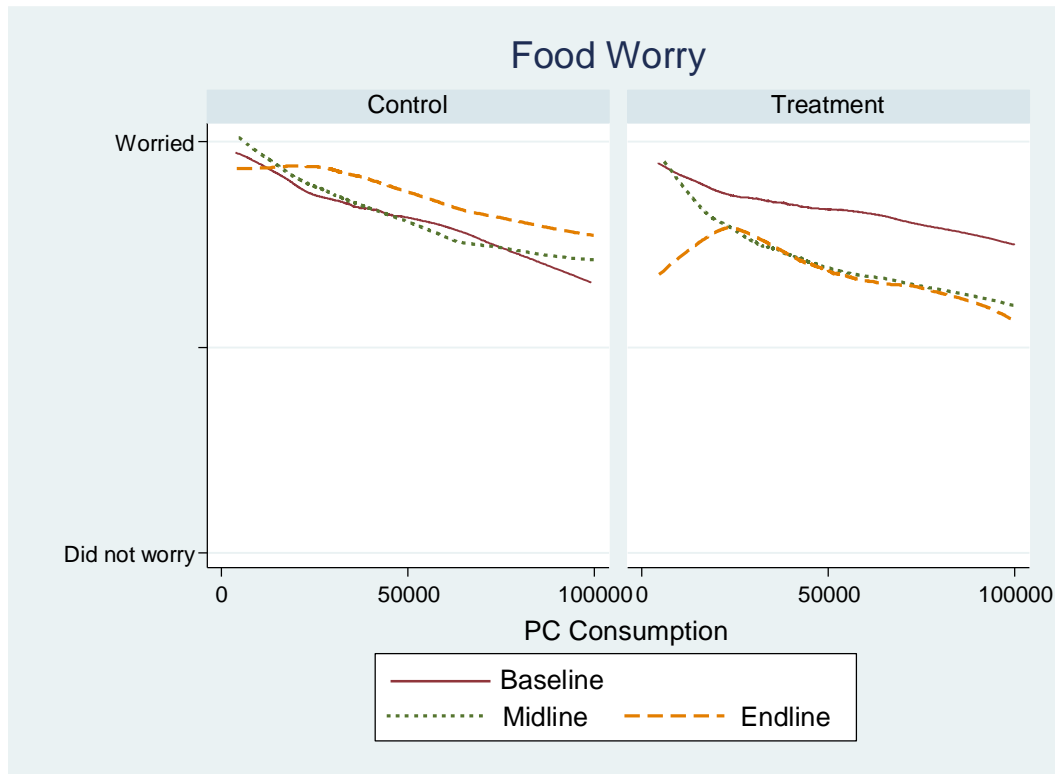
Figure 7.2.2: Number of Meals per Day by Per Capita (PC) Consumption
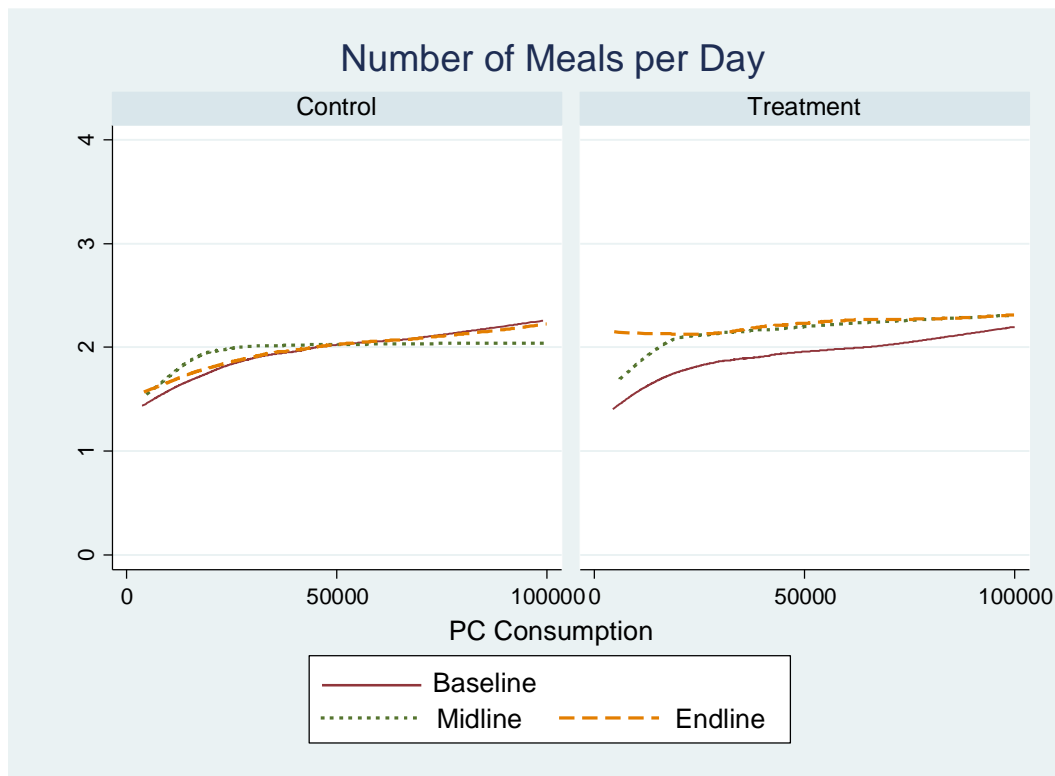
Figure 7.2.3: Two or More Meals per Day
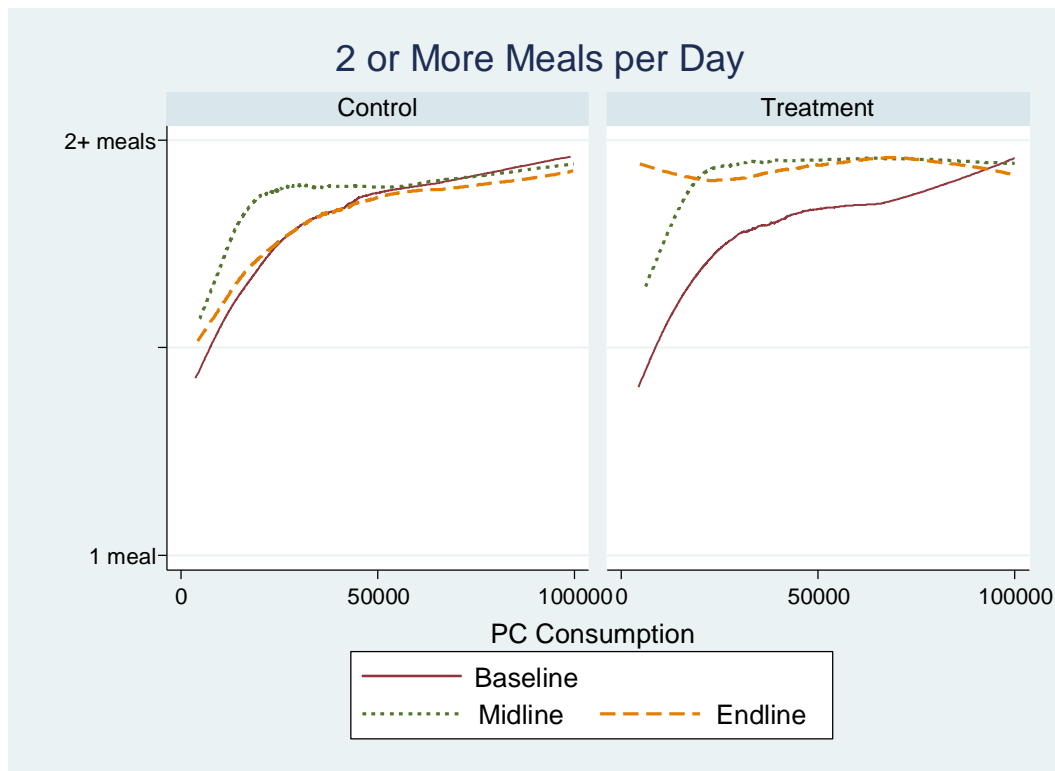
7.4 Children's Material Needs

Material wellbeing of children is measured using a set of three indicators recommended by the United National General Assembly Special Session (UNGASS) on monitoring and evaluation of orphans and other vulnerable children.[18] The indicators are whether or not a child has a pair of shoes, has access to a blanket, and has a change of clothes. We assess the impact of the SCTP on each of these dimensions individually, and on whether a child has all three of these. The bottom row of Table 7.4.1 shows that the SCTP has a strong impact on ensuring a child has all three of these material needs, with an impact of 31 pp at endline, up from 19 pp at midline. This change at endline is driven by shoes (32 pp impact) and blankets (29 pp impact) whereas there is no impact of the SCTP on a change of clothes at the conventional levels of statistical significance of 5 per cent, in part because this was already relatively high at baseline (76 per cent) and had already increased to 94 percent by midline. The subsample analysis on the poorest 50 per cent of the overall sample produce impact estimates of the same pattern and magnitude (large impacts on shoes and blankets, no impact on clothes) and baseline means are notably lower among the poorer households, indicating the strong correlation between overall consumption and children's material needs. For example, at baseline only 9 per cent of children had all three material needs filled, and only 31 per cent had a blanket.

Table 7.4.1: Material Needs of Children

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Owns shoes	0.320***	0.203***	0.117***	0.204	0.640	0.324
	(6.52)	(4.48)	(2.87)			
Owns a blanket	0.292***	0.168***	0.123**	0.357	0.646	0.353
	(4.01)	(3.57)	(2.23)			
Has a change of clothes	0.102	-0.018	0.120***	0.756	0.940	0.768
	(1.65)	(-0.30)	(3.16)			
All 3 material needs	0.306***	0.192***	0.114**	0.120	0.496	0.201
	(6.05)	(5.58)	(2.65)			
N	22,747	22,747		3,530	3,720	4,176

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 7.2.1 for additional explanatory notes on model specification, including a list of control variables used. Age and sex of child are included as additional control variables in these specifications. * 10% significance ** 5% significance; *** 1% significance.

7.5 Summary

The SCTP has achieved its primary objective of ensuring food security and consumption among the ultra-poor labour constrained households, with larger impacts amongst the very poorest. The program has generated an average increase of MWK10,380 per person per year, which represents an increase of 23 per cent over baseline; this increase is 53 per cent amongst the poorest households. Consistent with this, there is a sharp improvement in food security, with an increase by 15 per cent in the number of meals per day, and program households 20 pp less likely to worry about food. Diet diversity has also improved, with significant increases in the budget share devoted to meats, fish and poultry products. Finally, the program has also generated strong positive impacts on the material wellbeing of children. The proportion of children in programme households with a pair of shoes, access to a blanket and a change of clothes has risen from just 12 per cent to 50 per cent. The program increases the likelihood of possession of shoes among children 5-17 by 32 pp, a 10 per cent increase over baseline.

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[18] UNICEF (2005). *Guide to monitoring and evaluation of the national response for children orphaned and made vulnerable by HIV/AIDS*. New York, NY: Author.

8. Impacts on Subjective Welfare

One unique aspect about our household survey is the inclusion of questions on individual subjective well-being to complement the more objective measures on material well-being. We also explored this topic qualitatively. In both the survey with the main respondent and in IDIs with the caregiver, we asked about their individual expectations and preferences to understand the psychological dimension of programme impacts.

8.1 Perceptions of Future Well-being

To assess caregivers' perceptions of their future well-being, we asked caregivers whether they thought their lives would be better in one and two years. Additionally, we asked them the likelihood that their household would need financial assistance in the next year, and the likelihood that they would have a food shortage in the next year. Table 8.1.1 shows that caregivers in treatment households have a more positive outlook on their future well-being in the longer term; they are significantly more likely to think that life will be better in one and two years (18 pp and 17 pp, respectively). On the other hand, caregivers do not report a significantly lower likelihood of needing financial assistance, but they do report a lower likelihood of having a food shortage in the next twelve months as compared to baseline, and this latter difference is statistically significant. The magnitude of the effects on caregivers thinking that life will be better in two years and the likelihood of having a food shortage are slightly larger at endline than at midline, while the impact on perception of food shortage is almost twice as large at endline as compared to midline. These effects are likely due to the predictability of the cash transfer over a longer period of time, which allows beneficiaries to change their expectations about their life situation and future.

Table 8.1.1: Caregiver Perceptions of Future Well-being

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Life will be better in a year *(N=9,489)*	0.181** (2.41)	0.113 (1.45)	0.068 (1.24)	0.519	0.726	0.503
Life will be better in 2 years *(N=9,083)*	0.174*** (3.00)	0.157** (2.44)	0.018 (0.30)	0.433	0.681	0.485
Will likely need financial assistance *(N=9,775)*	-0.111 (-1.62)	-0.039 (-0.62)	-0.071 (1.37)	0.606	0.429	0.553
Will likely have food shortage *(N=9,775)*	-0.124** (-2.06)	-0.075 (-0.96)	-0.049 (0.77)	0.759	0.544	0.676

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

8.2 Stress and Quality of Life

Additionally, we assessed caregivers' perceptions of their well-being by asking questions concerning their quality of life and stress. A quality of life scale was constructed from respondents' answers to how much they agreed to a series of eight positive statements about their lives, such as "*I am satisfied with my life*" and, "*If I could live my life over, I would change almost nothing.*" Each statement was ranked on a 1-5 scale based on how much the respondent agreed with the statement, with higher numbers indicating greater agreement, resulting in a scale with scores ranging from 8-40. Results in Table 8.2.1 show that the cash transfer has had an important impact on caregivers' quality of life. At baseline, the average score among treatment households was 17, which increased to 22 at midline and held at 22 at endline. The overall programme impact is thus strongly significant for quality of life; there is a total impact increase of 3.7 points for caregivers receiving cash transfers over those in the control group at endline – which is slightly higher than the effect of 2.6 points found at midline.

Table 8.2.1: Caregiver Stress and Quality of Life

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Quality of life scale	3.713***	2.751***	0.961*	17.266	22.391	19.358
	(4.63)	(3.62)	(1.71)			
Stress scale	-1.557***	-0.941	-0.616	14.780	12.938	14.404
	(-3.09)	(-1.70)	(1.64)			
N	9,774	9,774		1,558	1,530	1,707

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 8.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

Figure 8.2.1 shows quality of life scores modelled against per capita consumption by survey wave. Overall, there is not much of a relationship between per capita consumption and quality of life scores. However, these graphs clearly show how caregivers in T households have a higher jump in their scores between baseline and endline compared to caregivers in C households across all consumption level, although there is not much difference in scores for T households between midline and endline.

Figure 8.2.1: Quality of Life Scores by Per Capita Consumption
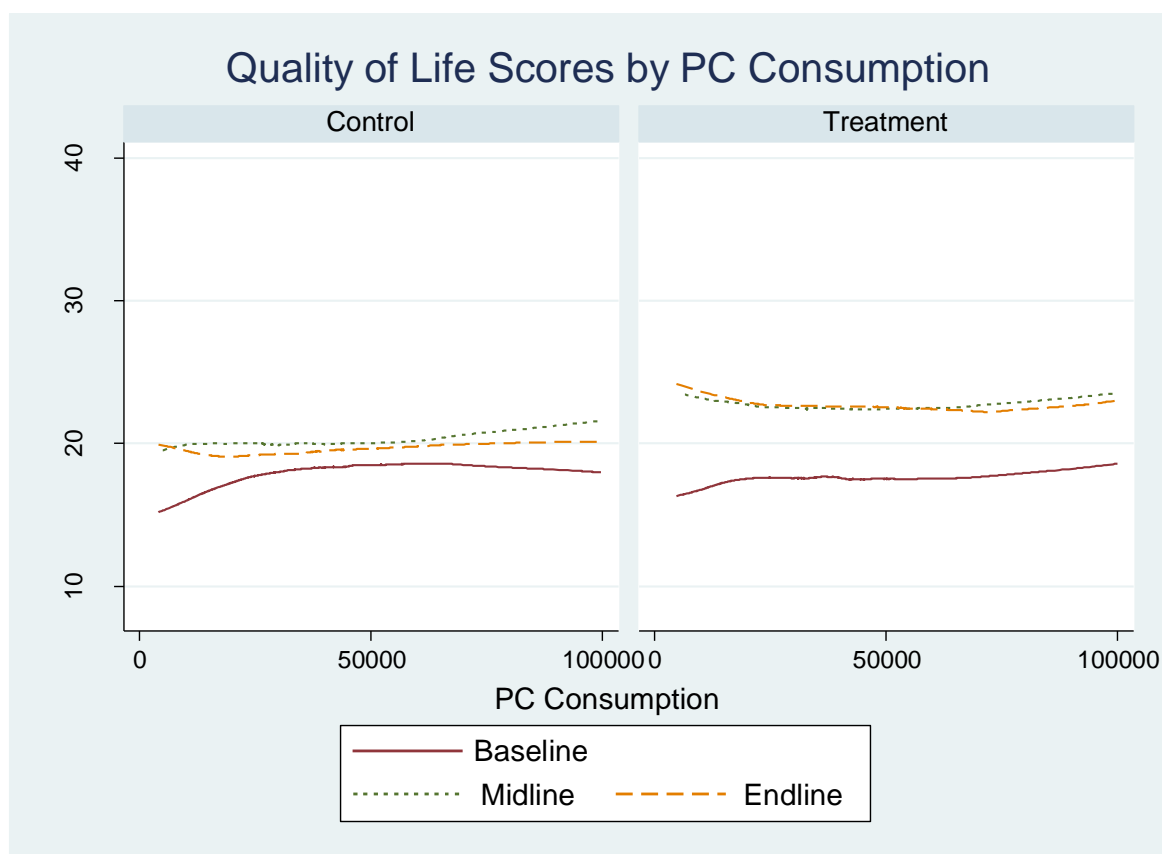
Table 8.2.1 also reports the impact of the programme on the stress scale. To assess a caregiver's level of stress, questions were asked about difficulties, anxieties and control issues respondents felt in their lives. All questions were asked about the last month and given a rank of 1-5 (scores on the stress scale, thus, ranged from 4-20) with higher numbers representing higher frequency that they felt the issues applied to them. Issues included being *"unable to control the important things in life"* and having *"difficulties piling up."* The average stress score in the T households decreased slightly from 15 to 13 at midline and did not decrease any further by endline, however this decline is significantly

larger among respondents in T households in the latter period. While it is possible that caregivers in T households are feeling slightly less stressed since receiving the cash transfer, the overall high scores indicate that subsistence living is a chronically stressful existence.

Echoing the quantitative findings of improved but continued stress, one of the recurring narratives identified in the qualitative interviews was that the SCTP program had helped to reduce worry and stress, but was not enough to eliminate all of the stress and worry experienced by beneficiary households. Participants indicated that having the money helped them to feel less stress, especially about food security. A youth participant, Shadrek, made the link between food security and stress,

> *Interviewer*: Sometimes when a household doesn't have enough money for food and other basic needs it can be very stressful or can make you worry. Have you ever felt this kind of stress or worry?

> *Participant*: Yes it happened, the crops in the household maize field were stolen and this made us harvest little yields. This gave us worries that the food in the household will not be enough to eat. We depend on my grandmother a lot, she does not have any source of income so this stressed us all. I did worry how the granny will source food for all of us in the family. I thought to myself she is very old, what is it that she can do to help us all with the food. I got stressed.

> *Interviewer*: How has your stress or worry changed since your family started receiving to money from the *Mtukula Pakhomo* program?

> *Participant*: The stress that we had in the past is not there now anymore. It was about money to use for buying food, now because the money from *Mtukula Pakhomo* is there to use to buy food the stress is nothing to worry about.

While Shadrek's analysis reflects the salience of food security as a source of stress, other participants continued to feel stress related to crop failure, their own or their children's future, the conditions of their homes, and their health, among other things.

Edith, an 82 year old caregiver, described food as her main worry. The period of the evaluation has been challenging for her family as she felt betrayed by her granddaughter, Eliza, a youth participant, for getting married. Edith worried about being a burden on others given her limited ability to work. Other older female caregiver participants shared this worry of not being able to work and having to rely on others. She worried about the condition of her house, which had a leaking roof, and not having any way to fix it. She reflected how receiving the money reduced but did not eliminate her stress saying, "*The stress is there but when I am sure that we will eat tommorrow*." Further reflecting on stress, Edith provided an interesting perspective,

> *Interviewer*: Ok, so you as Levista, how has the SCTP impacted your life as a whole?

> *Participant*: I have told you that I am just happy that someone has given me money, (to) buy salt, maize school for the children, so yeah.

> *Interviewer*: Does it help with your stress?

> *Participant*: I don't stress, I just wait on the next day to come. Look at me, why should I worry?

> *Interviewer*: So you don't stress in any way?

> *Participant*: Ah, if I did, I would have left the house a long time ago. I am still there even in that condition so whatever happens

This quote reflects how a lifetime of stress has led Edith to live day to day as a way to cope. Her grandaughter Eliza also provided an interesting perspective on stress. Against her grandmother's will, she had married between the baseline and midline interviews. Her motivation to get married was to

alleviate the stress related to poverty in her household, where she was responsible for most of the chores as well as doing ganyu[19] and seeking food.

> *There is a difference when you are married or not. When I was here and not married, I would do all the chores and also go search for food but now I just wait for my husband to give me food.*

Eliza's husband had gone to work in Lilongwe just two weeks before the endline interview. Even though he had not yet started to provide money, she felt less stress knowing that he was seeking work and trying to provide for her and that she was not alone.

A male caregiver, Daudi, shared another perspective on reduced stress due to the support received from the SCTP.

> *Interviewer*: Ok. Sometimes people face challenges on a daily basis. What problems are you facing?
>
> *Participant:* I worry a lot about fertilizer because we don't apply adequate fertilizer to our garden. However I worry less these days because of the Mtukula Pakhomo programme because we save up some of the money and then us it to buy fertilizer to eases our worries.

Daudi also indicated that he was less stressed because he had cash to buy essential items,

> *Yes, I am less stressed now because I am now able to buy some of the things like maize and notebooks more easily than before.*

He also extended his stress reduction to the impact of shocks on his household, in particular sudden illness. In the past they were not prepared for sudden illness, but with the SCTP he felt a little more prepared to handle shocks. Daudi's grandson, Jafar, echoed these findings of reduced stress and increased happiness saying,

> *My wellbeing has improved and I am a happy person. I do get the things that I was lacking in the past. Plus I am knowledgeable of things compared to past years because I have been in school more frequently now.*

Here Jafar links his reduced stress to his ability to stay in school, continue learning, and prepare himself for his future.

Finally, a 57 year old female caregiver, Aisha, reflected on the impact of the SCTP on her stress,

> *Participant:* I used to get worried in the past but now the stress and the worries have been lessened. Right now I can sleep well though I have a little worries. But in the past is was difficult because I was thinking a lot.
>
> *Interviewer:* How has the stress been reduced?
>
> *Participant:* The (stress) has been lessened because of the Mtukula Pakhomo money. I do use the money to deal with some of the things that did worry me like the shortage of food.

By having the money to help deal with basic needs, Aisha's stress had been reduced, which allowed her to sleep better and improve her overall wellbeing.

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[19] Ganyu is a term widely used in Malawi to describe a range of short-term labour relationships and tasks. These are most commonly agricultural, such as weeding or ridging on other smallholders' fields.

8.3 Life Distress

We also asked the main respondents about self-perceived distress in their life. A life distress scale was constructed from respondents' answers to how distressed they currently felt about a series of ten aspects of their lives, such as "Relationship to children," "Financial situation of your household" and "Physical health of you or your household members." Each statement was ranked on a 1-5 scale based on how much distress was associated with each aspect, with higher numbers indicating greater distress, resulting in a scale with scores ranging from 10-50. Results in Table 8.3.1 show that the cash transfer has had significant impacts on caregivers' perceptions of distress in their lives. While scores are only available for respondents at endline, the average score among treatment households was 24 compared to a score of 27 among control households. There is a total impact decrease of 3.5 points for caregivers receiving cash transfers over those in the control group. This result is driven by reductions in smaller perceptions of life distress (-2.1 points) and to a lesser extent social distress (-0.6 points) and financial distress (-0.7 points) among treatment households.

Table 8.3.1: Caregiver Distress

Dependent Variable	Endline Impact (1)	Endline Treated Mean (2)	Endline Control Mean (3)
Life distress scale	-3.453***	23.540	26.590
	(-4.25)		
Social distress	-0.637***	4.892	5.504
	(-3.47)		
Life distress	-2.111***	14.942	16.803
	(-3.71)		
Financial distress	-0.704***	3.706	4.283
	(-5.04)		
N	3,237	1,530	1,707

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 8.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

One area of caregiver stress that came up in several interviews was the stress related to either finding a husband or coping with life without a husband. This was a form of stress experienced by female youth as well, especially those who had children but were not married. Women also described experiencing stigma related to divorce in their communities. Christina, whose husband had abandoned her when she was two months pregnant with her youngest child, identified divorce as a main source of sadness, stress, and worry for herself and her children.

> *Eh! It has changed, it is not like I sit down and feel sorry for myself anymore, I actually thank God for looking down on me. I have been able to start a business, the tobacco, the shade and sometimes when people come, they actually say "eh this household looks good, to say that there isn't a man, one can't believe" because of the way, it is being taken care of. The beer customers say that. They also say, the place looks even better than their homes.*

With the money from the SCTP, Christina was challenging gender norms and expectations but providing well for her household and developing several productive enterprises without a husband. By the end of the interview she concluded,

> *Interviewer:* Ok. Has your stress (related to finding a husband) changed with the SCTP?

> *Participant:* Yes. I don't even think about it often. I actually rebuke myself when I start thinking about that because things are better now. Even when men come to propose marriage, I tell them off that "I don't want, I want to do my business, my farming and my children" because I will relax and say there is a man, he will fix everything and that will lead to destroying all these I have built without a husband. I have been standing on my own, my business and when I am lacking, the SCTP saves me and I am able to hire people to do it, I pay maybe MWK1500 or MWK2000, so I don't need a husband.

While Christina had come to decide that she was better off without a husband, another divorced caregiver, Dorothy, felt the impact could be even more if she had a husband,

> The SCTP has impacted my life. What I didn't have I am able to get, my children wouldn't go to school the full school week because they could be sent back due to school uniform or development fees but the money has helped me, if I was married it could have even impacted the more, but still so long as I am able to send my children to school, I am grateful.

Dorothy's husband had left her three years before when she refused to be in a polygamous marriage. Despite not having the support of a husband, Dorothy had still managed to support one of her sons in going to secondary school, which was a major source of pride.

Several youth and caregiver participants who did have husbands emphasized that these partners were not able to provide much financially for the household. However, having a husband was still the most dominant norm and expectation, and not being able to adhere to these norms contributed to stress among female participants.

8.4 Heterogeneity Analysis

Additional analysis by subpopulations reveals few differences. However there is a stronger impact on the life distress scale score for all subgroups, including female-headed households (reduction of 3.71 points), households with four or fewer members (3.50 points), and the poorest households at baseline (3.64 points).

8.5 Summary

The results on subjective well-being are consistent with those reported for more objective measures of well-being such as consumption and food security. The SCTP has had an impressive effect on the subjective well-being and mental health of participants. Self-reported quality of life, future outlook, and stress have all improved significantly, with the program leading to a 22 percent increase in the quality of life score and an 11 percent change in the stress scale. A new set of measures to capture 'distress' was introduced at end-line—these also show significant reductions in distress in all domains (social, financial and overall) for program beneficiaries. Recent thinking on poverty has highlighted the importance that mental health, stress and 'affect' play in decision-making and executive functioning. These measures are thus not just ends in themselves, but can also help individuals make good decisions in other spheres of life, thus leading to a virtuous circle. The qualitative findings help to illustrate the direct link between receiving the transfer and reducing stress, and the positive benefits of reduced stress on health, education and overall wellbeing. Nevertheless, stress and worry continue to affect beneficiary households, especially those that are labour-constrained and lack social support network.

9. Impacts on Health

This chapter presents information about the impact of the SCTP on key individual- and household-level health indicators. Information about health and well-being was collected in all waves. Health status, morbidity, and treatment-seeking behaviour data were collected for all household members, and data on chronic illness and disability status were collected for individuals ages 10 and older.

Programme impacts for self-reported health status, chronic illness, disability, morbidity, and the incidence and level of health service use were estimated at the individual level for a balanced panel of households. Programme impacts at the household level were also estimated among the balanced household panel.

9.1 Self-Reported Health Status, Chronic Illness and Disability

Main respondents were asked to rate the general health of each household member on a five-point Likert scale, to report if household members aged 10 and older suffered from a chronic illness, and to

report if household members aged 10 and older had difficulties seeing, hearing, walking or climbing steps, remembering or concentrating, or communicating – even with assistance such as glasses or hearing aids. Household members were considered to have a disability if they had a lot of difficulty with, or could not perform, at least one task.

Long term physical health conditions and injuries would not be expected to respond to the cash transfer. Chronic conditions that are related to life-style may be affected, for example if the cash reduced the need to engage in heavy physically-demanding ganyu labour. Dimensions of health that are more responsive to immediate income, such as use of curative care or purchase of drugs would be the strongest candidates for being affected by the cash transfer.

Table 9.1.1 presents programme impacts on self-reported health status, chronic illness, and disability. The prevalence of poor self-reported health status was low in both survey rounds; at baseline only five per cent of beneficiary household members reported poor-health, compared to four per cent in both T and C groups at midline, and three per cent in the T and five per cent in C groups at endline. We did not find significant programme impacts on the proportion of individuals in poor health for the full sample or in further sub-analyses by sex of the household head, baseline poverty level, and baseline household size. We did find a significant programme impact of -4 pp on the per cent of individuals reporting a chronic illness at midline, however by endline this effect disappeared. There was no change in the prevalence of any type of disability between treatment baseline levels and follow-up levels for either T or C households. The prevalence of chronic illness decreased from 26 per cent at baseline to 23 at midline and again to 21 per cent among individuals in both T and C households at endline.

Table 9.1.1: Impacts on Self-Reported Health Status, Chronic Illness and Disability

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Poor health status *(N=46,277)*	-0.013	0.004	-0.017	0.048	0.031	0.048
	(-1.00)	(0.34)	(1.31)			
Chronic illness *(N=32,314)*	-0.036	-0.044**	0.008	0.258	0.213	0.213
	(-1.37)	(-1.94)	(0.45)			
Disability *(N=32,314)*						
Any	-0.010	-0.001	-0.009	0.061	0.074	0.088
	(-0.81)	(-0.09)	(0.73)			
Seeing	-0.004	0.002	-0.006	0.019	0.027	0.034
	(-0.69)	(0.36)	(0.96)			
Hearing	-0.000	-0.002	0.001	0.010	0.016	0.017
	(-0.06)	(-0.62)	(0.35)			
Walking/climbing steps	-0.007	-0.006	-0.001	0.037	0.043	0.048
	(-0.69)	(-0.85)	(0.06)			
Remembering/concentrating	-0.008	-0.002	-0.006	0.011	0.013	0.020
	(-1.27)	(-0.63)	(0.96)			
Communicating	-0.001	0.000	-0.001	0.008	0.009	0.011
	(-0.29)	(0.08)	(0.30)			

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for individual age and sex, as well as baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance. Annex D present results from sub-analyses of health status, chronic illness, and disability.

9.2 Morbidity, Treatment-Seeking Behaviour and Health Expenditures

The occurrence of any illness or injury during the past two weeks declined in both T and C groups between baseline and endline surveys (Table 9.2.1), with only 26 per cent of T individuals and 28 per cent of C individuals reporting an illness or injury at endline, however this is up from midline group averages of 19 per cent and 23 per cent among T and C groups, respectively. We find that the SCTP is associated with a six pp ($p = 0.05$) decrease in the occurrence of illness or injury for the full sample and a 12 pp ($p = 0.01$) increase in the probability of seeking treatment at a public or private health facility among those individuals with an illness/injury. These results, like at midline, seem to be driven by improvements in treatment-seeking behaviours among the poorest households; beneficiaries from the poorest 50 per cent of households were 12 pp ($p = 0.01$) more likely than individuals from control households to seek treatment for a recent illness or injury (Annex D).

Respondents also reported their total expenditures for each individual in the household over the past four weeks for medical care, for medical care not related to an illness (e.g., prenatal care), and for non-prescription medicines. Among the full sample we find no significant programme impacts on health expenditures at endline. Significant programme impacts were found expenditures for illness and injury, the probability of having any non-illness related medical care, and the expenditure levels for both non-illness medical care and for non-prescription drugs at midline. Among those individuals with any expenditures for illness or injury, beneficiary individuals spent MWK 137 more than control individuals ($p = 0.01$). The programme was associated with a less than one pp ($p = 0.05$) increase in the probability of having any non-illness/injury-related medical expenditures, with beneficiary households spending MWK 41 ($p = 0.01$) more than control individuals on average. Beneficiaries spent on average MWK 77 ($p = 0.05$) more than non-beneficiaries on non-prescription medicines at midline. Unfortunately, none of these programme impacts remained at endline.

Table 9.2.1: Impacts on Morbidity, Service Use and Health Expenditures

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any illness or injury (N=46,160; past two weeks)	-0.059** (-2.10)	-0.077** (-3.46)	0.018 (0.62)	0.302	0.259	0.276
Sought treatment at public or private health facility (N=12,014; past two weeks)	0.121*** (3.39)	0.088*** (3.08)	0.032 (1.02)	0.508	0.561	0.555
Health Expenditures (past 4 weeks, MWK)						
Any expenditure for illness or injury (N=46,124)	-0.002 (-0.09)	0.005 (0.43)	-0.007 (0.33)	0.054	0.165	0.160
Expenditure for illness or injury (N=11,890)	65.64 (0.83)	201.28*** (3.00)	-135.64 (1.38)	163.47	553.89	488.19
Any expenditure for medical care not related to an illness (N=46,134)	-0.005 (-1.13)	0.006 (1.37)	-0.011** (2.67)	0.010	0.004	0.011
Expenditure for medical care not related to an illness (N=11,895)	0.33 (0.02)	44.74** (2.47)	-44.41** (2.13)	22.76	15.48	26.96
Any expenditure for non-prescription medicines (N=46,129)	-0.026 (-1.14)	-0.004 (-0.18)	-0.022 (0.98)	0.174	0.135	0.138
Expenditure for non-prescription medicines (N=11,891)	17.85 (0.61))	69.02** (2.17)	-51.17*** (3.24)	92.44	87.83	75.00

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 9.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

Annex D show results for female-headed households, by baseline poverty level, and by baseline household size. Moreover, individuals from T households with fewer than four members were 11 pp (*p*= 0.01) more likely to seek treatment than smaller C households at endline.

In the qualitative interviews, most participants indicated that their household's health was better overall since being in the program. Christina, one of the most highly affected participants in the sample, highlighted the integration of mental and physical health impacts,

> *Interviewer*: Has anything changed in your life since you started getting the money from SCTP?
>
> *Participant*: There is change. Like I said I have stress no more, I am happy.
>
> *Interviewer*: What about your health?
>
> *Participant*: My health is good. I am happy, I used to have a headache most times due to stress but now I am ok.

Caregivers across the qualitative cohort connected their improved physical health and that of their other household members improved health to doing less *ganyu,* having more and better food as well as feeling less stress and worry, as reflected by Daudi, one of the few male caregivers in the qualitative sample.

> *Interviewer:* Ok. Has your health been affected by receiving *Mtukula Pakhomo?*
>
> *Participant:* Yes, I am less stressed now because I am now able to buy some of the things like maize and notebooks more easily than before.

The most salient direct impacts on health were focused on having cash to pay for transport to health facilities, purchase medications, and seek care at private clinics. Several caregivers had chronic conditions and frequently needed care or medication. For example, Agnes was living with HIV and while her anti-retroviral therapy was provided free of charge at the clinic, she used the SCTP money for the transport to the clinic to get her medication. Daudi's wife had recurring health problems and the money from the SCTP had been used for her to seek care,

> *Interviewer*: Ok. How about on health seeking behavior and sicknesses?
>
> *Participant*: When there is need to go to the hospital or to buy medicine if the money from *Mtukula Pakhomo* is available we use it for the expense.
>
> *Interviewer:* Have used *Mtukula Pakhomo* money for any of that purpose in the last year or the last two years?
>
> *Participant:* Yes.
>
> *Interviewer*: What happened?
>
> *Participant*: My wife's feet were feeling hot so I gave her some money to use at the hospital and just two days ago she also used Mtukula Pakhomo money as transport to go to the hospital.

Daudi went on to specify that the hospital where his wife sought care was a paying hospital and that she had payed MWK300.

Halifa was in her mid-70s and emphasized that the SCTP had impacted her health more than her children's health because her children were healthy as she was chronically sick. Again, her examples were focused on having money to seek care and medication. At the time of the endline interview, she indicated that the cash from the SCTP had run out so she was seeking medication at the public clinic. During the last year she had experienced malaria and pneumonia and when she had cash, she had sought care in a private clinic, where she had paid MWK1500. She emphasized that with the money from the program she was able to get "quick treatment", rather than delaying until she can find money, and better quality than what she could get at the free public clinic. While she felt overall that

her health was more impacted, she had also paid MWK2500 when one of her grandchildren got sick during the last year using money from the program.

Hadija also experienced chronic health problems and highlighted how she used the money from the SCTP to pay for her transport to the clinic. Describing the impact of the program, she said,

> *I bought the clothes for myself. I have also benefited by using the money for transportation to get to Maseko health facility. There I use the same money to pay for medical services like medicine and get an injection and come back home. When I also want to go to the general hospital I do pay for bicycle taxi and go to the hospital get treated and come back.*

She indicated that the cost of these injections had increased from MWK500 to MWK1000 and that she could only seek the care when she had the cash, saying, *"(I have) Nowhere to get other cash, when it is finished, it is finished."* While Hadija discussed having nowhere to get money when the cash had run out, other caregivers discussed having the confidence to borrow money when they had a health emergency but had run out of cash. Lucy, 70 year old caregiver, described how she had been unable to borrow money for health needs in the past,

> *Interviewer*: Ok. How has being in the programme affected your health and that of other household members?
>
> *Participant*: We are all very healthy. I cannot say that we are frequently sick that would be telling a lie.
>
> *Interviewer*: Ok. You earlier said that for the few occasions you we sick you bought some medicine. Is this what you were also doing in the past when a household member is ill?
>
> *Participant*: It was not possible. I would try to borrow money from my relatives and friends but they wouldn't give me. But these days they even give me MWK500 because they know that I will repay the money using my payment from *Mtukula Pakhomo*. That is exactly why I am saying that things have now changed for me. These days when I go to someone to borrow money they give me. When I get paid I repay the money.

Lucy's example highlights how her access to resources had expanded beyond just the cash through her expanded access to resources from family members lending her money.

9.3 Household-Level Health Indicators

In Table 9.3.1, we show programme impacts on health indicators at the household level. We do not find any statistically significant impacts on self-reported poor health or disability at the household level. However, we do find that the programme is associated with a two pp reduction in the percentage of households that have at least one member with a chronic illness ($p= 0.10$. Moreover, we find a 13 pp reduction in the percentage of households with at least one incidence of illness or injury in the past two weeks ($p= 0.01$); an effect of similar magnitude was found at midline showing the greater transfer value and longer timeframe did not produce any additional programme impacts for illness and injury in the household.

Table 9.3.1: Household-Level Health Indicators

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
At least one household member…						
Self-reported poor health	-0.018	-0.024	0.006	0.327	0.327	0.385
	(-0.99)	(-1.17)	(0.34)			
With a chronic illness	-0.017*	-0.022*	0.005	0.842	0.842	0.820
	(-1.90)	(-1.93)	(0.62)			

With a disability	-0.010 (-0.77)	-0.006 (-0.34)	-0.004 (0.26)	0.389	0.389	0.406
With illness/injury (past 2 weeks)	-0.131*** (-3.00)	-0.129*** (-3.48)	-0.002 (0.04)	0.524	0.407	0.450
With any medical expenditures (past 4 months)	-0.013 (-1.41)	-0.019 (-1.66)	0.006 (0.60)	0.891	0.891	0.853
N	9,906	9,906		1,576	1,576	1,726

Notes Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 9.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

9.4 Summary

We find, on average, significant impacts of the SCTP on occurrence of illness or injury in the past two weeks, seeking treatment at a health facility for illness/injury, and households reporting at least one member with any illness or injury within the past two weeks. Although differing in magnitude, these programme impacts are consistent between follow-up rounds. Additionally, programme impacts on treatment-seeking behaviours and expenditure levels for illness/injury are particularly strong for the poorest 50 per cent of beneficiary households, suggesting that baseline poverty intensity is an important moderator of programme impacts on health service use.

10. Impacts on Young Child Health

Child health and anthropometric data were collected at baseline, midline, and endline. Information about preventive health programme participation, recent morbidity, health service use, feeding practices, and delivery conditions were collected for all household children age 0-5 years at each survey round, and anthropometric measurements were taken for all children ages 6-59 months.[20]

Programme impacts were calculated for a balanced panel of households with at least one young child (as opposed to a panel of children) within the qualifying age range. Based on the Malawi SCTP conceptual framework, the cash transfer is hypothesized to improve child health and anthropometric outcomes through improved nutrition and health service utilization. However, as the conceptual diagram illustrates, the pathway between receipt of the cash and an outcome such as anthropometry is quite long and complex, with many intermediate actions and outcomes required. In addition, changes in longer-term anthropometric outcomes such as height-for-age take time and is unlikely to therefore be affected within the time-frame of the valuation. On the other hand, shorter term indicators such as weight-for-age could be affected if morbidity goes down and food intake increases. However even food intake does not reflect diet quality or meal frequency.

10.1 Anthropometry

Group means and estimates of programme impacts on anthropometric outcomes for children age 6-59 months are presented in Table 10.1.1. At baseline, the average weight-for-age z-score (WAZ) for children ages 6-59 months residing in T households was -0.97. By endline, children were slightly worse off in terms of overall means, and we found no significant programme impact on the WAZ.

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[20] Anthropometry was taken for an extended age group 6-71 months for the endline survey, however for comparability we analyzed the age group 6-59 months only.

Table 10.1.1: Impacts on Anthropometry among Children Ages 6 – 59 Months

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age *(N=4,535)*						
WAZ	0.014 (0.17)	-0.094 (-1.42)	0.108 (1.48)	-0.975	-0.974	-1.029
Underweight	0.014 (0.58)	0.043 (1.47)	-0.028 (0.90)	0.177	0.170	0.177
Severely underweight	0.002 (0.15)	0.026* (1.80)	-0.024 (1.53)	0.050	0.039	0.039
Height-for-age *(N=4,476)*						
HAZ	-0.119 (-1.33)	0.009 (0.11)	-0.128 (1.51)	-1.890	-1.909	-1.742
Stunted	0.020 (0.42)	-0.007 (-0.19)	0.027 (0.82)	0.493	0.458	0.414
Severely stunted	0.022 (0.73)	0.051** (2.38)	-0.028 (1.04)	0.214	0.182	0.154

Table 10.1.1: Impacts on Anthropometry among Children Ages 6 – 59 Months (continued)

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-height *(N=4,495)*						
WHZ	0.049 (0.58)	-0.123 (-1.61)	0.172** (2.14)	0.166	0.158	-0.010
Wasted	-0.027*** (-2.99)	-0.014 (-1.09)	-0.013 (0.89)	0.045	0.029	0.047
Severely wasted	-0.002 (-0.37)	-0.005 (-1.07)	0.003 (0.70)	0.011	0.007	0.014

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for sex and age in months of the child, baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

At baseline, the overall T mean on height-for-age z-score (HAZ) was -1.89, with approximately half (49 per cent) of the T sample qualifying as stunted. No overall programme impacts were found for HAZ or prevalence of stunting, nor did we find impacts amongst subgroups. However, we did find that the programme decreased the prevalence of wasting among beneficiary children by three pp (*p*=0.01). This impact is driven mostly by children aged 6-23 months, children from female headed households, and male children for which the programme decreased the incidence of wasting by nine pp (*p*= 0.01), three pp (*p*= 0.05), and six pp (*p*= 0.05), respectively. Moreover, the programme was found to increase weight-for-age z-score (WHZ) for children in male headed households by 0.49 points (*p*=0.05). However, WHZ results should be interpreted with caution, given the low prevalence of wasting at baseline and follow-up among all study children.

Annex D presents programme impacts for anthropometric outcomes by the sex of the child, sex of the household head, baseline poverty level, household size at baseline, and 6-23 month and 24-59 month child age subgroups.

10.2 Feeding Practices

Table 10.2.1 presents results of programme impact on feeding practices for children aged 0-5 years. Less than 40 per cent of children under-five in T households were fed solid foods three or more times per day at baseline, but by midline and, subsequently, endline, about half of these children were receiving more solid meals, compared to only 31 per cent of children in C households at endline. Even so, we find a slightly significant impact on children being fed solid foods three or more times per day at both endline (9 pp) and midline (6 pp), however the difference between the results is not significant implying no additional impacts were realized due to longer receipt of the transfer or the increased transfer value for beneficiary households. On the other hand, the per cent of children living in beneficiary households that consumed vitamin A-rich foods in the past day increased from 69 per cent at baseline to 81 per cent at endline, compared to 69 per cent of children in C households at endline—but again, no significant programme impacts were found.

While limited overall programme impacts were found, we do find a significant impact on receiving three or more solid meals per day by baseline household size, sex of the household head, and baseline poverty level. Specifically, beneficiary children from larger households were 12 pp (p=0.01) more likely than their peers in the C group receive solid food at least three times per day, those with female household heads (p= 0.05) were about 11 pp (p= 0.05) more likely than their peers in the C group to receive solid foods at least three times per day, while those from the poorest 50 per cent of households at baseline were 15 pp (p=0.01) more likely. Each of these endline results are statistically similar to the midline impacts suggesting, again, no additional benefit from an additional year of receiving the transfer.

Table 10.2.1: Impacts on Feeding Practices of Children Aged 0-5 Years

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Fed solid foods ≥ 3 times/day *(N=5,140)*	0.093* (2.00)	0.061 (1.24)	0.032 (0.70)	0.372	0.494	0.312
Consumed Vitamin-A rich foods in past day *(N=5,135)*	0.038 (0.65)	-0.015 (-0.29)	0.054 (1.50)	0.689	0.816	0.693

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 10.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

Annex D presents programme impacts disaggregated by the sex of the child, sex of the household head, household baseline poverty level, and household size.

10.3 Morbidity and Use of Curative Care

Incidence of diarrhoea, fever, and cough in the two weeks prior to interview declined from 42 per cent at baseline to 39 per cent at endline for the T groups (Table 10.3.1). Even so, we do not find programme impacts on any of these outcomes in the full sample. However, significant gains in treatment-seeking behaviours can be attributed to the programme. At baseline, caretakers for the majority of children in T households sought curative care at either a public or private health facility. At endline, 92 per cent of children with diarrhoea during the past two weeks, 92 per cent with a fever, and 91 per cent of children with a cough received treatment in beneficiary households, compared to 87 per cent, 90 per cent, and 83 per cent, respectively, in the C group. However, significant programme impacts were found for treatment-seeking behaviour for fever, only. Compared to children from C households, beneficiary children were 12 pp (p= 0.05) more likely to have sought curative care for fever. This impact is not significantly different from the effect size found at midline of 18 pp.

Programme impacts on morbidity and care-seeking behaviours for sick children were even more pronounced among subgroups; beneficiary children from smaller T households were 18 pp *(p=0.05)* more likely to have sought treatment for fever than children from smaller C households at baseline while those from households with more than four members were 12 pp (*p=0.05*) more likely. Children in male-headed households were found to be 50 pp (*p=0.01*) more likely to seek treatment for diarrhoea than those in male-headed C households. Annex D show programme impacts on child morbidity and use of curative care by the sex of the child, sex of the household head, baseline poverty level, and household size.

Table 10.3.1: Impacts on Morbidity and Use of Curative Care (Past Two Weeks) among Children Aged 0-5 Years

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any illness *(N=5,037)*	0.034	0.013	0.022	0.421	0.388	0.392
	(0.67)	(0.30)	(0.37)			
Diarrhoea	-0.017	0.028	-0.045	0.164	0.129	0.159
	(-0.49)	(1.21)	(1.54)			
Fever	0.057	0.028	0.030	0.238	0.232	0.227
	(1.27)	(0.85)	(0.60)			
Cough	0.044	0.019	0.024	0.257	0.166	0.138
	(1.02)	(0.55)	(0.59)			
Sought treatment at public or private health facility						
Diarrhoea *(N=725)*	0.104	0.074	0.030	0.703	0.917	0.869
	(1.46)	(0.87)	(0.48)			
Fever *(N=1,178)*	0.122**	0.184***	-0.062	0.679	0.920	0.899
	(2.09)	(3.03)	(1.14)			
Cough *(N=888)*	0.039	0.048	0.041	0.714	0.907	0.830
	(1.47)	(0.70)	(0.56)			

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 10.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

10.4 Preventive Health Care Practices

Baseline and endline means and programme impacts on young child preventive care practices for children aged 0-5 years are presented in Table 10.4.1. The percentage of children ages 0-5 participating in nutrition programmes, under-five clinics, and receiving well-baby/under-five check-ups declined from baseline to endline among beneficiary households. At baseline, only four per cent of T households were participating in a nutrition programme, and this dropped to three per cent at endline (compared to an increase to five per cent among C households at endline). At baseline, over two-thirds of children participated in an under-five clinic, this decreased to 65 per cent for the T group at midline and then remained about the same at 68 per cent at endline, but no significant impact of the programme was found. Attendance at a well-baby or under-five check-up in the past six months also declined from baseline to endline, although only slightly. The majority of children were reported to have a child passport[21] in all survey rounds, as such, we find no programme impacts on this outcome.

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[21] A standardized card used in healthcare in Malawi that is typically required to be tended to at a health centre. A Child Health Passport is employed for keeping track of a child's immunizations, nutritional status, and other health issues and intervention, and is kept by the child's guardian. The passports also typically contain pertinent information for young child health – for example, on breastfeeding.

Table 10.4.1: Impacts on Preventive Care among Children Aged 0-5 Years

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Participation in nutrition programme *(N=5,037)*	-0.021 (-1.37)	-0.031* (-1.73)	0.010 (0.50)	0.037	0.032	0.052
Participation in under-five clinic *(N=5,037)*	-0.051 (-0.89)	0.008 (0.16)	-0.059 (1.47)	0.725	0.677	0.753
Check-up at well-baby/under-five clinic in last six months *(N=5,036)*	-0.052 (-0.66)	0.016 (0.18)	-0.068 (1.33)	0.483	0.467	0.534
Possession of a child health passport *(N=5,130)*	0.037 (1.56)	0.020 (0.88)	0.018 (0.87)	0.853	0.934	0.940

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 10.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

Delving deeper, we find the likelihood of participating in a nutrition programme to decrease for children in male headed households participating in the SCTP by 10 pp (*p*=0.05), but find no other significant impacts among subgroups. Annex D report programme impacts on preventive care by sex of the child, sex of the household head, baseline poverty level, and household size.

10.5 Delivery Location and Assistance

Lastly, we investigated whether the programme had any significant impacts on delivery practices during the period between baseline and endline. At baseline, three-fourths of deliveries from beneficiary households were at a health facility and were attended by a skilled provider. These percentages were higher for both T and C households at endline, but we found no significant programme impact on facility deliveries or use of skilled birth attendants.

Table 10.5.1: Impacts on Delivery Location and Attendance for Births since Baseline

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Delivery at a health facility	0.036 (0.80)	0.024 (0.64)	0.012 (0.31)	0.763	0.911	0.896
Delivery by a skilled attendant	0.031 (0.67)	0.024 (0.69)	0.007 (0.18)	0.757	0.904	0.902
N	4,729	4,729		1,060	196	227

Notes: Health facility includes hospital, health facility, and village health post. Skilled birth attendant includes doctors, nurse, midwife, and clinical officer. Estimations use difference-in-differences modelling among individual births within the past 24 months in panel households and estimates for binary outcomes are estimated using LPM. See Table 10.1.1 for additional explanatory notes on model specification, including a list of control variables used. T-statistics in parentheses. * 10% significance ** 5% significance; *** 1% significance.

10.6 Summary

On average, we find positive programme impacts on prevalence of wasting among children ages 6-59 months at both midline and endline. We also find slight overall programme impacts for the percentage of children that are fed solid foods at least three times per day at endline, while there were no impacts at midline, and no impacts on children who had consumed vitamin A-rich foods in the past day in either round. We do see some significant treatment effects for children's anthropometric and feeding outcomes among subpopulations by baseline household poverty status, household size, sex of the child, and sex of the household head across rounds. We found no programme impacts on the incidence of child diarrhoea, fever or cough during the two weeks prior to the survey at endline. There were, however, significant programme impacts on treatment-seeking behaviours for beneficiary children with fever in both survey rounds. Lastly, there were no significant differences in children from T households participating in preventive care activities compared to children from C, and we

found no programme impacts for delivery location or assistance among births across all survey rounds.

11. Impacts on Education and Child Work

This section reports on the impacts of the SCT on children's activities. It starts with a sub-section examining program effects on children's participation in school. It then proceeds with a sub-section looking at effects on children's engagement in economic activities and household chores and ends with a section on the impact of the SCT on child labour as defined in international conventions.

Primary schools do not charge fees in Malawi, although sometimes parents are asked or required to contribute to incidental expenses, such as funds to improve the school. In addition, while shoes and uniforms are not absolutely compulsory, there tends to significant stigma attached to not having them, so that they constitute an important out-of-pocket cost for school enrolment at the primary school level. On the other hand, there are fees at the secondary school level, as well as shoe and uniform requirements, so the financial costs of secondary school are much higher than at primary level. There are also fewer secondary schools, so that the average travel time is higher, which also raises out-of-pocket costs. Thus, financial constraints are likely to be more influential among older children (of secondary school age) but can also be barriers at younger ages depending on the particular community and the norms around uniforms and shoes. In terms of school attendance (as opposed to enrolment), if the cash transfer reduces the need for children to work for pay, attendance may increase.

11.1 Education

Figure 11.1 depicts Lowess smoothed graphs of children's school attendance during the current school year separately for the control group (left panel) and the treatment group (right panel). School attendance has an inverted U-shaped relationship with age and peaks around the age of 12. We observe an increase in school attendance in both the control and the treatment group from baseline to endline. However, this increase is more pronounced in treatment villages across all age groups.

Figure 11.1.1: School Enrolment
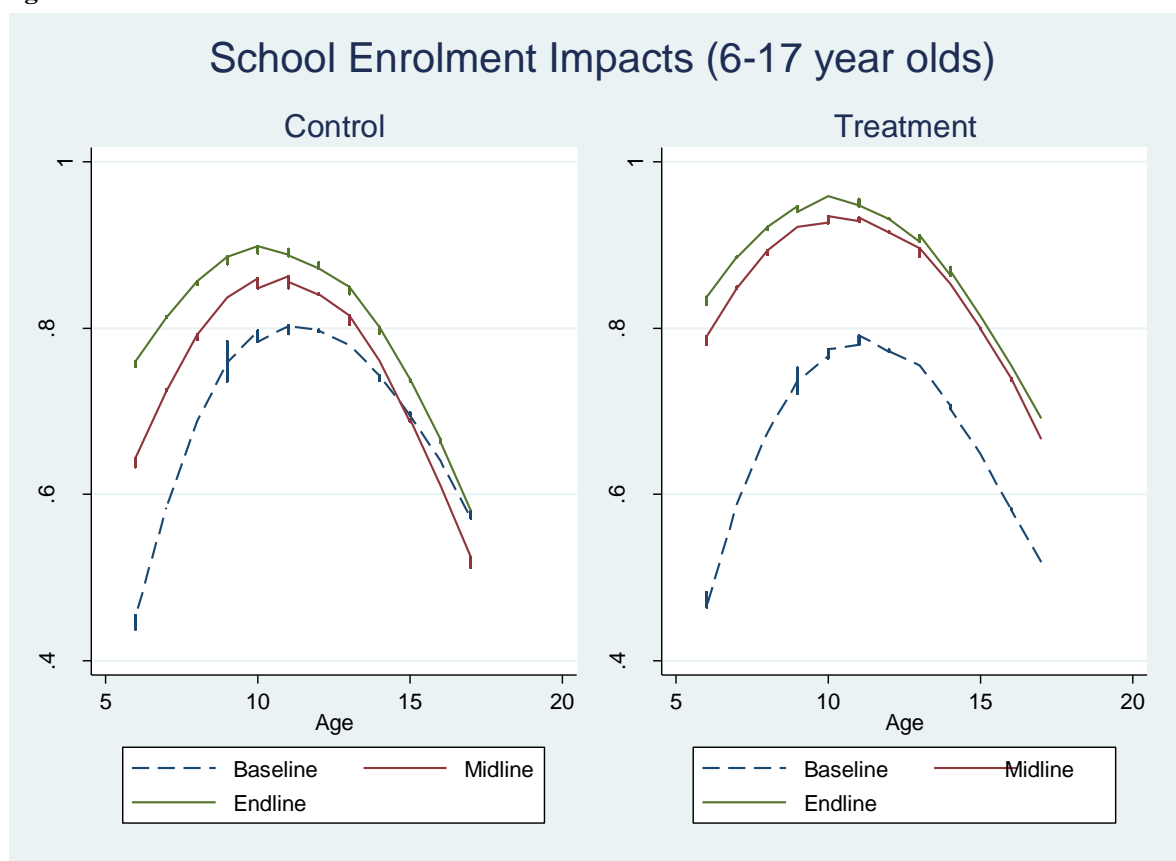
Accordingly, our estimates (displayed in Table 11.1.1) show that the SCT had a beneficial effect on school attendance. In our estimates, as in all the estimates in the remainder of this chapter, we incorporate the control variables used in the remainder of the household level regression, as well as additional gender, and age dummies. The first two rows of the table focus on all children aged 6 to 17 (i.e. primary and secondary school aged children) and respectively display the effect of the SCT on school attendance during the current school year and *regular* school attendance during the current school year (defined as school attendance without withdrawal from school for two consecutive weeks or more over the past 12 months). Our estimates indicate strong effects of the program on school participation at midline and endline. In particular, at midline, children in the treatment group were about 11 percentage points more likely attend school than children in the control group and about 13 percentage points more likely to attend school without interruptions. At endline, these impacts were 9 and 13 percentage points respectively.

Effects appear to be somewhat stronger in magnitude for secondary school aged children (14 to 17) than for primary school aged children (6 to 13). For the former, school attendance during the current school year (without interruptions) had increased by about 16 (16) percentage points at midline and 13 (16) percentage points at endline. For the latter, school attendance during the current school year (without interruptions) had increased by about 13 (10) percentage points at midline and 8 (12) percentage points at endline (the latter not statistically significant). We also examined program effects on pre-school aged children (3-5), but find no statistically significant impacts on their school attendance (although point estimates for this age group are also markedly positive). Effects on school attendance and regular school attendance appear marginally stronger for boys than girls. At both midline and endline, for instance, program impact on regular school attendance was 15 percentage points for boys and 11 percentage points for girls. As shown in Annex D, the effects of the SCT on school attendance are somewhat stronger for poorer and bigger households.

Table 11.1.1: School Attendance

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
ALL, AGES 6-17						
Currently attending school	0.089***	0.114***	-0.025	0.686	0.898	0.832
	(3.01)	(4.47)	(1.23)			
N	21,703	21,703		3,342	3,548	3,952
Attending school regularly	0.132***	0.134***	-0.002	0.592	0.859	0.742
	(4.28)	(4.27)	(0.07)			
N	21,701	21,701		3,342	3,548	3,952
EFFECTS BY AGE GROUP						
AGES 6-13						
Currently attending school	0.076**	0.101***	-0.025	0.708	0.936	0.871
	(2.34)	(3.42)	(1.05)			
N	16,072	16,072		2,515	2,469	2,822
Attending school regularly	0.124***	0.129***	-0.005	0.609	0.902	0.784
	(3.72)	(3.70)	(0.18)			
N	16,071	16,071		2,515	2,469	2,822
AGES 14-17						
Currently attending school	0.134***	0.162***	-0.028	0.619	0.806	0.732
	(4.41)	(6.84)	(1.07)			
N	5,631	5,631		827	1,079	1,130
Attending school regularly	0.163***	0.157***	0.006	0.540	0.758	0.636
	(4.69)	(5.31)	(0.16)			
N	5,630	5,630		827	1,079	1,130

AGES 3-5

Currently attending school	0.055	0.043	0.012	0.234	0.354	0.316
	(0.81)	(0.68)	(0.20)			
N	3,616	3,616		591	533	629
Attending school regularly	0.061	0.055	0.007	0.207	0.350	0.303
	(0.97)	(0.90)	(0.11)			
N	3,616	3,616		591	533	629
EFFECTS BY GENDER						
BOYS AGED 6-17						
Currently attending school	0.090***	0.125***	-0.034	0.685	0.906	0.832
	(3.17)	(4.49)	(1.53)			
N	11,089	11,089		1,703	1,823	2,020
Attending school regularly	0.150***	0.154***	-0.004	0.582	0.869	0.729
	(5.00)	(4.53)	(0.13)			
N	11,088	11,088		1,703	1,823	2,020
GIRLS AGED 6-17						
Currently attending school	0.088**	0.103***	-0.015	0.687	0.889	0.831
	(2.29)	(3.22)	(0.69)			
N	10,614	10,614		1,639	1,725	1,932
Attending school regularly	0.113***	0.113***	-0.000	0.603	0.848	0.755
	(2.89)	(3.16)	(0.00)			
N	10,613	10,613		1,639	1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. All estimations control for gender, age dummies, baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

As shown in Table 11.1.2 the SCTP resulted in a concomitant increase in education expenditures incurred during the current school year, roughly equivalent to the registered impact on school attendance (13 percentage points at midline, 10 percentage points at endline in the overall sample). The consumption section discusses the actual per capita household education expenditures in more detail.

Table 11.1.2: Education Expenditure

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
ALL, AGES 6-17						
Any education expenditure	0.097***	0.131***	-0.035	0.647	0.893	0.813
	(3.19)	(4.14)	(1.31)			
N	21,435	21,435		3,256	3,546	3,951
EFFECTS BY AGE GROUP						
AGES 6-13						
Any expenditure	0.088**	0.122***	-0.034	0.662	0.932	0.851
	(2.64)	(3.47)	(1.20)			
N	15,849	15,849		2,436	2,467	2,822
AGES 14-17						
Any expenditure	0.133***	0.171***	-0.039	0.605	0.803	0.717
	(4.00)	(6.01)	(1.22)			
N	5,586	5,586		820	1,079	1,129

EFFECTS BY GENDER						
BOYS AGED 6-17						
Any expenditure	0.099***	0.149***	-0.051	0.643	0.901	0.813
	(3.38)	(4.12)	(1.65)			
N	10,963	10,963		1,663	1,821	2,019
GIRLS AGED 6-17						
Any expenditure	0.094**	0.112***	-0.018	0.652	0.885	0.813
	(2.33)	(3.16)	(0.65)			
N	10,472	10,472		1,593	1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Increased school attendance does not necessarily translate into increased grade progression. Children who are induced to attend school by the program may, for instance, not perform well in school and hence not be allowed to progress to a higher grade at the end of the school year. We examine the effects of the SCT on grade progression in Figure 11.1.2, which shows the effects of the program on the highest grade completed by children aged 6 to 17 at baseline, midline, and endline. The top panel focuses on children in control areas and the bottom panel on children in treatment areas. In the control group, we observe a reduction in the probability that children aged 6-17 did not complete even the lowest grade of primary school and a modest increase in the probability that children completed the lower and middle grades of primary school from baseline to endline. Very few children in control areas completed any grades in secondary school in any of the survey waves. This pattern looks similar and not much more pronounced in treatment areas. There is no evidence of a strong impact on grade progression.

Figure 11.1.2: Highest Grade Completed In Control (Top Panel) and Treatment (Bottom Panel)

Highest grade completed by children aged 6-17 in treatment
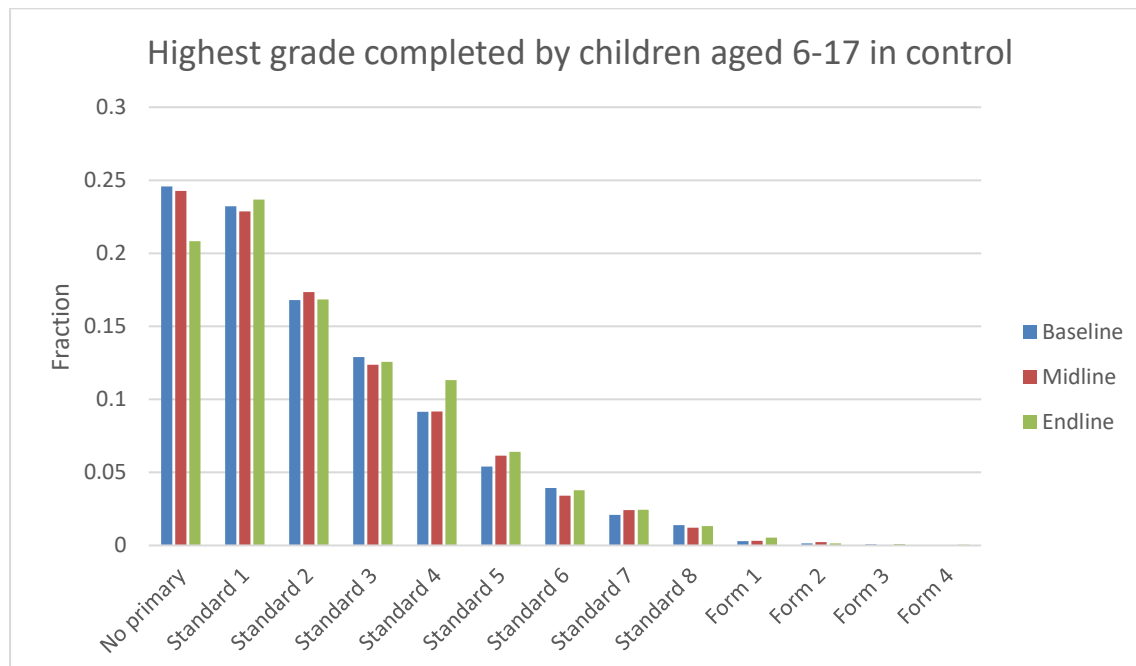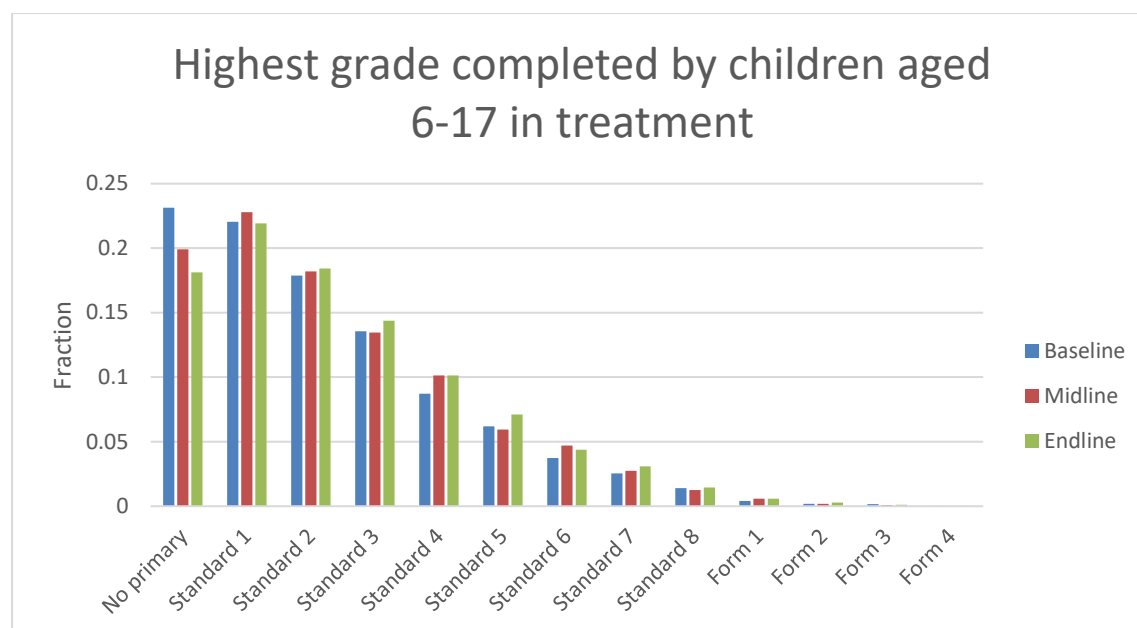
Table 11.1.3 examines impacts on highest grade completed more formally. Impacts on this outcome are generally limited. In accordance with the graphical evidence, we observe no statistically significant effects on grade progression. We also examined alternative indicators for grade progression, including whether children attend the appropriate grade for age (grade (standard) 1 of primary school at age 6 up to grade (form) 4 of secondary school at age 17) and the difference between the highest grade actually completed by the child and the highest grade the child should have completed at his/her age (results not displayed). We also find limited to no statistically significant effects on these outcome variables. Potentially, more time is needed to see increased school attendance translate into increased grade progression.

Table 11.1.3: Highest Grade Completed

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
ALL, AGES 6-17						
Highest grade completed	0.235	0.153	0.082	2.547	3.183	2.992
	(0.95)	(1.10)	(0.48)			
N	21,703	21,703		3,342	3,548	3,952
EFFECTS BY AGE GROUP						
AGES 6-13						
Highest grade completed	0.314	0.219	0.095	1.963	2.638	2.507
	(1.01)	(1.37)	(0.40)			
N	16,072	16,072		2,515	2,469	2,822
AGES 14-17						
Highest grade completed	-0.006	0.000	-0.006	4.353	4.468	4.218
	(-0.03)	(0.00)	(0.05)			
N	5,631	5,631		827	1,079	1,130
EFFECTS BY GENDER						
BOYS AGED 6-17						
Highest grade completed	0.204	0.087	0.117	2.519	3.177	3.004
	(0.93)	(0.63)	(0.68)			
N	11,089	11,089		1,703	1,823	2,020

GIRLS AGED 6-17						
Highest grade completed	0.269	0.228	0.042	2.575	3.190	2.979
	(0.87)	(1.11)	(0.22)			
N	10,614	10,614		1,639	1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

In the qualitative endline interviews, both caregivers and youth identified school attendance and performance as key impacts of the SCTP. Participants identified several ways in which receiving the transfer improved attendance including having money to buy uniforms and supplies, pay fees, and reduce the amount of ganyu that previously had caused children to be absent. Performance was impacted by having breakfast before going to school which helped youth to concentrate, improved attendance, less bullying, more time outside of school for studying, and improved conditions at home for studying.

At baseline, 9 of the 16 youth participants in the qualitative cohort were consistently attending school (5 boys and 4 girls). At endline, 7 youth were consistently attending school with a more pronounced gender disparity, 6 boys and 1 girl, echoing the quantitative findings of a gendered pattern in the impact on school attendance. Table 1 provides a summary of the educational transitions of the qualitative cohort participants. The three girls who had been attending school at baseline but not at endline dropped out due to getting married and/or pregnant. None of the 4 girls who were not attending at baseline had gone back to school by endline. The reason for not going back was a combination of having been out of school too long as well as marriage and having children, which made it more difficult if not impossible to go back to school. One female youth, Eliza, who had dropped out of school due to poverty and then got married because there was "no one to help us", explained that her husband would not approve of her going back to school,

> *Interviewer:* Would you go back to school given a chance?
>
> *Participant:* That would be my husband's decision.
>
> *Interviewer*: What would you be your decision?
>
> *Participant:* Mmmmmh, then I will get old while in school, I cannot go back.
>
> *Interviewer:* Apart from feeling old, what other reason cannot make you go back to school.
>
> *Participant*: My marriage and also my husband cannot allow me and also my grandmother cannot allow.
>
> *Interviewer*: Why would your husband not allow you to go to school?
>
> *Participant*: He would say who will be cooking for him.

While Eliza had already left school before getting married, this exchange highlights how her future decision making is now influenced by her husband.

Among the boys, two male participants who had not been attending school consistently at baseline were back in school at endline, which they directly attributed to the SCTP for the reasons listed above. One male youth had dropped out of primary school and had moved to Lilongwe to attend madrasa at the time of the endline interview. Karim, who was the one male youth participant who had not been in school at baseline and had not returned at endline, explained that for his family, the money was simply not enough to allow him to go back to school as he was the primary economic provider. His mother had a chronic health condition and his grandmother was not able to work so Karim was responsible for all of the chores in addition to generating income. He explained that he wanted to return to school but lacked sufficient "support",

If things were ok at home I would go back to school but I wouldn't buy a short or school uniform while there is no food here. That cannot happen. I would rather buy food than buy clothes. That is also one of the reasons that I dropped out of school because of lack of support…If there was enough food at home I would go back to school because then I would want to know that there will be food for me at home. I would want to know how to read and write at school.

Karim's response highlights the salience of food security as a determinant of school attendance, especially in a household that relies on the youth as an economic provider. He has a hierarchy of priorities and he feels food is more important for his family's wellbeing than his attendance at school. In Karim's household, the caregiver explained that the transfer money ran out after 2 weeks. She also felt that it was too late for Karim to return to school. Of note, several participants who themselves had dropped out mentioned that their siblings were attending school at endline due to the support of the transfer.

Echoing the theme of the transfer not being enough to fully address the barriers to poverty and, more specifically education, a male youth, Said, had stayed in school but detailed some of the challenges he was facing. His family had experienced a major shock, the death of his grandmother, who was the primary beneficiary of the SCTP. Due to administrative issues, they had not been receiving their payments. Said indicated that without the transfer he would have dropped out of school. However, he also reflected on how the delayed payments were affecting his educational experience since his grandmother's death,

Interviewer: Tell me about how last year has been for you at school?

Youth Participant: Last year the school has been going well but this year has been hard, I am getting sick regularly.

Interviewer: When you say is was well what do you mean?

Youth Participant: Last year when the Mtukula Pakhomo money was received it was share to me to use to buy food, I was not having problems in class, I was very active and attentive and I even got position 4.

Interviewer: How has this changed over time?

Youth Participant: Right now I do go to school without taking any food in the morning and this has made me not to be active in class, and I fail to grasp what the teachers say sometimes.

Interviewer: You mention about getting sick regularly, how has this affected you school?

Youth Participant: This has made me to miss school more frequently.

Said's narrative of his experience during the two years of the evaluation, first experiencing improvements in his school attendance and performance, and then, following his grandmother's death, experiencing a decline due to hunger and poor health, reflect both the impact of the SCTP on education as well as the ongoing vulnerability experienced by beneficiary households.

Table 11.1.4 Transitions in School Attendance in the Qualitative Cohort (n=16)

TA	Attending school at baseline		Attending school at endline	
	Girls	Boys	Girls	Boys
M'bwana Nyambi	1	1	1	2
Jalasi	1	1	0	1
Maganga	0	1	0	1
Ndini	2	2	0	2
Total	4	5	1	6

One of the most notable impacts with regard to education were the three male youth participants who transitioned from primary to secondary school (one between baseline and midline and the other two between midline and endline). All three emphasized that this transition would not have been possible without the money from the SCTP.

Isaak had transitioned from primary to secondary between baseline and midline. He had moved from his caregiver's house (his grandmother) to live with an uncle in another town to attend secondary school. At endline he was in Form 2. He paid for his school fees, supplies and uniform with a combination of transfer money and support from his uncle along with ganyu that he did only when needed during holidays and weekends. Isaak describe the impact of the program in the following way,

> *Interviewer*: Since the last time, have there been any improvements in your life?
>
> *Youth Participant*: As of now I do not spend much of my time looking for ganyu and get paid money to help me like I used to before. Right now my time is spent on school. I am always busy with school, no time for ganyu.
>
> *Interviewer*: What else has changed?
>
> *Youth Participant*:: The school uniform, I was buying it using money from the ganyu but now the household has a source of income, *Mtukula Pakhomo*. Money from this program was used to buy a new uniform. I do not lack food that much nowadays because the money from *Mtukula Pakhomo* is there to use to support us. Life has changed. It has helped in school, I have food, have bought changing clothes. In the past I had only one pair of clothes that when I come from school I could wash it at night and wear it the next day. (Now) The uniform is in good condition and not torn up.

Highlighting ongoing threats to education in Isaak's life, one time during the last year he was sent home from school for late fees for a week; he returned to school once his family received the transfer and could settle the balance. Despite this absence, he was performing well (5th out of 38 students). While at baseline his educational goal was to finish Std 8, at endline he hoped to go to college and get a master's degree. He described the impact of the program on his educational goals in the following way,

> *...yes it has changed in such a way that in the past all I needed was to finish standard eight and do some ganyu to get money and travel abroad to South Africa. but now because I have been in school due to cash transfer I have changed, I did not think of getting to secondary school but now and I have acquire a little knowledge and realized that I can manage, I have changed my mind, cancelled the South Africa plan, and I need to get to college, Master's degree. I have seen that the school is going on well and I can reach far with it. I can also go to South Africa without worrying about deportation if I finish my school..*

In this quote, Isaak articulates an impact that extends beyond school attendance and performance to his motivation and overall life goals. He had gained confidence in his abilities after making it to form 2 and had established a more balanced pattern of school and work where school was the priority.

George lived with his grandmother and was in Standard 8 at both baseline and midline; he repeated Standard 8 because he wanted to keep his options for secondary school open but lacked the funds for secondary school fees. At midline, his family had not been receiving the transfer long enough to pay for the secondary school fees. At endline George had started secondary school and was performing well (8th out of 74 in his class). Like Isaak, he had been sent home for 1 week due to lack of fees; once his grandmother received the transfer, he returned to school. At the time of the interview, he also revealed that he had a balance at school,

> *The only thing I can say is that I am unable to get money to pay for fees therefore I fear I may not be able to continue with my education even though there is some hope now. The* Mtukula Pakhomo *money is also being used to pay for other expenses at home, food, soap and other stuffs therefore I feel it will be difficult for me to complete my education. For example*

> *because* Mtukula Pakhomo *money had not been paid we had to borrow money for fees. I have a MK500 balance right now.*

In this quote, George conveys his sense of uncertainty about the future. In addition to the financial stress, he also said he did not yet feel he was performing at his best because he lacked materials and had missed some school but overall was enjoying his experience in secondary. George was earlier in the transition to secondary school than Isaak and had not yet achieved the same level of confidence and stability amidst this ongoing uncertainty about how he would pay for school.

The third male youth who transitioned to secondary school, Allan, also experienced uncertainty about whether he would be able to continue with secondary school as it would have been "impossible" for his single mother to pay for the fees without the SCTP. Like Isaak and George, in addition to having money for the fees, a critical component of Allan's transition to secondary school was that he reduced the amount of ganyu and consequently had more time to study and did not miss school. He also indicated that the increased demands of secondary school required that he spend more time on school. Allan had missed school when the borrowed bicycle he used to get to school broke down, again reflecting the ongoing vulnerability among beneficiary households. Describing how the SCTP has personally impacted him, Allan said,

> *Interviewer*: Ok. You have already told me that *Mtukula Pakhomo* has reduced your engagement in ganyu activities. How else has *Mtukula Pakhomo* personally affected you?
>
> *Youth Participant*: I am able to go to school because of *Mtukula Pakhomo.*
>
> *Interviewer*: *Had it not been for Mtukula Pakhomo?*
>
> *Youth Participant*: I would not have been able to go to school.
>
> *Interviewer*: Why?
>
> *Youth Participant*: Because I would not have managed to buy a school uniform and pay school fees.

Allan, who aspired to be a medical doctor, also reflected on how the program has affected his future educational goals,

> *The money from* Mtukula Pakhomo *has managed to pay for my secondary school expenses thereby raising my hopes that I may make it as a medical doctor in future because I am attending school.*

11.2 Time use and child work[22]

Figure 11.2.1 examines the probability that children were engaged in any economic activities during the week prior to the endline interview (which took place shortly before the start of the peak agricultural season). Economic activities comprise: running or helping in household fishing business, livestock agricultural activities for the household, non-livestock agricultural activities for the household, casual (so-called ganyu) labour outside the household, and (non-ganyu) work for a wage outside the household. The figure shows the percentage of children engaged in any of these activities for the control group (solid line) and the treatment group (dashed line). The probability of engagement in economic activities increases rapidly with age, from about 5% at the age of 6 to about 45% at the age of 17 in the control group at endline. Differences between the treatment and the control group are

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[22] As not all of the economic activity and household chores variables were collected at baseline and midline, some of the results presented in this sub-section focus on endline only.

limited at the age of 6, but at higher ages children in the treatment group appear more likely to engage in economic activities than children in the control group.

Figure 11.2.1: Participation in Economic Activities
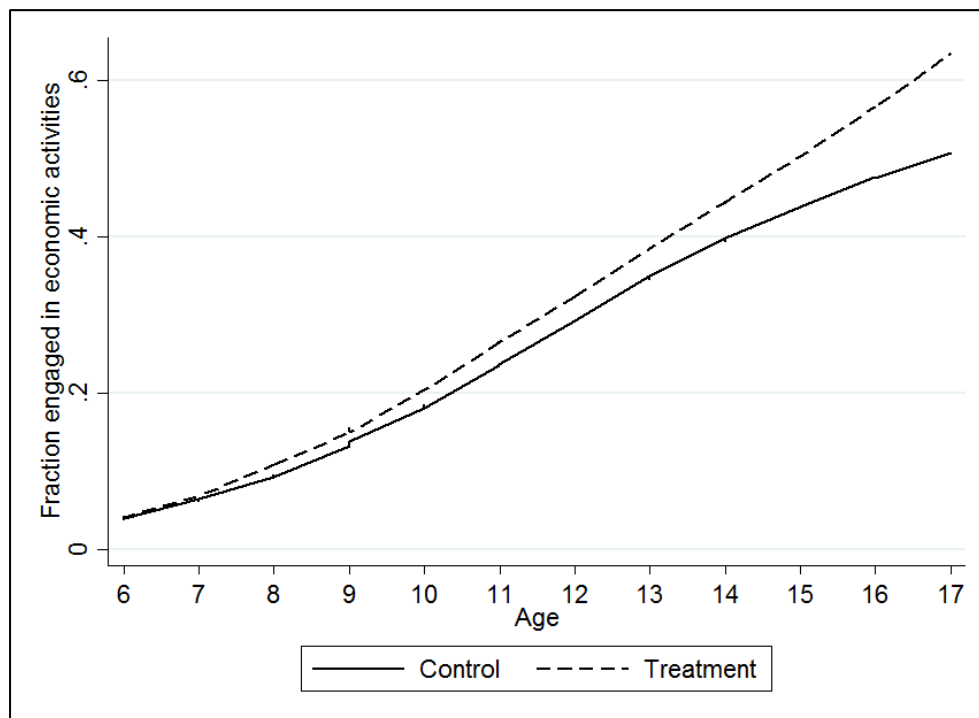
Table 11.2.1 investigates the effects of the program on engagement in any economic activities in the week prior to the interview, total hours spent in economic activities in the week prior to the interview, and hours spent in each of the separate underlying economic activities listed above. Overall, impact on engagement in economic activities and hours spent in economic activities is limited and not statistically significant. However, there appears to be a modest shift in the economic activities in which children engage: participation in non-livestock agricultural activities increased by about 20 minutes a week at endline (this variable was measured only at endline) while participation in ganyu work decreased by about half an hour a week. The latter finding is consistent with evaluations of cash transfer programs in other Sub-Saharan countries which also find that cash transfer programs enable households to shift away from less desired forms of (casual) labour to work on the own household farm.[23]

Table 11.2.1: Economic Activities in Week Prior to Interview

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
OVERALL						
Any economic activities (binary)	0.023				0.284	0.256
	(0.93)					

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[23]The economic impacts of cash transfer programmes in sub-Saharan Africa. 2014. From Protection to Production, FAO. Accessible at: http://www.fao.org/3/a-i4194e.pdf

N	7,500				3,548	3,952
Hours of economic activities	-0.012				1.747	1.892
	(-0.04)					
N	7,500				3,548	3,952

HOURS IN SUB-ACTIVITIES

Non-agricultural business	0.122	0.063	0.059	0.223	0.106	0.081
	(0.67)	(0.39)	(0.85)			
N	21,635	21,635		3,328	3,548	3,952
Non-livestock farm work	0.292**				0.868	0.655
	(2.45)					
N	7,500				3,548	3,952
Livestock farm work	0.067	0.009	0.057	0.151	0.168	0.090
	(0.92)	(0.12)	(0.77)			
N	21,636	21,636		3,328	3,548	3,952
Casual or ganyu labour	-0.582***	-0.670**	0.088	1.207	0.566	0.974
	(-2.88)	(-2.43)	(0.35)			
N	21,631	21,631		3,328	3,548	3,952
Work for wage	0.084	0.094	-0.009	0.079	0.038	0.092
	(1.09)	(1.28)	(0.14)			
N	21,618	21,618		3,327	3,548	3,952

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table 11.2.2 examines heterogeneity of the measured effects on economic activities in the week prior to the interview by age and gender. In accordance with the graphical evidence, point estimates for impact on economic activities are more pronounced for older than for younger children (using the same two age groups we used in the education analysis). However, the effects are not statistically significant for either age group. The point estimate for engagement in economic activities is larger for boys than for girls, but again effects are not statistically significant for either subgroup. We also find that effects on economic activities in the week prior to the interview tend to be stronger for less-poor households (Annex D).

Table 11.2.2: Heterogeneity of effects on economic activities in week prior to interview

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
EFFECTS BY AGE GROUP						
AGED 6-13						
Any economic activities (binary)	0.011				0.193	0.181
	(0.48)					
N	5,291				2,469	2,822
Hours of economic activities	0.028				0.938	1.088
	(0.16)					
N	5,291				2,469	2,822

AGED 14-17

Any economic activities (binary)	0.052			0.497	0.446
	(1.47)				
N	2,209			1,079	1,130
Hours of economic activities	-0.107			3.653	3.926
	(-0.16)				
N	2,209			1,079	1,130

EFFECTS BY GENDER
BOYS AGED 6-17

Any economic activities (binary)	0.039			0.309	0.272
	(1.34)				
N	3,843			1,823	2,020
Hours of economic activities	-0.033			2.000	2.301
	(-0.08)				
N	3,843			1,823	2,020

GIRLS AGED 6-17

Any economic activities (binary)	0.008			0.257	0.239
	(0.33)				
N	3,657			1,725	1,932
Hours of economic activities	-0.009			1.481	1.465
	(-0.04)				
N	3,657			1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

We also examine engagement in two types of economic activities using alternative reference periods: ganyu labour in the year prior to the interview and non-livestock agricultural work during the past peak season. The results are reported in Table 11.2.3. Again, our estimates confirm a shift from ganyu labour (pronounced and statistically significant reduction of 12 percentage points) to agricultural work (not statistically significant).

Table 11.2.3: Economic Activities (Alternative Reference Periods)

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Participated in ganyu in past year (10+ only)	-0.117***	-0.104*	-0.012	0.412	0.347	0.390
	(-2.77)	(-2.01)	(0.27)			
N	14,084	14,084		2,125	2,402	2,643
Worked in agriculture during last peak season	0.041	-0.017	0.058**	0.578	0.590	0.513
	(1.12)	(-0.50)	(2.27)			
N	21,629	21,629		3,328	3,548	3,952

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

We also examine participation in household chores during the day prior to the endline interview. Household chores include: (i) collecting water, (ii) collecting firewood, (iii) collecting nuts, tree

foods, or other products from the forest, (iv) taking care of children, cooking, and cleaning, and (v) taking care of elderly or sick household members. In Figure 11.2.2, children in the control group exhibit a strong gradient from the age of 6 to the age of 13 when participation in household chores increases from about 25% to about 70%. There is a notable difference between children living in treatment and control areas, with participation in household chores about 10 percentage points higher among the former across all age groups.

Figure 11.2.2: Household chores
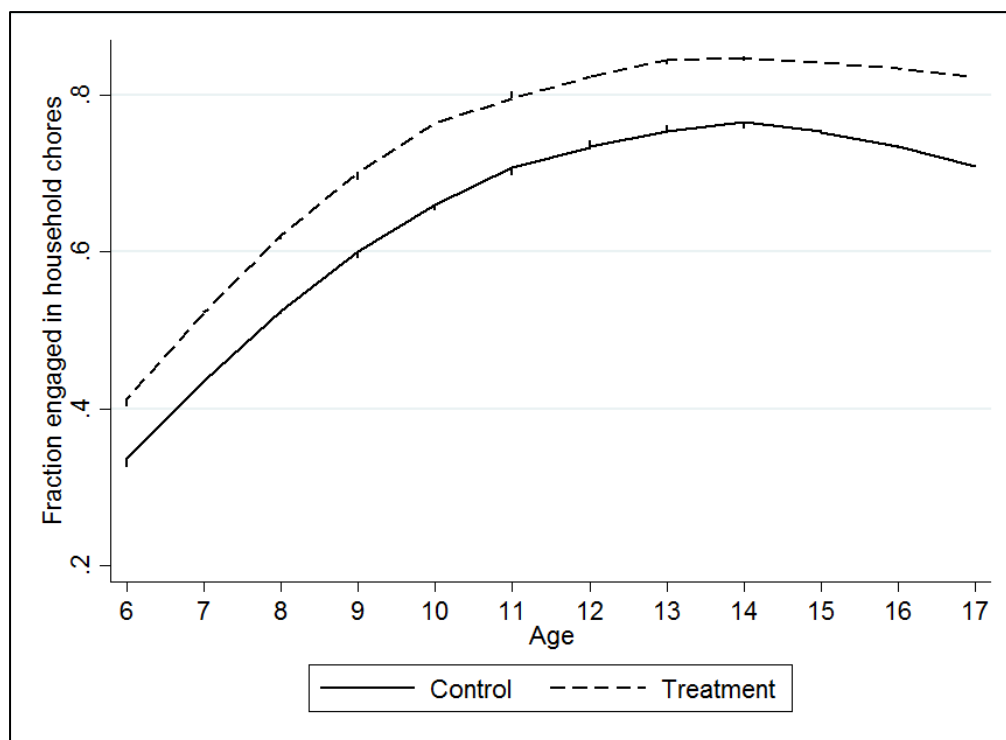
We examine the effects of the SCT on household chores more closely in Table 11.2.4. While children from the treatment group are indeed about 10 percentage points more likely to engage in household chores, impacts on hours of household chores in the day prior to the interview are limited and not statistically significant. Impacts on hours engaged in underlying household chores are also limited, the only significant change being a modest reduction in time spent collecting firewood (approximately 6 minutes in the past day).

Table 11.2.4: Household Chores in the Day Prior to the Interview

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
OVERALL						
Any household chores (binary)	0.106***				0.735	0.644
	(3.59)					
N	7,500				3,548	3,952
Hours of household chores	0.074				1.211	1.180
	(0.66)					
N	7,500				3,548	3,952

HOURS IN SUB-ACTIVITIES

Collecting water	-0.016	-0.031	0.014	0.418	0.444	0.408
	(-0.31)	(-0.62)	(0.29)			
N	21,636	21,636		3,328	3,548	3,952
Collecting firewood	-0.109**	-0.100**	-0.009	0.253	0.155	0.168
	(-2.22)	(-2.16)	(0.26)			
N	21,629	21,629		3,328	3,548	3,952
Collecting nuts, tree fruit, honey, other	-0.048	0.012	-0.060	0.021	0.046	0.080
	(-1.33)	(0.35)	(1.46)			
N	21,631	21,631		3,328	3,548	3,952
Childcare, cooking, cleaning	-0.000	-0.048	0.048	0.550	0.454	0.402
	(-0.00)	(-0.51)	(0.71)			
N	21,629	21,629		3,325	3,548	3,952
Taking care of elderly or sick household member	-0.011				0.111	0.122
	(-0.60)					
N	7,500				3,548	3,952

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Interestingly, as shown in Table 11.2.5, the program affects both boys' and girls' participation in household chores to the same extent. The latter despite very pronounced differences in control rates of participation in household chores: 52% for boys and 77% for girls. Effects on household chores are broadly similar in the poorest and less-poor households and in small and bigger households (Annex D).

Table 11.2.5: Heterogeneity Of Effects On Household Chores In Week Prior To Interview

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
EFFECTS BY GENDER						
BOYS AGED 6-17						
Any household chores (binary)	0.117***				0.629	0.519
	(2.81)					
N	3,843				1,823	2,020
Hours of household chores	0.039				0.764	0.704
	(0.34)					
N	3,843				1,823	2,020
GIRLS AGED 6-17						
Any household chores (binary)	0.092***				0.846	0.774
	(4.21)					
N	3,657				1,725	1,932
Hours of household chores	0.115				1.679	1.677
	(0.96)					
N	3,657				1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

11.3 Child labour

Finally, we examine the effects of the SCT on child labour. While some types of children's engagement in economic activities and household chores are legal and perhaps desirable, child labour consists of those types of economic activities and household chores that may not be. For the purpose of this study we use the definition of child labour applied by the National Statistics Office (NSO) of Malawi[24], which is in accordance with the 2008 ILO resolution concerning statistics of child labour[25]. In particular:

1. For economic activities the following age-specific thresholds are applied to identify child labour:
   - Ages 5-11: 1 any engagement in the week prior to the interview;
   - Age 12-14: 14 hours or more in the week prior to the interview.
   - Age 15-17: 43 hours or more in the week prior to the interview.

2. For household chores (in combination with economic activities) the following age-specific thresholds are applied to identify child labour:
   - Age 5-14: 28 hours or more in the week prior to the interview;
   - Age 15-17: 43 hours or more in the week prior to the interview.

3. Hazardous economic activities carried out in the year prior to the interview are considered to be child labour for all children under the age of 18.

The following 5 subsets of hazardous economic activities were captured as part of the endline survey, for all economic activities carried out by children in the past year: (i) carrying heavy loads, (ii) working with dangerous tools or operating heavy machinery, (iii) exposure to dust, fumes, or gas, (iv) exposure to extreme cold, heat, or humidity, (v) exposure to loud noise of vibration.[26] Similar to the NSO, our definition of child labour does not capture worst forms of child labour other than hazardous activities.

Figure 11.3.1 displays a Lowess smoothed graph of child labour for elimination. Because the definition of child labour varies across age groups, substantive discontinuities can be observed at the age thresholds. Participation in child labour increases rapidly from age 6 to 11, almost entirely due to participation in economic activities (even for short hours). Among the higher age groups, the maximum hour thresholds are less likely to be binding, resulting in a drop in child labour rates especially from the age of 11 to the age of 12. The vast majority of cases of child labour in the higher age groups (12-14 and 15-17) are due to participation in hazardous work and not due to excessive hours worked (results not displayed). We observe a substantive increase in child labour in the treatment group versus the control group in the higher age groups.

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[24] In collaboration with various partners (including UNICEF) the NSO estimated the prevalence of child labor in its 2014 MDG endline report, which is based on "a nationally representative sample survey encompassing a total of 28,479 households".
http://www.nsomalawi.mw/images/stories/data_on_line/demography/MDG%20Endline/MES%202014%20Report.pdf

[25] http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/normativeinstrument/wcms_112458.pdf

[26] These 5 subsets of hazardous activities were selected because, according to extensive analysis carried out by the UNICEF MICS team, together they identify virtually all children engaged in child labor. "How Sensitivity are estimates of working children and child labour to deifinitions? A comparative analysis," MICS Methodological Papers No.1 2012.
http://data.unicef.org/corecode/uploads/document6/uploaded_pdfs/corecode/Child_Labour_Paper_No.1_FINAL_162.pdf

Figure 11.3.1: Child Labour
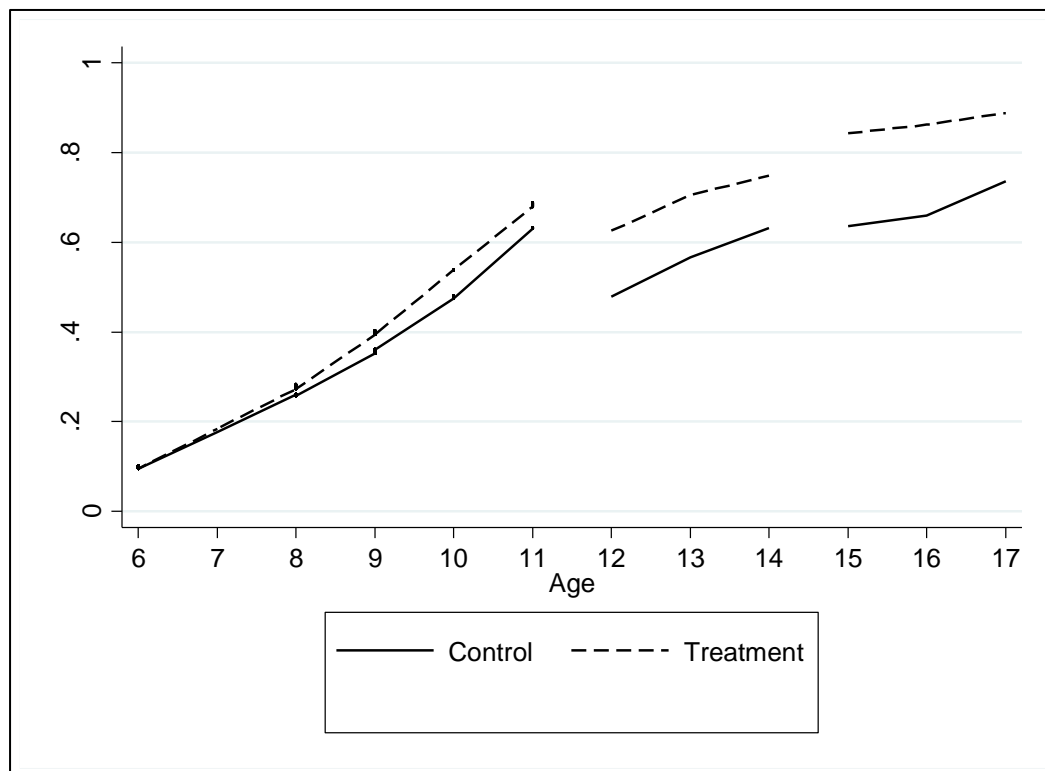
Our estimates (Table 11.3.1) suggest that, on average, child labour increased by about 9 pp. This effect is entirely due to an increase in engagement in hazardous activities. In particular, children in the treatment group are more likely to work in environments that expose them to dust, fumes, or gas (13 percentage point increase), and extreme cold, heat, and humidity (16 pp increase). These effects are observed both for boys and girls (Table 11.3.2) and generally similar in the poorest and less-poor households as well as small and less-small households (Annex D). More work is needed to determine what causes the increase in participation in hazardous activities, and an in-depth qualitative study has just been completed which explores the issue of child labour in more detail. Results from that analysis will be available in the first quarter of 2017.

Table 11.3.1: Child Labour

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Child labour	0.090***				0.557	0.465
	(3.35)					
N	7,500				3,548	3,952
MAIN SUBCATEGORIES OF CHILD LABOR						
Excessive hours	0.010				0.201	0.192
	(0.75)					
N	7,500				3,548	3,952
hazardous economic activities	0.105***				0.501	0.406
	(2.88)					
N	7,500				3,548	3,952

MAIN SUBCATEGORIES OF HAZARDOUS WORK

Carrying heavy loads	0.027		0.247	0.211
	(0.58)			
N	7,499		3,547	3,952
Working with dangerous tools or machinery	0.072		0.272	0.217
	(1.25)			
N	7,499		3,547	3,952
Exposure to dust, fumes or gas	0.126***		0.434	0.334
	(3.45)			
N	7,499		3,547	3,952
Exposure to extreme cold, heat or humidity	0.158***		0.365	0.244
	(4.77)			
N	7,499		3,547	3,952
Exposed to loud noise or vibrations	0.023		0.057	0.034
	(1.34)			
N	7,498		3,547	3,951

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table 11.3.2: Heterogeneity of Effects On Child Labour

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
EFFECTS BY GENDER						
BOYS AGED 6-17						
Child labour	0.088***				0.583	0.476
	(3.38)					
N	3,843				1,823	2,020
Excessive hours	0.005				0.204	0.196
	(0.40)					
N	3,843				1,823	2,020
hazardous economic activities	0.115***				0.526	0.411
	(3.02)					
N	3,843				1,823	2,020
GIRLS AGED 6-17						
Child labour	0.090***				0.529	0.452
	(2.88)					
N	3,657				1,725	1,932
Excessive hours	0.013				0.197	0.188
	(0.73)					
N	3,657				1,725	1,932
hazardous economic activities	0.093**				0.475	0.402
	(2.43)					
N	3,657				1,725	1,932

Notes: Estimations use difference-in-differences modelling among panel households and coefficients for binary outcomes are estimated based on a linear probability model. See Table 11.1.1 for additional explanatory notes on model specification, including a list of control variables used. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

11.4 Summary

We find strong effects of the program on children's school participation across all age ranges and a concomitant increase in per-child education expenditure. These effects do not merely reflect increased enrolment, but increased *regular* participation in school (i.e. participation without extended withdrawal during the school year). We do not observe strong effects on grade progression, but these effects may materialize in the longer run. The program appears to increase children's participation in household chores (although impacts on hours of household chores are limited) and participation in hazardous economic activities. While the exact mechanism behind this effect requires further research, a possible explanation is the increase in household investment in productive activities described elsewhere in this report. Most of these results can be observed for both boys and girls and different age groups. Moreover, these effects do not differ strongly for the poorest and less-poor households in our sample, nor for smaller and bigger households.

12. Transitions to Adulthood among Youth

A key question of the evaluation is whether or not the SCTP affects the safe transition into adulthood among youth. Globally, there is increasing evidence to suggest a protective effect of SCTs, however the topic remains an understudied area, particularly in relation to unconditional SCTs and in sub-Saharan Africa. Conceptually, there are a number of pathways through which the SCTP may influence youth outcomes, including decreases in household poverty, increases in household spending and changes in household time-allocation decisions—which may in turn decrease stress, increase overall investment in youth (including investment in education) and decrease exposure of the youth to risky environments. Characteristics such as household size, gender of the SCTP recipient, aspirations of the youth themselves, and environmental factors such as distance to schools and health facilities may moderate programme impacts.

We examine impacts on six broad categories of youth outcomes, namely: 1) sexual debut, marriage, and pregnancy, 2) risky sexual behaviours among youth who had ever had sex, including experience of forced sex, 3) mental health and well-being (including future aspirations), 4) HIV risk perceptions, 5) alcohol and tobacco use, and 6) social support. This section complements findings on education and child labour reported in earlier sections. Impacts on education and child labour may be situated more proximally on the casual impact chain, which may, over time, affect outcomes examined here, such as sexual debut or marriage transitions.

To assess these outcomes, interviews with youth were administered during baseline (when youth were aged 13 to 19 years), during the midline data (when youth were approximately aged 14 to 21 years) and again at endline (when youth were 15 to 22 years). Additionally, information on marriage and pregnancy was obtained from the main household questionnaire, which was administered to the main household respondent who provided information on all household members. Up to three youth per household were interviewed, prioritizing the youngest three youth when possible. Due to the sensitive nature of the questions, youth interviews were conducted in private by enumerators of the same sex as the youth. Interviews were not conducted if privacy could not be assured. Informed consent was obtained from parents of youth aged 17 and under, and assent was also obtained from these youth. For youth aged 18 and above, informed consent was obtained directly from the youth. We also conducted qualitative IDIs at baseline, midline and endline with a subsample of 16 youth and their caregivers.

The sample for analysis included youth residing in households interviewed at any wave (though youth may have been interviewed at only one wave). Impacts were estimated using DD modelling for current or time variant measures (e.g., mental health, self-assessment of HIV risk, or those with 12-month recall periods). For outcomes that were lifetime measures or only collected in follow-up surveys (e.g., ever had sex, ever experienced forced sex, social support indicators), we analysed a sample of youth who had not reported experiencing the outcome at baseline. For these outcomes, we performed cross-sectional analyses at follow-up comparing T and C groups. The rationale is that youths who have already sexually debuted (or experienced other lifetime outcomes) had no likelihood of being influenced by the programme with respect to this outcome. Thus, there would be no variation in their outcomes over the panel period.

In all modelling, standard errors were adjusted for complex survey design and for youth-specific probability of selection within each household. Controls used were the same as in the household-level models, however we also controlled for contemporaneous sex and age in years of the youth. In addition to overall impacts, we explore findings stratified by: 1) sex of the youth; 2) age of the youth (13 to 17 years versus 18 to 22 years); 3) household size (small indicating four or fewer members and large indicating over four members); and if the youth resides in a household 4) in the poorest 50% of the sample, 5) a female-headed household and 6) is present in the full panel (all three waves). As shown in the Baseline Report, there is good baseline balance between T and C groups. Assessing all outcome and control variables utilized in the sample, none are statistically significantly different. When assessing interview rates, we find that in the baseline, approximately 76.6 per cent of the total possible youth within the target age range were interviewed, while this percentage was approximately 78.7 at midline and 90.5 at endline. These figures result in total sample sizes of n=2,109 at baseline,

n=2,102 at midline and n=2,325 at endline for a total youth sample of n=6,536 and a response rate averaging 81.9 per cent.

12.1 Sexual Debut, Pregnancy and Marriage

Poverty and early sexual debut, pregnancy, and marriage are intertwined in a cycle that heightens vulnerability to each condition, decreasing future potential productivity and well-being. Evidence from some existing SCTs (including two in Africa—in Malawi and Kenya) has demonstrated the programmes' abilities to delay sexual debut[27,28], childbearing[29,30], and marriage[1] among youth and young adults. However, another study from Zambia found no significant programme impacts on childbearing or sexual debut among youth (aged 13 to 17 at programme initiation) after two years of programme participation.[31]

We first present results of impact on sexual debut. For this analysis we drop 32 per cent of the baseline sample who reported already debuting at baseline, and conduct a cross-sectional analysis with the remaining sample at midline (n=1,515) and endline (n=1,635). Table 12.1.1 shows that among this sample, approximately 22 per cent and 27 per cent of the T and C samples, respectively, report sexual debut at midline—and these figures increased to 42 and 44 per cent in T and C samples respectively at endline. The SCTP has a 6.2 pp impact (significant at the 1% level) on decreasing the probability of sexual debut at midline, however by endline this impact dissipates. When we split the sample between males (middle panel) and females (bottom panel) we see that this impact is concentrated among males. Among males, the programme results in an 8.5 pp decrease in sexual debut, whereas the magnitude for females is 3.9 pp and is insignificant. There are fewer notable differences between other examined subgroups: overall impact results hold and are similar for older and younger youth, youth in poorest and female-headed households, and among the panel.

Table 12.1.1: Impacts on Sexual Debut among Youth Aged 13 to 19 at Baseline

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ever had sex (full sample)	-0.024	-0.062***	0.220	0.266	0.420	0.439
	(-0.74)	(-3.41)				
N	1,635	1,515	752	763	765	870
Ever had sex (male sample)	0.017	-0.085***	0.222	0.290	0.458	0.452
	(0.38)	(-4.26)				
N	798	692	361	331	388	410
Ever had sex (female sample)	-0.058	-0.039	0.217	0.248	0.383	0.427
	(-1.29)	(-1.69)				
N	837	823	391	432	377	460

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. All estimations control for sex (except those stratified by sex) and age in years of the youth, baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. Youth who report ever having had sex at baseline are excluded from the analysis * 10% significance ** 5% significance; *** 1% significance.

[27] Baird, S., et al.,*"The short-term impacts of a schooling conditional cash transfer programme on the sexual behavior of young women.* Health Economics, 2010. **19**(S1): p. 55-68.

[28] Handa, S., et al., *The Government of Kenya's Cash Transfer Programme Reduces the Risk of Sexual Debut among Young People Age 15-25*. PloS one, 2014. **9**(1): p. e85473.

[29] Gulemetova-Swan, M., *Evaluating the impact of conditional cash transfer programs on adolescent decisions about marriage and fertility: the case of oportunidades*. 2009.

[30] Handa, S., et al., *Impact of the Kenya Cash Transfer for Orphans and Vulnerable Children on early pregnancy and marriage of adolescent girls*. Social Science & Medicine, 2015. **141**: p. 36-45.

[31] American Institutes for Research (AIR), *Zambia's Multiple Category Program: 24-Month Impact Report*. August 2014, AIR: Washington, DC

Next we examine the SCTP impacts on first pregnancy of females. As this measure is collected among the full sample of women in the household survey—we examine both the youth sample, as well as a sample of 15 to 24 year olds. Similar to sexual debut, we limit the sample to those females who report never having been pregnant at baseline (dropping 8.2 per cent of the sample aged 13 to 19 and 13 per cent of the sample aged 15 to 24). We are unable to analyse impacts on current pregnancy, as it is a relatively rare event. Our resulting sample sizes for the youth module sample are n=885 at midline and n=965 at endline, and for the older sample n=922. Table 12.1.2 shows that among the 13 to 19 year olds at baseline, 20 per cent of female youth in T households and 24 per cent of female youth in C households had experienced a first pregnancy by the endline follow up. Despite the mean differences in a promising direction, we do not find an overall impacts on the probability of delaying first pregnancy due to the programme in either midline or endline. Among the poorest 50 per cent of households, we find a significant decrease of 3.5 pp at midline, however this effect has dissipated at endline (not shown).

Among the older sample of female youth aged 15 to 24 (bottom panel), we find significant impacts only at midline, whereby the programme delays first pregnancy by 1.5 pp, however this is only significant at the 10 per cent level. Impacts among the poorest households are much larger in magnitude whereby females are 9.6 pp less likely to experience a first pregnancy (significant at the one per cent level, not shown).

Table 12.1.2: Impacts on First Pregnancy among Female Youth, Among those Never Pregnant at Baseline

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ever been pregnant (age 13 to 19 at baseline)	0.019	-0.015	0.083	0.093	0.195	0.241
	(0.65)	(-1.01)				
N	965	885	431	454	436	529
Ever been pregnant (age 15 to 24)	0.001	-0.015*	0.067	0.082	0.102	0.126
	(0.07)	(-1.88)				
N	2,235	1,818	875	943	1,014	1,221

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis among the 13 to 19 year old sample is re-weighted according to the probability of youth being selected for interview. Youth who report ever being pregnant at baseline are excluded from the analysis. * 10% significance ** 5% significance; *** 1% significance.

Finally, we turn to impacts on early marriage and co-habitation among the same two samples utilized for first pregnancy (youth aged 13 to 19 and youth aged 15 to 24). Here, for the youth module sample, we exclude three per cent of the sample who reported being married or co-habiting at baseline, resulting in a sample size of n=2,005 at midline and n=2,218 at endline. By endline, approximately seven per cent of the T sample and eight per cent of the C sample report being married or co-habiting (Table 12.1.3). Although coefficients are in the expected direction, for the younger sample, there are no significant programme impacts.

For the older youth (aged 15 to 24, bottom panel), we see a 1.8 pp decrease in early marriage at midline due to the programme—however this impact dissipates by endline. However, it should be noted that the data tracking protocol of the quantitative survey may not be set up to capture dynamics around marriage for young people—particularly for females who typically move to reside with their new partners or in partner's households. Thus this is an area to explore further in conjunction with qualitative findings.

Table 12.1.3: Impacts on Marriage or Co-Habitation among Youth, Among those Never Married or Co-Habited at Baseline

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ever been married (age 13 to 19 at baseline)	-0.003	-0.005	0.018	0.025	0.072	0.084
	(-0.16)	(-0.85)				
N	2,218	2,005	1,012	993	1,036	1,182
Ever been married (age 15 to 24)	0.001	-0.018**	0.119	0.145	0.145	0.145
	(0.20)	(-2.72)				
N	5,670	4,737	2,314	2,423	2,658	3,012

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis among the 13 to 19 year old sample is re-weighted according to the probability of youth being selected for interview. Youth who report ever being married or co-habited at baseline are excluded from the analysis. * 10% significance ** 5% significance; *** 1% significance.

In the qualitative sample, at baseline, 10 of the 16 youth participants (six girls and four boys) had ever been sexually active, though only a few reported being sexually active at the time of the baseline interview. At endline, 13 youth had been sexually active within the last year (since midline) (seven girls and six boys). By endline, only one female youth participant and two male youth participants had never had sex. All of the six sexually active female participants were pregnant or had at least one child by endline. In contrast, among the male participants, none of them reported having any children. In general, youth participants spoke about sexual activity as something that they should avoid or be ashamed of or as an economic necessity.

A noticeable gendered pattern was also observed with regard to marriage; none of the male participants in the qualitative cohort were married at baseline or endline. In contrast, by endline, five of the female participants were married and two had children but were not married.

12.2 Risky Sexual Behaviours

In addition to sexual debut, we examined various indicators of risky sexual behaviours among the sample reporting having engaged in sex, including: 1) characteristics surrounding first sex (own age, partner's age, age disparate sex—defined as sex with a partner more than five years older in age, condom use, and forced nature of sexual experience), 2) characteristics of recent sexual activity (transactional sex—defined as ever giving or receiving money, gifts or favours for sex, number of partners, concurrency of recent sexual experiences, condom use, most recent partner's age and age disparate sex with most recent partner) and 3) lifetime measures of forced and transactional sexual experiences. Incidence of sexual violence may decrease among youth in beneficiary households if the programme lowers incentives to engage in risky sexual behaviours (e.g., transactional sex or engaging in relationships with unequal power dynamics).

The sample size of sexually experienced youth, excluding those who had previously debuted at baseline, was relatively small (approximately 17 per cent of the total youth sample, n=380 at midline and n=680 at endline), so we were somewhat limited in our ability to draw conclusions about programme impacts on these outcomes. In particular, for this sample we largely examine overall impacts, as the sample sizes do not allow further stratification.

Table 12.2.1 shows impacts from cross-sectional modelling at midline and endline. Among youth experiencing debut over the evaluation period, by endline the average age at debut was approximately

15 years old for both T and C samples, whereas average partner age was approximately 16 years old for both samples. The percentage classified as age disparate sex at endline was relatively low (two to five per cent), indicating that youth are partnering with peers. Approximately 44 (T) to 41 (C) per cent of youth used a condom at first sex and 15 (T) to 25 (C) per cent characterized their first sex as forced. Across the indicators, nearly all show significant impacts—youth debuting in the evaluation period at endline are more likely to have younger partners (by 0.51 years), less likely to have age disparate sex (3.3 pp), and less likely to report forced sex (10.7 pp) for their first sexual experience. We also see that age at first sex is significantly lower for beneficiary youth (-0.23 years)—however since this is only weakly significant (at the 5 per cent level) and the magnitude is small, this may be a virtue of small sample size imbalances. Although suggestive at best due to small sample sizes, it appears that impacts on partner age, age disparate sex and forced sex are driven by the female sample.

Table 12.2.1: Impacts on First Sexual Experience among Youth Aged 13 to 19 at Baseline, among Those Reporting Debut

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Age at sexual debut	-0.223*	-0.160	15.035	15.261	15.452	15.681
	(-1.77)	(-1.74)				
Partner age at first sex	-0.513*	0.153	16.202	16.174	16.144	16.702
	(-1.77)	(0.52)				
First sex age disparate>5 years	-0.033**	0.023	0.069	0.069	0.029	0.047
	(-2.49)	(1.23)				
Condom used at first sex	-0.048	-0.025	0.473	0.482	0.443	0.414
	(-1.20)	(-0.53)				
First sex forced	-0.107**	0.009	0.250	0.190	0.156	0.259
	(-2.51)	(0.33)				
N	688	380	174	206	321	367

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. We exclude youth who report having sexually debuted at baseline. * 10% significance ** 5% significance; *** 1% significance.

Turning to recent sexual experiences (within the last 12 months), the sample is further reduced, and varies by indicator (see Table 12.2.2). We find that at endline approximately 48 per cent and 46 per cent of the T and C samples report having given or received money for sex; 52 per cent and 47 per cent of the T and C samples report using a condom at last sex; both samples report nearly two sexual partners and nearly three sexual acts in the past three months; approximately 38 per cent of both T and C groups report unprotected sex in the last three months; average partner age was approximately 15.5 years old and by endline, virtually no one reported age disparate sex; finally, approximately 22 per cent of the sample reports concurrent relationships in the last 12 months. We find limited impacts across all measures, with the exception of decreases in the number of sexual acts in the last three months at midline and small increases in partner age (similar to first sex experiences) in both midline and endline. Due to small sample sizes we do not disaggregate further by sub-group.

Table 12.2.2: Impacts on Recent Sexual Experience among Youth Aged 13 to 19 at Baseline (last 12 months), among Those Reporting Debut and Recent Partnership

Dependent Variable (last 12 months unless noted)	Endline Impact (1)	Midline Impact (2)	Midline Treatment Mean (3)	Midline Control Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Gave or received money for sex with most recent partner	0.065	-0.070	0.474	0.503	0.564	0.513
	(1.04)	(-1.13)				
N	478	274	124	150	219	259
Condom used at last sex	-0.019	0.019	0.517	0.481	0.476	0.429
	(-0.51)	(0.35)				
N	478	274	124	150	219	259
Number of sexual partners	-0.118	-0.053	1.531	1.502	1.582	1.589
	(-1.27)	(-0.45)				
N	478	274	124	150	219	259
Number of sex acts (last 3 months)	1.032	-0.794*	1.720	2.319	3.044	2.598
	(1.31)	(-2.00)				
N	478	274	124	150	219	259
Unprotected sex (last 3 months)	0.023	0.046	0.505	0.485	0.374	0.349
	(0.41)	(0.56)				
N	308	180	77	103	134	174
Partner age, most recent partner	-0.449*	1.242***	17.835	17.427	17.596	18.345
	(-1.78)	(3.59)				
N	459	262	118	144	213	246
Age disparate partner, age>5 years	-0.091***	0.134***	0.145	0.070	0.056	0.139
	(-3.76)	(4.78)				
N	459	262	118	144	213	246
Concurrent relationships	-0.017	-0.027	0.161	0.196	0.135	0.139
	(-0.79)	(-0.48)				
N	478	274	124	150	219	259

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. We exclude youth who report having sexually debuted at baseline, as well as those with no sexual experiences in the last 12 months. * 10% significance ** 5% significance; *** 1% significance.

Finally, we examined whether youth had ever engaged in transactional sex or ever experienced forced sex. At endline approximately 51 per cent and 502 per cent of the T and C groups (respectively) report engaging in transactional sex. In addition, 21 per cent and 36 per cent of the T and C groups (respectively) report ever experiencing forced sex. We find no measureable programme impacts on transactional sex—however, this may be due partially to the inability of a simple quantitative indicator to capture this concept.[32] In contrast, we find 13.5 pp decrease in report of ever being forced to have sex at endline among programme youth—which, similar to first sex impacts on forced sex, seems to be driven by the female sample (34.2 pp).

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[32] Fielding-Miller et al. *Cultural consensus modeling to measure transactional sex in Swaziland: Scale building and validation* Social Science & Medicine, 2016. **148** p. 25-33.

Table 12.2.3: Impacts on Lifetime Experience of Forced or Transactional Sex among Youth Aged 13 to 19 at Baseline, among Those Reporting Debut

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ever gave or received money for sex	-0.016	-0.024	0.501	0.526	0.506	0.499
	(-0.32)	(-0.34)				
Ever forced to have sex	-0.135**	0.080	0.318	0.228	0.207	0.364
	(-2.49)	(1.53)				
N	687	379	173	206	321	366

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. We exclude youth who report having sexually debuted at baseline. * 10% significance ** 5% significance; *** 1% significance.

When thinking through the impacts on sexual behaviour, it is useful to consider how selection effects might drive impacts. For example, since we only observe information for the group of youth who have debuted, it is possible that the programme is also affecting through delay in sexual debut—the composition of our T and C groups. In particular, those who delayed debut in T households, may have fundamentally different levels of risk taking and thus, the C group may no longer be a good comparison group.

Transactional and forced sex were also mentioned in the qualitative interviews. Grace's experience highlights the interrelationship between the two. Grace was a youth participant in the qualitative cohort who had two children at endline and was not married; the fathers of her two children were working in South Africa and not providing any support. She had moved in with another boyfriend who promised to marry her before endline but he did not provide proper conditions and also went to work in South Africa. Between midline and endline she had transactional sexual relationships with two men, one who forced her to have sex and then provided money and another who paid her for sex without force. She said she used condoms in all of these sex acts to protect herself. Her hope was still to find a husband to, *"...support me, who will get me clothes, soap and everything I need."* While she hoped to eventually have four children, at endline, Grace was using for norplant for family planning. She highlighted benefits of the SCTP for herself and her family though she emphasized that the money was not enough, which is why she had to make money in other ways. In addition to transactional sex, she was also using the money from the SCTP to sell cassava and she did *ganyu*, though less than before she was in the SCTP. She aspired to open a grocery store as her father had one done in the past, though his venture had not been successful.

A male youth participant who had never been sexually active, Shadrek, also spoke about feeling pressured to have sex in exchange for money. Shadrek described being approached by a girl at his school who knew that he was a beneficiary of the SCTP:

> *Interviewer*: Did you feel pressure from anyone to have a sexual relationship during the last year?

> *Participant*: Yes

> *Interviewer*: Tell me more?

> *Participant*: There is a girl from school but stays in another village. Her name is Doreen. She wanted to have sexual relationship with me but I denied it. I told her that I have no intentions of getting into sexual relationship now, all I need is to finish my education and get married.

> *Interviewer*: Did receiving the Mtukula Pakhomo program affect your decision to engage in sexual activity during the last year?
>
> *Participant*: Yes it did because this girl approach was for the money I do get from the cash transfer. She said that she wanted to be with me because I do receive the money so I knew that this girl just wanted to be a gold digger and eat my money. So I denied her to protect the money I do get because it is meant for school not sexual relationships.

Shadrek did not plan to get married until he was 20 and planned not to engage in sex until that time. His narrative reflects how male youth experienced pressure to have transactional sex, which plays into notions of masculinity and the pressures young men can feel to perform as men by demonstrating their masculinity. His experience also highlights the pressures that beneficiaries can feel regarding the money, especially given the extreme poverty in the communities in which they live.

With regard to other sexual risk behaviours, several youth participants described having multiple partners and not using condoms ever or consistently. Most of the pregnancies that occurred in the qualitative cohort were not planned. Salome was pregnant at the time of the endline interview. She explained the evolution of her condom use and subsequent pregnancy,

> *Participant:* First times he was using condoms, but later on he stopped and I missed my periods the next month, that's when I realized I was pregnant.
>
> *Interviewer:* What were your emotions when you knew you got pregnant?
>
> *Participant:* I wasn't happy because it made me stop school.

Salome had insisted on using condoms in the beginning but then when her partner resisted, they stopped using them, which was described by others in the qualitative cohort.

> *Interviewer*: During the time you were using condoms, who was the one influencing the other to use the condoms?
>
> *Participant*: I was the one.
>
> *Interviewer*: Why were you saying that?
>
> *Participant:* Because we were taught that when a girl passes adolescence she is likely to get pregnant.
>
> *Interviewer:* Was he using the condoms because he was wanted to or because you forced him to?
>
> *Participant:* Because I forced him to.
>
> *Interviewer*: What made you stop forcing him to use the condom as you did before?
>
> *Participant:* I listened to what he said and I liked it.

This exchange highlights several interesting behavioural, gender and social dynamics. First, Salome had knowledge about condoms and was comfortable insisting on their use with her partner. It would seem that they were able to acquire condoms. However, condom use can be a difficult behaviour to sustain especially in the context of a married couple that plans to have children together. While Salome was initially able to convince her partner, sustaining consistent condom use was a challenge that could have been shaped by power dynamics in her relationship over time. Additionally, Salome reveals her own preference for sex without a condom at the end of this exchange, which appears to be a major determinant of her discontinued use.

In contrast to Salome, who insisted on using condoms at the beginning, George's experience reflects a recurring pattern of no condom use described by several participants. George had transitioned to Form 1 between midline and endline after repeating Standard 8. Like Shadrek, George received pressure to give support to his girlfriend due to his participation in the SCTP. He liked her because she was in school and not promiscuous. He described a consensual sexual relationship based on mutual attraction,

> *Interviewer*: How did you decide with (partner) on whether to use a condom or not when you had sex?
>
> *Participant*: We didn't even use a condom.
>
> *Interviewer*: How was the decision not to use a condom made?
>
> *Participant*: (Silence)
>
> *Interviewer*: How did you decide not to use a condom?
>
> *Participant*: We both just wanted not to use a condom. We didn't even talk about using a condom.
>
> *Interviewer*: Ok.
>
> *Participant*: We started thinking about a condom after we had sex because were afraid that I had impregnated her.
>
> *Interviewer*: Ok. What do you feel about using condoms?
>
> *Participant*: It was important that we should have used a condom. Condoms protect us from contracting sexually transmitted diseases.
>
> *Interviewer*: Have you ever impregnated a girl?
>
> *Participant*: No.
>
> *Interviewer*: How would your life be impacted if you were to impregnate a girl now?
>
> *Participant*: That would be the end of my hopes for the future.
>
> *Interviewer*: How?
>
> *Participant*: Because I would have to drop out of school and I would be forced to get married because those forcing us to get married would be saying that is what we wanted.

Despite the grave consequences of having a baby at this point in his life, George and his partner never discussed condoms until they had a pregnancy scare. He highlights the potential impact of a pregnancy on his life given the pressures to get married and leave school. The inconsistent use of family planning and HIV prevention methods highlights the limits of cash interventions and the need to integrate other structural and behavioural HIV prevention and reproductive health strategies into the SCTP in order to improve these outcomes.

12.3 Mental Health and Aspirations

Mental health is a key component of the World Health Organization's (WHO's) definition of health[33] and is important for enabling youth to reach their full potential in terms of education and productivity. A study from Malawi in Zomba demonstrated the ability of a SCT to improve female adolescent mental health outcomes, and the authors concluded these impacts were mediated through physical health, increased schooling and family support for education, as well as higher levels of individual consumption and leisure.[34] The Kenyan Government's Cash Transfer for Orphans and Vulnerable Children (CT-OVC) programme was found to have positive impacts on mental health (both Hope scale and not experiencing depressive symptoms), but impacts were largely found among males and not females.[35]

We measured mental health using the Centre for Epidemiological Studies-Depression (CES-D) scale.[36] We used a 10-item short-form of the CES-D scale, based on a longer 20-item scale and has been validated internationally[37,38,39] and implemented in Africa.[40] The CES-D scale has high internal consistency and reliability in household surveys across a variety of demographic characteristics.[41] Questions were asked on a Likert scale regarding feelings and behaviours in the past seven days. To calculate the scale, scores are summed for all 10 questions and can range from 0 to 30, with higher scores reflecting more depressive symptoms. We further constructed a binary outcome variable indicating whether the respondent scored above a validated threshold for depressive symptoms (score > 20). The Cronbach's alpha, a measure of inter-item reliability for the CES-D in the overall sample is 0.75, indicating a good consistency between indicators (where the rule of thumb is above 0.70).

In addition to the CES-D, we include measures of future aspirations (ideals) across four different domains: 1) level of educational attainment, 2) monthly earnings, 3) age at first marriage and 4) number of lifetime children. If we believe that the SCTP is changing the way youth think about their future trajectory, it is possible that we would see impacts on such measures of what the youth hopes to achieve in relation to both economic as well as social domains.

Table 12.3.1 shows that at baseline, we find that the sample of youth in beneficiary households had a CES-D score of 19.6 and 44 per cent qualified as showing depressive symptoms. At the endline follow-up, the youth in T households showed virtually no changes in average CES-D scores (19.6), although a slightly larger proportion were classified as having depressive symptoms (47 per cent). Meanwhile, youth in C households showed large increases where average CES-D scores were 21.5 with 61 per cent classified as having depressive symptoms. Despite these mean differences, there is no significant impact on the CES-D scale or indicator of depressive symptoms. However, when looking

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[33] World Health Organization. [cited 2014 5 December]; Available from: http://www.who.int/about/definition/en/print.html.

[34] Baird, S., J. De Hoop, and B. Özler, *Income shocks and adolescent mental health.* Journal of Human Resources, 2013. **48**(2): p. 370-403.

[35] Kilburn, K., et al. *Effects of a large-scale unconditional cash transfer program on mental health outcomes of young people in Kenya*. Journal of Adolescent Health, 2016. **58**(2): p. 223-229.

[36] Radloff, L.S., *The CES-D scale a self-report depression scale for research in the general population.* Applied Psychological Measurement, 1977. **1**(3): p. 385-401.

[37] Boey, K.W., *Cross K.Widation of a short form of the CES-D in Chinese elderly.* International Journal of Geriatric Psychiatry, 1999. **14**(8): p. 608-617.

[38] Bojorquez Chapela, I. and N. Salgado de Snyder, *Psychometric characteristics of the Center for Epidemiological Studies-depression Scale (CES-D), 20-and 10-item versions, in women from a Mexican rural area.* Salud Mental, 2009. **32**(4): p. 299-307.

[39] Cheung, Y.B., K.Y. Liu, and P.S. Yip, *Performance of the CESu, and P.S. Yip, ter for Epidemiological Srom: ced abuse, anness in the Community.* Suicide and Life-Threatening Behavior, 2007. **37**(1): p. 79-88.

[40] Onuoha, F.N., et al., *Negative mental health factors in children orphaned by AIDS: natural mentoring as a palliative care.* AIDS and Behavior, 2009. **13**(5): p. 980-988.

[41] Andresen, E.M., et al., *Screening for depression in well older adults: Evaluation of a short form of the CES-D.* American Journal of Preventive Medicine, 1994.

at the poorest 50% of households (see bottom panel of Table 12.3.1), there is a 1.6 point decrease in the CES-D scale attributable to the programme (10% significance level). As the CES-D tends to increase as youth age, part of the upward trend in the C group is likely explained simply by an aging cohort—however the SCTP appears to protect against this increase in poor mental health among the poorest segment of our sample.

Table 12.3.1: Impacts on Mental Health and Affect among Youth Aged 13 to 19 at Baseline

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
CES-D (full sample)	-1.019	-0.141	-0.878*	19.601	19.594	21.536
	(-1.70)	(-0.24)	(1.79)			
Depressive Symptoms (full sample)	-0.046	0.007	-0.053	0.438	0.472	0.609
	(-0.78)	(0.12)	(1.17)			
N	6,359	6,359		1,006	1,065	1,212
CES-D (poorest 50 per cent)	-1.562**	-0.076	-1.485**	19.679	19.319	21.980
	(-2.74)	(-0.12)	(2.45)			
Depressive Symptoms (poorest 50 per cent)	-0.073	0.034	-0.107**	0.429	0.457	0.640
	(-1.28)	(0.56)	(2.29)			
N	3,721	3,721		600	620	705

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. CES-D stands for the Centre for Epidemiological Studies-Depression Scale, composed of 10-items, where a score of >20 is classified as having depressive symptoms. * 10% significance ** 5% significance; *** 1% significance.

We present results of the analysis showing programme impacts on future ideals or aspirations in Table 12.3.2. Because these measures were only collected at midline and endline, we conduct a cross-sectional analysis using youth appearing in waves 2 and 3. Overall, youths' ideal level of education attainment at midline is 12 to 13 years, their ideal age at first marriage is 25 to 26 years, and their ideal number of children is approximately four. By endline, ideal education level has increased by one year, while other indicators remain largely unchanged. Despite coefficients in the expected direction, there are no programmatic impacts on aspirations. We do, however, find a few subgroup impacts: female youth in beneficiary households have higher earning aspirations, older youth in beneficiary households have higher education and earning aspirations (not shown). In addition, youth in the poorest 50 per cent of households have higher ideal education, ideal earnings, and ideal age at marriage—although the impact on earnings dissipates at endline (Table 12.3.3).

Table 12.3.2: Impacts on Future Aspirations among Youth Aged 14 to 21 at Midline (full sample)

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ideal formal education level	0.318	0.016	12.801	12.615	13.781	13.471
	(1.38)	(0.05)				
N	2,277	2,070	1,046	1,024	1,065	1,212
Ideal one month earnings (logged MWK)	0.098	-0.005	10.412	10.329	10.510	10.479
	(1.65)	(-0.12)				
N	2,276	2,066	1,043	1,023	1,065	1,211
Ideal age at first marriage	0.255	0.171	26.205	25.699	25.552	25.752
	(1.33)	(0.78)				
N	2,188	2,060	1,041	1,019	1,019	1,169
Ideal number of children in lifetime	0.006	-0.027	3.976	4.043	3.998	3.969
	(0.06)	(-0.30)				
N	2,276	2,060	1,040	1,020	1,064	1,212

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. * 10% significance ** 5% significance; *** 1% significance.

Table 12.3.3: Impacts on Future Aspirations among Youth Aged 14 to 21 at Midline (Poorest 50 per cent at Baseline)

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ideal formal education level	0.573*	0.570	12.793	12.247	13.877	13.352
	(2.02)	(1.47)				
N	1,325	1,205	613	592	620	705
Ideal one month earnings (logged MWK)	0.052	0.139**	10.468	10.303	10.528	10.508
	(0.89)	(2.55)				
N	1,324	1,203	612	591	620	704
Ideal age at first marriage	0.495*	0.570**	26.449	25.680	25.848	25.819
	(1.87)	(2.18)				
N	1,279	1,198	609	589	597	682
Ideal number of children in lifetime	-0.159	-0.054	3.945	4.071	3.977	4.017
	(-1.37)	(-0.62)				
N	1,325	1,198	609	589	620	705

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. * 10% significance ** 5% significance; *** 1% significance.

In the qualitative youth expressed a range of aspirations. Among in-school youth, who were mostly male, several participants shared the impact of simply having the aspiration to stay in school longer. George describes how his educational aspirations have changed with the program:

> *Before Mtukula Pakhomo I wasn't even thinking about continuing with education because there was no money for school fees therefore I was thinking that by twenty years I should get married and start having children but that has been postponed with the coming in of Mtukula Pakhomo.*

George highlights here a shift away from starting to have children at a young age, which was also expressed by many others. Shadrek echoed and extended this aspiration,

> *What I can add is that this year thing are better compared to how they were in the past. In the past I used to have trouble concentrating on school because of the challenges that I did face, I could not imagine myself continuing with school but nowadays I do have hopes that I will finish my education since thing have started to work well. I was very poor, I used to put on rugs and sometimes I was skipping school and go to the mountain to fetch firewood and sell because the household needed money for food or use the money to buy myself a pair of shorts but now everything is available, the books, a pair of shorts, I am dressing very well and do not feel ashamed when going to school. This is giving me hope in as far as school is concerned.*

Shadrek articulates how having his basic needs met including clothes and food have allowed him to focus mentally on school but also to feel good socially without shame and embarrassment. All of these factors contribute to his improved sense of hope and his commitment to his education. Beyond simply staying in school longer, other participants expressed aspirations to become a doctor or nurse and to get a Master's degree. Again, most attributed their expanded aspirations to have their basic needs more securely covered, which allowed them to worry less and hope more.

12.4 HIV Risk

Evidence is largely lacking on SCTs' abilities to prevent the transmission of HIV[42], despite the aforementioned growing body of evidence on intermediate outcomes (i.e., those related to sexual behaviours). One evaluation in the Zomba district of Malawi found that the programme reduced the odds of contracting HIV[43], though there were very few HIV-positive individuals in the sample and the weighted results may have driven the statistically significant findings.[44] More recently, two school-based CCTs among adolescent girls in South Africa found no impacts on HIV incidence, however found decreases in Herpes Simplex Virus 2 (HSV-2) incidence and/or other behavioural impacts. Although these results are preliminary, it is likely that targeting and low incidence of HIV among this population led to low power to detect impacts.[45,46]

We did not collect biomarkers in this study to test actual HIV incidence or prevalence— however, we ask youth to assess their own risk of contracting HIV and thus report a self-assessment measure. For

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[42] Pettifor, A., et al., *Can money prevent the spread of HIV? A review of cash payments for HIV prevention.* AIDS and Behavior, 2012. **16**(7): p. 1729-1738.

[43] Baird, S.J., et al., *Effect of a cash transfer programme for schooling on prevalence of HIV and herpes simplex type 2 in Malawi: a cluster randomised trial.* The Lancet, 2012. **379**(9823): p. 1320-1329.

[44] Webb, E.L., R.J. Hayes, and J.R. Glynn, *Cash transfer scheme for reducing HIV and herpes simplex type 2.* The Lancet, 2012. **380**(9844): p. 802.

[45] Karim, Q.A. and CAPRISA 007 Team. *Impact of conditional cash incentives on HSV-2 and HIV in rural high school students in South Africa.* Presentation, ISA Vancouver, July 2015.

[46] Pettifor A et al. *HPTN 068: A Conditional Cash Transfer to prevent HIV infection among young women in South Africa.* Presentation, IAS Vancouver, July 21, 2015.

this analysis, we exclude youth who respond that they have never heard of HIV/AIDS (11 per cent at baseline, three per cent at the midline and two per cent at endline).

At baseline, 17 per cent of treated youth consider themselves at moderate or high risk for HIV. By the endline, 27 per cent of the treatment youth and 28 per cent of the control youth consider themselves at moderate or high risk of HIV. This increase can largely be explained by the aging of the sample and the initiation of sexual activity. Among the full sample, we find no measureable impacts on self-assessed HIV risk, and this lack of impact is consistent across subsamples.

In qualitative interviews at endline, youth continued to display a high awareness of HIV along with engagement in HIV-related risk behaviours including unprotected sex and multiple partnerships.

Table 12.4.1: Impacts on Self-Assessed Risk of HIV among Youth Aged 13 to 19 at Baseline, among Those Who Report Knowing of HIV/AIDS

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
HIV risk moderate or high (full sample)	-0.015	-0.030	0.015	0.174	0.266	0.280
	(-0.28)	(-0.57)	(0.33)			
N	6,039	6,039		891	1,061	1,191

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. We exclude youth who report not knowing about HIV/AIDS. * 10% significance ** 5% significance; *** 1% significance.

12.5 Substance Use

The potential for increased expenditures on alcohol and tobacco is often cited as an argument against unconditional SCTs. However, studies to date from these programmes have found little evidence that they increase spending on alcohol and tobacco.[47,48] Our hypothesis for youth is that substance use is a risk behaviour that may decrease as a result of the SCT through among others, reduced exposure to risky environments. For the youth specific analysis, we analyse self-reports of ever having drank alcohol (more than just a few sips) and ever having smoked. In addition, we collect frequency measures, including the number of days the youth was drunk in the past 30 days and if smoking was occasional or daily in the past 30 days, however these sample sizes are too small to confidently analyse.

Similar to other outcomes, we analyse a sub-sample of youth who report never having drunk alcohol or smoked at baseline (dropping approximately one per cent of the sample for smoking and three per cent of the sample for drinking). At endline, approximately one per cent (T) and two per cent (C) of the remaining sample reports ever having smoked, while approximately three per cent of both groups reports ever having drank alcohol. We find no meaningful impacts on alcohol consumption, and find that the programme significantly decreased the cigarette smoking by 1.3 pp (5% level significance) at mindline. However, since the sample of youth who ever report this activity is so small, these results

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[47] The Kenya CT-OVC Evaluation Team, *The impact of the Kenya Cash Transfer Programme for Orphans and Vulnerable Children on household spending.* Journal of Development Effectiveness, 2012. **4**(1): p. 9-37.

[48] Evans, D.K. and A. Popova, *Cash Transfers and Temptation Goods: A Review of Global Evidence.* World Bank Policy Research Working Paper, 2014. **6886**.

should be taken as suggestive. The outcome means are too small to conduct meaningful subsample analyses, thus these are not reported here.

Table 12.5.1: Impacts on Use of Substances among Youth Aged 13 to 19 at Baseline, Among those Never Reporting Use at Baseline

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Ever smoked cigarettes	-0.006	-0.013**	0.008	0.020	0.013	0.020
	(-1.45)	(-2.78)				
N	2,267	2,057	1,040	1,017	1,063	1,204
Ever drank alcohol, more than a few sips	-0.000	-0.007	0.033	0.031	0.031	0.034
	(-0.02)	(-0.84)				
N	2,243	2,030	1,019	1,011	1,045	1,198

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. We exclude youth who report having ever smoked or ever drank at baseline, respectively. * 10% significance ** 5% significance; *** 1% significance.

12.6 Social Support

Social support, or perceptions of social support, can be a key factor in young peoples' transitions to adulthood. Social support may provide resources to cope with stress, increase mental health and provide youth with positive role models. There is a possibility that the SCTP could have an impact on social support, if we think that overall cohesion of the household increases and stress decreases with receipt of the transfer. However, the main role of social support may be in moderating programme impacts—that is, youth who perceive higher social support may be better able to translate increases in material resources to favourable outcomes.

We investigate perceived social support using the Multidimensional Scale of Perceived Social Support.[49] The measures investigate two aspects of perceived support: 1) the number of people in peer and family networks, and 2) the perceived level of social support among friends and family. The level of social support is assessed through an eight-item positively worded scale, and operationalized using an index created through principal component analysis (PCA) (alpha = 0.80). For example, questions regarding level of support include statements such as: *"I can talk about my problems with my friends"* or *"I get the help and support I need from my family."* Responses vary from one (strongly disagree) to five (strongly agree) for each item. In addition to the index, we operationalize a measure of "high support" indicating a ranking in the top third (tercile) of the index. Since these measures were only collected at the midline and endline, we report results on the cross-sectional analysis comparing T and C youth.

Table 12.6.1 shows that youth identify just over five friends and just over six family members in their support network at midline. At endline, these numbers trended down for friends, while for family members, increased. The individual scores on levels of support across the eight questions ranged from 3.3 to 4 (not shown), indicating that, on average, youth either were neutral or agreed to positive statements about their peer or family networks. There were no overall programme impacts on any of the indicators of social support at midline (even a negative impact on family member contact), by

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[49] Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment*, *52*(1), 30-41.

endline, there were positive impacts on both the PCA scale, as well as scoring in the highest tercile of the PCA (T youth were 12.8 pp more likely to be in the highest tercile, mean for C group 28 per cent, while mean for T group 36 per cent). This indicates that while the SCTP does not seem to have a meaningful impact on the breadth of youth networks, it does seem to affect the quality of networks. Sub-groups showed little meaningful variation, whereby both sexes, ages and poverty levels tended to show similar trends in impacts (not reported).

Table 12.6.1: Impacts on Social Support among Youth aged 14 to 21 at Midline

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Number of friends	0.188	-0.262	5.186	5.073	4.724	4.644
	(0.68)	(-0.94)				
Number of family members (regular contact)	-0.010	-0.668**	6.084	6.512	7.101	7.020
	(-0.02)	(-2.91)				
Perceived Social Support scale (PCA)	0.686***	0.054	-0.114	-0.237	0.191	-0.282
	(4.51)	(0.49)				
Highest tercile of Perceived Social Support scale (PCA)	0.128***	0.030	0.317	0.289	0.360	0.275
	(3.32)	(1.46)				
N	2,277	2,067	1,045	1,022	1,065	1,212

Notes: Estimations use cross-sectional modelling at midline and endline among panel households. Binary outcomes are estimated using LPM. See Table 12.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. Robust t-statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis and the analysis is re-weighted according to the probability of youth being selected for interview. Perceived Social Support scale (PCA) constructed by aggregating eight questions using principal component analysis. * 10% significance ** 5% significance; *** 1% significance.

In the qualitative interviews, we elicited detailed inventories of youth participant's social networks, including both peer and personal support networks. We found that networks varied by gender and school attendance; males and youth in school had larger networks and were more socially connected. We also characterized that youth participants had predominantly "strong" ties, or connections to people who were close to them, and fewer "weak" or "bridging" ties, to those who were outside their immediate network. Networks frequently get smaller during the transition to adulthood as youth lose their school or neighbourhood networks and start to develop partnerships and families of their own. On the other hand, given the positive impact of the SCTP on school attendance, among youth who were still in school, we might expect social networks to expand as they develop connections at school.

In our longitudinal analysis of youth social networks we observed both decreased network size as a consequence of the transition to adulthood (e.g. leaving school, getting married, moving away for work or school) along with some sustained or even expanded networks and social participation. Eliza is an example of a participant whose already small network got smaller during the two year evaluation period. At baseline, she listed only one female friend in her peer networks. While they initially stayed friends following Eliza getting married and moving to live with her husband, by endline, Eliza had lost touch with this friend and had no new friends in her peer network. There were some women in the community where she lived who she talked to but did not consider them friends. Eliza was concerned about gossip and for this reason avoided extensive social interaction with people; due to gossip, she was also reluctant to seek a loan from a VSL out of fear that people would know about her personal business. Eliza's social network was affected by her marriage as she did not get along with her husband's family and did not develop strong ties with them. When her husband went to seek work in Lilongwe, she moved back to live with her grandmother. Eliza did participate in one community

activity, preparing food during funerals. While her family's basic needs have improved, for Eliza participation in the SCTP did not have a marked impact on her social network or participation.

In contrast to Eliza, Grace had a large peer network that increased during the evaluation period. Grace had two children but lived with her parents as her marriage did not work out. She had a large group of female friends and cousins with whom she spends time doing chores, exchanges support and provide companionship. She had some tensions with some of her friends during the evaluation period due to some rumours about infidelities but these tensions had been resolved by endline. While Grace hoped to marry, the fact that she had stayed at her parent's house and had not moved to live with a husband appears to have helped her maintain her social network as she spent much of her productive time with her friends, helping each other and providing company to one another.

While these two examples reflect how networks were affected by the transition to adulthood, there were also examples of more direct impacts of the SCTP on network size and support. For example, several youth participants described having joined school or community clubs or sports teams since baseline, especially among the boys. Others explicitly mentioned less bullying and social exclusion, especially at school, which had affected the educational experiences of several youth at baseline. Shadrek was in school and not sexually active at endline as he was focused on his education. He clearly articulated how his network had changed between baseline and endline,

> *Interviewer:* How has your social network changed during the last 2 years?

> *Participant:* It has changed because the same people I am now friends with are actually the same people who did not want to chat with me when our household was not in the Social cash transfer program. They used to bully me, call me an orphan and chase me away whenever I want to play because I did not have nice clothes, I was a shame, BUT after starting getting the funds from the government these same people have accepted me and befriended me. The only friend I do feel we are very close is Master.

In addition to feeling more socially included at school, Shadrek was playing on sports teams and was actively involved in several clubs and groups. He directly linked his increased social participation to the program.

Allan's social network transition also reflects the transition to adulthood and impact of poverty on secondary education. Allan sustained the same peer network of three close male friends from baseline to endline. Out of the group, he was the only SCTP beneficiary. While Allan had transitioned to secondary school at endline and was thriving in Form 1, all of his friends had dropped out between midline and endline after Standard 8. Even though this network of friends had taken very different trajectories, they were all still close and supportive of each other, which was an important resource for Allan. Allan had also joined a community health promotion group, which helped him to create more weak ties in his community as well.

These examples of different network trajectories highlight patterns of network evolution in the context of the transition to adulthood as well as participation in the SCTP. Overall, given their more extensive ongoing participation in school, we saw that boys had more robust and thriving social networks that provided them both strong and bridging ties. In contrast, female youth participants had experienced increased isolation following marriage and tended to maintain more strong ties without developing weaker ties.

12.7 Summary

We examine a range of youth-specific outcomes using a unique survey module administered to youth ages 13 to 19 at baseline (14 to 21 at midline, 15 to 22 at endline). Overall, we find that the SCTP has potential to positively impact the transition to adulthood, particularly related to sexual debut, sexual risk taking, including sexual violence and social support. When we look at subgroups, we see a larger number of impacts, particularly for poorer households (for example, mental health). In many cases, impact are highly gendered—and impacts are being clearly driven by girls (sexual risk taking) or boys

(sexual debut). The impacts we do see are largely in line with the magnitude we would expect, and consistent with other studies. We are still limited by the relatively short length of time between baseline and endline to find transformative impacts over time on youth. Since we see impacts on some of the more proximate determinants—for example schooling—of many of these outcomes, impacts may take more time to be realized. In addition, since our sample sizes in some cases are small (for example characteristics of sexual experiences), we may be limited in our ability to detect affects until a larger percentage of the sample reports on these measures. We anticipate further work analysing impacts using youth-specific modelling, additional heterogeneity analysis, and mixed methods work to unpack these outcomes.

13. Impacts on Household Production and Assets

One of the objectives of the SCTP is to reduce poverty and hunger among beneficiaries. Since household poverty and hunger are invariably the result of household production being in deficit of household demand, we recognize that increasing household production is the more sustainable way to reduce poverty and hunger in the long term. The SCTP cash is hypothesized to act as a catalyst for behavioural responses and necessary investments in economic activities that will result in increased production and an accumulation of wealth in the form of durable assets among T households. To track these effects, the survey instruments had modules on the three main typical rural economic activities: crop production, livestock production and operation of a non-farm household enterprises. We also had modules on the ownership of agricultural and non-agricultural assets. This section provides an analysis of the impacts on these household economic activities and the ownership of assets.

13.1 Agricultural and Non-Agricultural Assets

Agriculture remains the primary economic activity for most of the rural poor, and about 93 per cent of our sample households owned or cultivated land in the 12 months preceding the baseline survey. The inability to own and use basic productivity enhancing implements for farming affects the productive efficiency of these households, and sometimes forces them to spend part of their already scarce resources on the rental of implements. Our survey instrument therefore sought information on the use, ownership and expenditure on implements over the last 12 months. The main focus of analysis was on the five basic assets, namely hand hoe, axe, panga knife, sickle and building/structure (chicken house, livestock kraal, poultry kraal). The results show significant positive impacts on the number of different assets owned, asset purchases in the last 12 months and actual expenditure on asset purchases among T households (Table 13.1.1). There is a significant seven pp impact on household purchases of at least one asset in the past 12 months, and a significant impact of about 174 MWK for the expenditure on purchases of assets over a base of 211 MWK among T households. An index of household 'wealth', based on the first principal component derived from ownership of these five agricultural implements is also significant at the one per cent level. In the endline survey, we also asked about asset purchases in the last four months, and we find a significant cross-sectional difference of six pp between T and C households (not shown).

In Table 13.1.2, we show the SCTP impacts on the ownership of the specific assets at the intensive (number owned) and extensive (whether owned any) margins. We find significant impacts on the ownership of hand hoe, axe and panga knife at both margins. We find a six pp point impact on the ownership of hand hoe, seven pp impact on the ownership of axe and panga knife. The impact on the number of hand hoe owned was 0.43 units over a base of 1.78 among T households. For sickle, we do not find impacts on the ownership but there is significant impact on the number of sickle owned (0.08 units over a base of 0.18 among T households). In the endline survey, we asked about ownership of pick and shovel/spade and found a significant cross-sectional difference in the ownership of pick but not on shovel/spade (not shown). These findings are consistent with the findings of the Malawi Mchinji

pilot programme, which also reported increases in the ownership of hand hoes, axes, and sickles (Covarrubias et al., 2012[50]).

Table 13.1.1: Impacts on Ownership and Purchases of Agricultural Assets

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own any asset	0.065***	0.014	0.051***	0.882	0.962	0.886
	(3.21)	(0.60)	(2.79)			
Number of asset types	0.249**	0.080	0.169*	1.615	1.922	1.491
	(2.41)	(0.68)	(1.70)			
Asset ownership index	0.302**	0.121	0.181	-0.133	0.269	-0.228
	(2.68)	(0.91)	(1.64)			
Any Asset Purchase in last 12m	0.072**	0.089***	-0.018	0.081	0.184	0.096
	(2.76)	(3.40)	(0.72)			
Total expenditure on purchases (MWK)	174.323*	152.698**	21.625	210.918	394.152	173.112
	(2.02)	(2.11)	(0.36)			
N	9,901	9,901		1,576	1,574	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. All estimations control for baseline head of household's characteristics (age in years, sex, indicator of any schooling, indicator of literacy, marital status), household demographic composition and size, indicators for new household members and household member outmigration, and a vector of contemporaneous cluster level prices. Robust t–statistics were obtained clustering at the different levels of the sampling design and are shown in parenthesis. * 10% significance ** 5% significance; *** 1% significance.

Table 13.1.2: Impacts on Ownership of Specific Agricultural Assets

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Own Hand Hoe	0.064***	0.007	0.058***	0.865	0.956	0.871
	(2.97)	(0.26)	(2.94)			
Number of Hand Hoe Owned	0.433***	0.199*	0.234**	1.780	2.415	1.976
	(5.59)	(1.85)	(2.17)			
Own Axe	0.071**	0.043	0.027	0.142	0.245	0.141
	(2.63)	(1.36)	(0.93)			
Number of Axe Owned	0.071**	0.044	0.027	0.147	0.267	0.158
	(2.46)	(1.34)	(0.87)			
Own Panga Knife	0.065**	0.011	0.054**	0.236	0.342	0.238
	(2.07)	(0.33)	(2.52)			
Number of Panga Knife Owned	0.097**	0.037	0.059***	0.247	0.378	0.250
	(2.75)	(1.11)	(3.01)			
Own Sickle	0.050	0.057*	-0.008	0.179	0.264	0.192
	(1.62)	(1.95)	(0.23)			
Number of Sickle Owned	0.079**	0.089**	-0.009	0.182	0.300	0.206
	(2.08)	(2.57)	(0.25)			
Own Building/Structure	-0.006	-0.036	0.030	0.181	0.091	0.036
	(-0.14)	(-0.86)	(0.82)			
N	9,901	9,901		1,576	1,574	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

[50]Covarrubias. K., Davis. B. and Winters, P. (2012) From Protection to Production: Productive Impacts of the Malawi Social Cash Transfer Scheme. Journal of Development Effectiveness, 4(1), pp. 50-77.

We next examine household ownership and purchases of non-agricultural (durable) goods. In times of crisis, durable goods could come in handy as collateral to secure a loan from money lenders or other members of the community, or at worst be pawned to deal with the crisis. Our midline and endline survey instruments had questions on the ownership of certain durable goods. Durable goods of interest included mortar/pestle, bed, table, radio (wireless), bicycle, lantern (kerosene) and mobile phone. The results shows a significant 14 pp impact on the ownership of at least one of the durable goods, as well as the number of different durable goods owned. We also find significant impacts on expenditures on durable goods among T households in the last 12 months (Table 13.1.3). An index of household 'wealth', based on the first principal component derived from ownership of durable goods is significant at the one per cent level at endline.

Table 13.1.3: Impacts on Ownership of Durable Goods

Dependent Variable	Endline Impact	Midline Impact	Midline Treatment Mean	Midline Control Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)	(4)	(5)	(6)
Owns any durable good	0.141***	0.085***	0.582	0.497	0.880	0.733
	(7.50)	(3.74)				
Number of durable goods owned	0.619***	0.124*	1.061	0.924	2.553	1.835
	(5.21)	(1.87)				
Durable good ownership index	0.326***	0.093	-0.049	-0.152	0.319	-0.103
	(3.47)	(1.20)				
Any expenditure on goods in last 12 months	0.068***	0.029***	0.061	0.029	0.234	0.148
	(3.07)	(4.55)				
Expenditure on durable goods in last 12 months (MWK)	228.344**	287.615***	473.672	150.329	782.372	459.948
	(2.17)	(3.01)				
N	3,300	3,299	1,574	1,725	1,574	1,726

Notes: Coefficients represent cross-sectional differences between panel T and C households at Midline and at Endline. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized.
* 10% significance ** 5% significance; *** 1% significance.

Results on the ownership of specific durable goods shows significant impacts on mortar/pestle, bed, table and bicycle. Ownership of mortal/pestle increased by 14 pp over a base of 33 per cent, while ownership of a bicycle increased by seven pp over a base of 11 per cent among T households. We do not find impacts on the ownership of chair, radio/wireless or mobile phone. We checked for ownership of the various durable good within the same household from midline to endline in order to examine changes in ownership in the same household over time. We find some evidence of households owning some durable goods at midline but not at endline. This was more prevalent among C households resulting in a decline of overall ownership of some durable goods among C households. For example while seven per cent of C households reported ownership of radio/wireless at midline, only six per cent did so at endline. Similarly for table, five per cent of C households reported having a table at midline but only four per cent reported same at endline. While we did not have questions on whether the household pawned or sold any of these assets, it is plausible that this was the cause of the differential, or that C households were less able to maintain/repair their durable goods compared to the T households.

Table 13.1.4: Impacts on Ownership of Specific Durable Goods

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Midline Treatment Mean (3)	Midline Control Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Mortar/Pestle	0.140***	0.054**	0.392	0.333	0.490	0.347
	(6.15)	(2.42)				
Bed	0.103**	0.088**	0.241	0.171	0.325	0.182
	(2.37)	(2.82)				
Table	0.020*	0.002	0.048	0.052	0.069	0.043
	(2.13)	(0.25)				
Chair	0.015	0.002	0.069	0.069	0.120	0.083
	(1.34)	(0.24)				
Radio/Wireless	0.011	-0.008	0.079	0.072	0.086	0.064
	(1.00)	(-0.73)				
Bicycle	0.071***	0.002	0.122	0.105	0.181	0.104
	(3.20)	(0.17)				
Lantern	0.010	-0.000	0.027	0.023	0.019	0.014
	(1.24)	(-0.06)				
Mobile phone	-0.004	-0.017	0.083	0.098	0.141	0.156
	(-0.19)	(-1.19)				
N	3,300	3,299	1,574	1,725	1,574	1,726

Notes: Coefficients represent cross-sectional differences between panel T and C households at Midline and at Endline. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

There were very few examples of durable goods in the qualitative interviews. A young caregiver, Witness, who was living with HIV and taking care of her two young children in addition to her younger siblings after her parents died of HIV had purchased a radio shortly before the endline interview using money from the SCTP.

> *Interviewer:* What about your life as Witness? Has it improved?
>
> *Respondent:* Yes.
>
> *Interviewer:* In what way?
>
> *Respondent:* Because I found what I have always desired.
>
> *Interviewer*: What is that?
>
> *Respondent:* A radio.
>
> *Interviewer:* Why did you want a radio?
>
> *Respondent:* To be listening to news from other countries.

Witness did not feel accepted in her community both due to HIV stigma as well as clan dynamics. The radio represented a way for her to feel connected and know about things happening in the world. It contributed to the overall happiness that she described as an impact of the SCTP. Participants also describe buying lanterns, which helped their children to be able to study more in the evening and perform better at school.

13.2 Crop Production and Sales

The primary source of livelihood for SCTP households is crop production, and one of the objectives of the SCTP is to increase production among T households. At baseline, more than 93 per cent of the households were engaged in crop production and more than 92 per cent cultivated plots which they owned. The working hypothesis is that the cash transfer could stimulate investments into inputs that

enhance the productivity of these households especially since they mainly owned the plots. This could be through investments in agricultural tools/assets, increased use of agricultural technology (such as irrigation or soil/water conservation structures), increased use of improved seed varieties and agro-chemicals, or through crop diversification. The survey instrument therefore had questions that explored all these inputs and the outcomes.

Quite importantly, our analysis shows that the SCTP has not had a potentially negative impact whereby T households would reduce their crop production activities in view of the cash they receive. For the entire sample, we find a significant positive impact on the number of plots cultivated and on the use of fertilizer/manure, but no impact on any of the other crop production input choices such as total area cultivated, household labour input, total irrigated area, number of different crops cultivated, use of improved seed variety, and use of soil/water conservation structures (Table 13.2.1). We also estimate the impacts on these crop production inputs among the baseline bottom 50 per cent of households and find a three pp impact on the extensive margin of crop production over a base of 95 per cent among T households. Further, we find significant impacts on the number of plots cultivated (0.11 units over a base of 1.28 for T households), total area cultivated (0.45 acres over a base of 1.23 acres among T households) and total area of land irrigated (0.05 acres over a base of 0.05 acres among T households). For this group also, we do not find impacts on the number of different crops cultivated, use of improved seed variety, use of fertilizer/manure and household labour input (Table 13.2.2). Estimation of impacts for the baseline upper 50 per cent of households shows no significant impact on any of these input variables except for fertilizer/manure use which is only significant at the 10 percent level (Table D.3.1).

Table 13.2.1: Impacts on Crop Production Inputs

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Crop production household	0.016	-0.012	0.029**	0.929	0.968	0.942
	(1.11)	(-0.86)	(2.41)			
Number of plots	0.085*	0.042	0.043	1.262	1.310	1.220
	(1.83)	(1.03)	(0.87)			
Total area cultivated (acres)	0.174	-0.023	0.197	1.379	1.563	1.335
	(0.94)	(-0.18)	(1.21)			
Average plot size (acres)	0.097	-0.074	0.170	1.024	1.160	1.037
	(0.74)	(-0.67)	(1.53)			
Household labour input (days)	6.995	0.507	6.488	86.949	99.410	90.014
	(0.85)	(0.05)	(0.84)			
Total irrigated area (acres)	0.000	-0.019	0.020	0.093	0.047	0.035
	(0.01)	(-0.51)	(0.85)			
No. of diff. crops	0.071	-0.055	0.126	1.602	1.824	1.642
	(1.02)	(-0.65)	(1.62)			
Improved seed variety	0.010	-0.008	0.019	0.058	0.087	0.074
	(0.45)	(-0.47)	(0.67)			
Plots with soil/water conservation structure	-0.015	-0.001	-0.014	0.329	0.498	0.511
	(-0.27)	(-0.01)	(0.31)			
Use of pesticide	0.001	-0.000	0.001	0.018	0.019	0.010
	(0.14)	(-0.00)	(0.18)			
Use fertilizer/manure	0.169***	-0.046	0.215***	0.615	0.628	0.402
	(2.89)	(-1.23)	(3.85)			
N	9,375	9,375		1,473	1,528	1,626

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Table 13.2.2: Impacts on Crop Production Inputs – Baseline Bottom 50 per cent

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Crop production household	0.026*	-0.012	0.038***	0.951	0.980	0.945
	(1.75)	(-0.76)	(2.88)			
Number of plots	0.109**	0.037	0.072	1.281	1.338	1.191
	(2.16)	(0.67)	(1.37)			
Total area cultivated (acres)	0.454**	0.015	0.439*	1.232	1.663	1.268
	(2.06)	(0.09)	(1.92)			
Average plot size (acres)	0.226*	-0.046	0.272*	0.923	1.177	1.023
	(1.85)	(-0.32)	(1.77)			
Household labour input (days)	13.764	3.848	9.916	93.924	109.108	97.606
	(1.40)	(0.32)	(1.09)			
Total irrigated area (acres)	0.050*	0.040	0.009	0.046	0.042	0.032
	(1.81)	(1.60)	(0.58)			
No. of diff. crops	0.117	-0.062	0.179**	1.565	1.838	1.584
	(1.47)	(-0.73)	(2.40)			
Improved seed variety	-0.005	-0.005	0.000	0.057	0.082	0.082
	(-0.22)	(-0.29)	(0.01)			
Plots with soil/water conservation structure	0.022	0.016	0.006	0.328	0.535	0.529
	(0.44)	(0.30)	(0.15)			
Use of pesticide	0.012	-0.009	0.020*	0.017	0.028	0.007
	(1.06)	(-1.29)	(1.91)			
Use fertilizer/manure	0.214***	-0.027	0.242***	0.559	0.624	0.372
	(3.67)	(-0.61)	(3.68)			
N	4,823	4,823		757	779	835

Notes: Coefficients represent cross-sectional differences between panel T and C households at Midline. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

From the foregoing, we can expect to see some positive impact on overall crop production. Increased availability of tools can be expected to enhance productivity even in the presence of the overall null impacts on the crop production decisions, and the heterogeneous positive impacts on the production decision among baseline bottom 50 per cent of households could add further gains. Table 13.2.3 shows the impacts on total crop harvests and harvests of the five key staples of maize, groundnut, rice, pigeon pea and nkhawni (pumpkin). These five crops were also the most frequently cultivated crops. The results show significant impacts on the quantity of crops produced (in kg) and the value of crops (MWK), for all crops and for the five staple crops[51]. There is a 62kg impact on the total quantity of crop harvest and a 60kg impact on the quantity of harvest for the five staples. We also find a 12,000MWK impact on total value of harvest and 11,000 MWK impact on the value of harvest for the five staples. We do not find impacts on the extensive margin of crop sales, but find a 1900 MWK impact on value of crop sales. We consider the null impact on the extensive margin of crop sales as generally positive. While crop sales may sound desirable as a source of revenue for the household, there is evidence of farmers selling crops at relatively low prices during the bumper harvest season,

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[51] Crop quantities reported in units other than kilogram are converted to a kilogram equivalent using conversion factors from the IHS Agricultural Conversion Factor Database obtained from the FAO. Crop values in MWK are computed using community level prices from the community data (where available) or from the average sale prices from crop sales. Harvest for each wave is valued using the prices for that wave, and so the impacts are effectively nominal. We show in Annex F that there were no excess inflationary effects of the cash transfer within T communities and so the observed impact on the value of crop production cannot be attributed to differential changes in the price conversion factors between T and C communities.

only to have to buy back the same crops at a much higher price during the lean season[52]. It may also reflect reduction in the urgency to sell among T households due to the protective role of the cash from the SCTP. Having larger harvests without higher sales may therefore be more protective for the T households over the annual production cycle. We find similar impacts on all these variables for the baseline bottom 50 per cent of households (Table D.3.2)

Table 13.2.3: Impacts on Crop Harvests and Sales

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Total Quantity of Harvest (Kg)	62.418***	12.825	49.593***	175.116	272.444	193.564
	(5.07)	(0.85)	(3.18)			
Total Quantity of Harvest (Kg) - Staples	60.342***	9.614	50.728***	168.444	260.526	185.605
	(4.73)	(0.71)	(3.23)			
Total value of harvests (MWK)	12,175.419***	389.573	11,785.845***	29,280.146	48,110.731	32,080.420
	(3.80)	(0.12)	(3.86)			
Total value of harvests (MWK) - Staples	11,201.987***	101.776	11,100.212***	27,965.477	45,379.394	31,078.746
	(3.71)	(0.03)	(3.64)			
Any crop sales	0.051	0.061	-0.010	0.197	0.288	0.209
	(1.46)	(1.66)	(0.31)			
Total sales (MWK)	1,875.488*	729.088	1,146.400	1,525.060	4,170.162	1,961.773
	(1.97)	(0.75)	(1.13)			
N	9,902	9,902		1,576	1,575	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

The impacts on the production and quantities of the five key staple crops are presented in Table 13.2.4. We find no impacts on the intensification of production of any of the crops. The results also shows that the impact on the overall production is driven almost exclusively by increase in the production of maize, against a backdrop of a negative impact on the production of pumpkin (*nkhwani*). However, among the baseline bottom 50 per cent of households, we find impacts on the production of maize (60 kg) and groundnut (6.5kg), and there is no impact on the production of *nkhwani*.

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[52] See for example Burke, M. (2014). Selling Low and Buying High: An Arbitrage Puzzle in Kenyan Villages. Department of Agricultural and Resource Economics, UC Berkeley.

Table 13.2.4: Impacts on Production and Quantity of Five Key Staple Crops

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Produced Maize	0.019	-0.009	0.028**	0.924	0.966	0.939
	(1.27)	(-0.59)	(2.30)			
Quantity of Maize	57.683***	19.750	37.933**	149.025	234.092	166.393
	(4.56)	(1.42)	(2.62)			
Produced Groundnut	0.059	0.066	-0.007	0.188	0.296	0.204
	(1.17)	(1.07)	(0.18)			
Quantity of Groundnut	3.787	4.822	-1.035	9.138	14.996	9.760
	(1.04)	(0.86)	(0.21)			
Produced Rice	0.015	-0.014	0.028	0.043	0.040	0.044
	(0.61)	(-0.61)	(1.63)			
Quantity of Rice	0.864	-2.534	3.398**	0.501	2.366	1.902
	(0.72)	(-1.42)	(2.27)			
Produced Pigeonpea	0.005	-0.050	0.055	0.183	0.188	0.169
	(0.08)	(-0.70)	(1.32)			
Quantity of Pigeonpea	0.498	-10.102*	10.600**	7.369	8.111	6.120
	(0.10)	(-2.03)	(2.20)			
Produced Nkhwani	-0.046	-0.057*	0.011	0.066	0.099	0.102
	(-1.11)	(-1.81)	(0.28)			
Quantity of Nkhwani	-2.490**	-2.322*	-0.169	2.411	0.962	1.430
	(-2.10)	(-1.81)	(0.23)			
N	9,902	9,902		1,576	1,575	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

13.3 Livestock Production, Consumption and Sales

Livestock production can provide an alternative source of livelihood and food for rural communities. Households that keep livestock alongside crop production have diversified sources of income that could boast household income and food security, as well as enhance their resilience to shocks. At baseline, about 29 per cent of households were involved in some form of livestock production, and the CSSC representatives regularly encouraged participants to invest in small livestock as an alternative source of livelihood.

Results from the impact analysis shows an impact of 22 pp in livestock ownership over a baseline of 29 per cent for the T households. An index of household 'wealth', based on the first principal component derived from ownership of livestock is found to be significant at the one per cent level. We also find significant impacts on livestock consumption and purchases in the last 12 months, but we do not find significant impacts on livestock sales. We carry out estimates of impacts on the intensive margin for the ownership, consumption, purchases and sale of livestock as measured in tropical livestock units (TLU). The TLU uses importance weights to provide a way of aggregating the numbers of the different types of livestock into a single metric to allow for overall comparison. We find significant positive impacts on the TLU owned, consumed and purchased, but again not on the sale (Table 13.3.1). Analysis of the livestock production, consumption and sales among the baseline bottom 50 per cent of households show similar impacts, but with generally higher magnitudes than for the full sample. For this sub-sample, we find a significant five pp impact on any sale of livestock, and an impact 0.005 units on the TLU sold which is significant only at the 10 per cent level (Table D.3.3).

Table 13.3.1: Impacts on Livestock Production, Consumption and Sales

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Livestock production household	0.220***	0.135***	0.084***	0.288	0.593	0.303
	(5.15)	(2.78)	(3.24)			
Livestock ownership index	0.545***	0.236**	0.309***	-0.214	0.565	-0.130
	(4.34)	(2.27)	(4.51)			
TLU Owned	0.051***	0.034**	0.017	0.039	0.102	0.048
	(3.73)	(2.47)	(1.67)			
Consumed livestock	0.093***	0.037	0.057***	0.116	0.239	0.116
	(2.83)	(1.28)	(2.77)			
TLU Consumed	0.005***	0.002	0.003*	0.006	0.012	0.006
	(2.79)	(1.68)	(1.95)			
Purchased livestock	0.162***	0.215***	-0.054**	0.052	0.253	0.066
	(5.91)	(5.37)	(2.34)			
TLU Purchased	0.018***	0.021***	-0.003	0.004	0.023	0.006
	(4.53)	(3.28)	(0.64)			
Sold any livestock	0.014	-0.015	0.029**	0.087	0.108	0.057
	(0.67)	(-0.89)	(2.07)			
TLU Sold	0.001	-0.004**	0.006***	0.010	0.009	0.005
	(0.49)	(-2.06)	(3.10)			
N	9,901	9,901		1,576	1,574	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

In respect of the specific livestock, we find significant positive impact on the ownership and number owned for goat/sheep, chicken and duck/geese. There is a 16 pp impact on the ownership of goat/sheep over a baseline of 11 per cent for T households, and an impact of 0.36 units on the number of goat/sheep owned over a baseline of 0.26 units for T households. Impact on ownership of chicken was 15 pp over a baseline of 19.9 per cent for T households with a corresponding impact of 0.69 units in the number of chicken owned over a baseline of 0.64 units for T households. We also find significant impacts on the number of pigs owned although there is no impact on the proportion of households raising pigs (Table 13.3.2).

Table 13.3.2: Impacts on Ownership of Specific Livestock

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Own Goat/Sheep	0.159***	0.094***	0.065***	0.111	0.324	0.145
	(5.43)	(3.96)	(3.44)			
Number of Goat/Sheep	0.363***	0.229***	0.134*	0.259	0.728	0.363
	(4.31)	(2.90)	(1.86)			
Own Pig	0.007	0.003	0.004	0.006	0.010	0.000
	(1.29)	(0.64)	(1.25)			
Number of Pig	0.027	0.019	0.008	0.009	0.033	0.001
	(1.43)	(1.23)	(0.61)			
Own Chicken	0.152***	0.075	0.077***	0.199	0.411	0.191
	(3.84)	(1.65)	(3.10)			
Number of Chicken	0.623***	0.428*	0.195	0.639	1.627	0.764
	(2.81)	(2.01)	(1.11)			
Own Duck/Geese	0.019*	0.009	0.009	0.012	0.044	0.019
	(2.04)	(1.38)	(1.23)			
Number of Duck/Geese	0.092*	0.048	0.044	0.058	0.157	0.054
	(1.84)	(1.12)	(1.52)			
N	9,901	9,901		1,576	1,574	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

We observe similar impacts on the ownership of specific livestock among the baseline bottom 50 per cent of households although the magnitudes are higher than for the overall sample. The impact on the ownership of goat/sheep and chicken were 26 pp and 25 pp respectively. The impact on the number of goat/sheep and chicken were 0.46 and 0.22 units over baseline values of 0.19 and 0.50 units respectively among T households. We do not find an impact on the number of pigs owned for this sub-sample (Table 13.3.3). We do not test for equality of coefficients between these two models.

Table 13.3.3: Impacts on Ownership of Specific Livestock – Baseline Bottom 50 per cent

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Own Goat/Sheep	0.245***	0.145***	0.100***	0.081	0.362	0.114
	(9.20)	(5.93)	(3.99)			
Number of Goat/Sheep	0.456***	0.264***	0.192**	0.189	0.757	0.286
	(5.79)	(3.03)	(2.08)			
Own Pig	0.011	0.004	0.007	0.003	0.013	0.000
	(1.57)	(1.06)	(1.49)			
Number of Pig	0.039	0.022	0.017	0.001	0.043	0.000
	(1.32)	(1.06)	(1.26)			
Own Chicken	0.222***	0.096*	0.126***	0.173	0.471	0.180
	(4.79)	(2.00)	(3.89)			
Number of Chicken	0.871***	0.569**	0.302	0.496	1.789	0.666
	(3.58)	(2.45)	(1.21)			
Own Duck/Geese	0.031***	0.005	0.025**	0.016	0.056	0.016
	(3.20)	(0.76)	(2.69)			
Number of Duck/Geese	0.170***	0.060*	0.110**	0.040	0.207	0.049
	(3.51)	(1.89)	(2.33)			
N	5,037	5,037		794	794	885

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

13.4 Non-Farm Enterprise Operations

Another avenue for income diversification and strengthening is in the area of non-farm enterprise (NFE) operations. At baseline, 25 per cent of T households operated a NFE. Table 13.4.1 shows the impacts on the ownership and operational characteristics of household NFE. We do not find any impacts on the overall ownership of NFE or on the profit margins of the NFEs. Unlike the agricultural tools and assets, we do not find any impacts on the enterprise ownership of assets. We examine enterprise types that are operated by the households to see if there is any patter of diversification. We find significant reduction on the operation of charcoal/firewood enterprises (Table 13.4.2).

Table 13.4.1: Impacts on Non-Farm Enterprise Operations

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Household operates enterprise	0.010	-0.046	0.056*	0.238	0.240	0.158
	(0.28)	(-1.36)	(1.78)			
Enterprise opened in last 12 months	0.005	0.001	0.003	0.054	0.051	0.030
	(0.40)	(0.11)	(0.30)			
Enterprise owns asset	0.042	0.004	0.038**	0.077	0.118	0.066
	(1.68)	(0.23)	(2.26)			
Log total profit	0.083	-0.237	0.320	1.588	1.582	0.977
	(0.31)	(-1.03)	(1.53)			
Log total profit (petty trade ent)	0.280	0.210	0.070	0.694	1.101	0.589
	(1.24)	(1.45)	(0.41)			
Main decision maker female	-0.008	-0.029	0.021	0.166	0.164	0.119
	(-0.27)	(-1.06)	(0.95)			
N	9,900	9,900		1,576	1,575	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Table 13.4.2: Impacts on Enterprise Type

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Petty trade enterprise	0.041	0.028	0.013	0.092	0.140	0.084
	(1.67)	(1.56)	(0.74)			
Charcoal/Firewood enterprise	-0.036*	-0.038	0.002	0.070	0.032	0.037
	(-1.71)	(-1.68)	(0.12)			
Home brewery enterprise	0.002	0.003	-0.000	0.005	0.007	0.002
	(0.57)	(0.96)	(0.12)			
Crafts enterprise	0.003	-0.018	0.021*	0.037	0.033	0.019
	(0.23)	(-1.43)	(1.74)			
N	9,900	9,900		1,576	1,575	1,726

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

For most qualitative cohort participants, the SCTP money was used to cover their basic food, health and educational needs. Some specifically mentioned that the money was not enough to help them start businesses. A few were able to engage in non-farm enterprise including Christina, 33, a divorced woman who was one of the most entrepreneurial participants in the qualitative cohort. The economic impact and social stigma of being divorced were very salient themes throughout Christina's interviews. Nevertheless, during the two years of the evaluation period, she had invested in cultivating

tobacco and homebrew, both of which had been productive endeavors. Of note, her daughter was the only female youth participant who was still in school at endline. When asked about the impact of the program, Christina's first response was,

> *I connect the program to my beer brewing business, my tobacco farming, this shade right here, I really wished for this…it was with the SCTP money that I paid for the rent (of the tobacco plot).*

With the money she made, Christina improved her house, invested in livestock, paid for people to help her cultivate tobacco, and did less ganyu.

> *Interviewer:* Ok, so apart from beer brewing business, tobacco and the other crops, what else do you do?

> *Respondent:* [Giggling] but that is what we depend on and also thanking God for the life that he gives me, because I can't say the ganyu is still something to depend on, because since the program, I haven't been doing too much ganyu.

Beyond doing less ganyu, Christina's non-farm enterprises together with the SCTP had several important impacts,

> *This money has impacted my life, because I didn't even have that toilet, it came because of the SCTP money. Even this shade has come because of the money, the poles used on it were bought with that money. I was even able to employ those that did the work and I paid them with the same money. To mean without the SCTP, the toilet couldn't be there, the shade couldn't be there and even the beer brewing business could not have been there. It has impacted. It even expanded to the chickens, kitchen utensils like buckets, even this tobacco right here…So yeah it has impacted my life.*

Christina was also able to join the VSL and seek out loans with more confidence that she would be able to pay them back. Other participants mentioned non-farm enterprise including making mats and selling cassava, bananas and fritters.

13.5 Summary

Our analysis shows that SCTP has had significant positive impacts on the ownership of agricultural assets household durable goods, crop production and livestock production. However, there are still a lot of room for further improvements in crop production due to the low uptake of agro-chemical, improved seed varieties and irrigation. We do not find any meaningful impacts on the operations and profitability of NFEs. We check for the extent to which households have diversified sources of income by examining how many of these three economic activities (crop production, livestock production and NFE) each household is involved in. As shown in Fig 13.5.1a and 13.5.1b, we find pronounced differences in the participation in economic activities between T and C households from baseline to endline. At baseline, about six per cent each of T and C households were not engaged in any of these three activities, and about half of the households were involved in exactly one of these economic activities. By endline, we find about half of T households involved in two of the activities with a further 20 per cent involved in all three of the activities. The distribution of the participation among C households has remained essentially the same over the period. Estimation of the impact shows that the increase in the number of economic activities among T households is significant.

We recognize that engaging in multiple economic activities could prove counterproductive if it leads to minimal investments of time and resources in either of them in a way that ultimately leads to a more mediocre outcome than focusing resources in one of them and doing it particularly well. We therefore examine how engaging in multiple economic activities affects the output of each of them. In particular, we examine total crop harvest for households that only engage in crop production and those that engage in both crop and livestock production. The combination of crop and livestock production was the most predominant for both T and C households engaged in exactly two of the activities (41 out of 47.5 and 21 out of 31.9 per cent in T and C households respectively at endline). The graph in Fig. 13.5.2 clearly suggests that at endline, crop and livestock producing households did no worse relative to crop only households in terms of the distribution of quantity of crop harvests. In fact at baseline, crop and livestock households look to have had more harvests overall than crop only households.
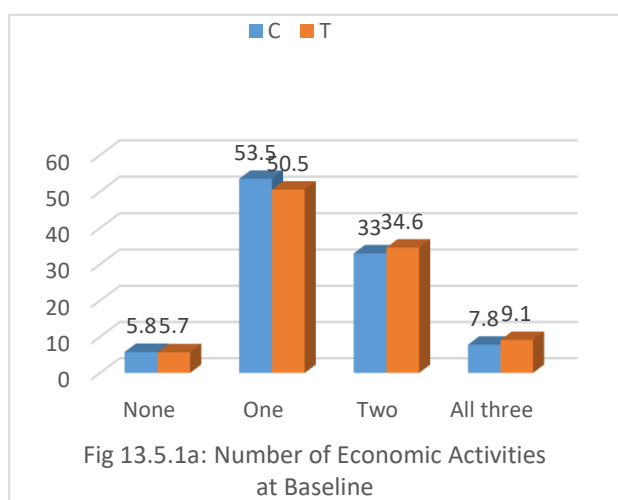
Fig 13.5.1a: Number of Economic Activities at Baseline
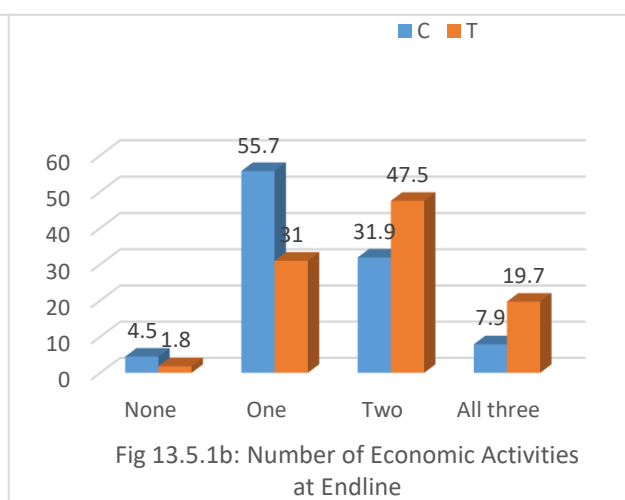
Fig 13.5.1b: Number of Economic Activities at Endline
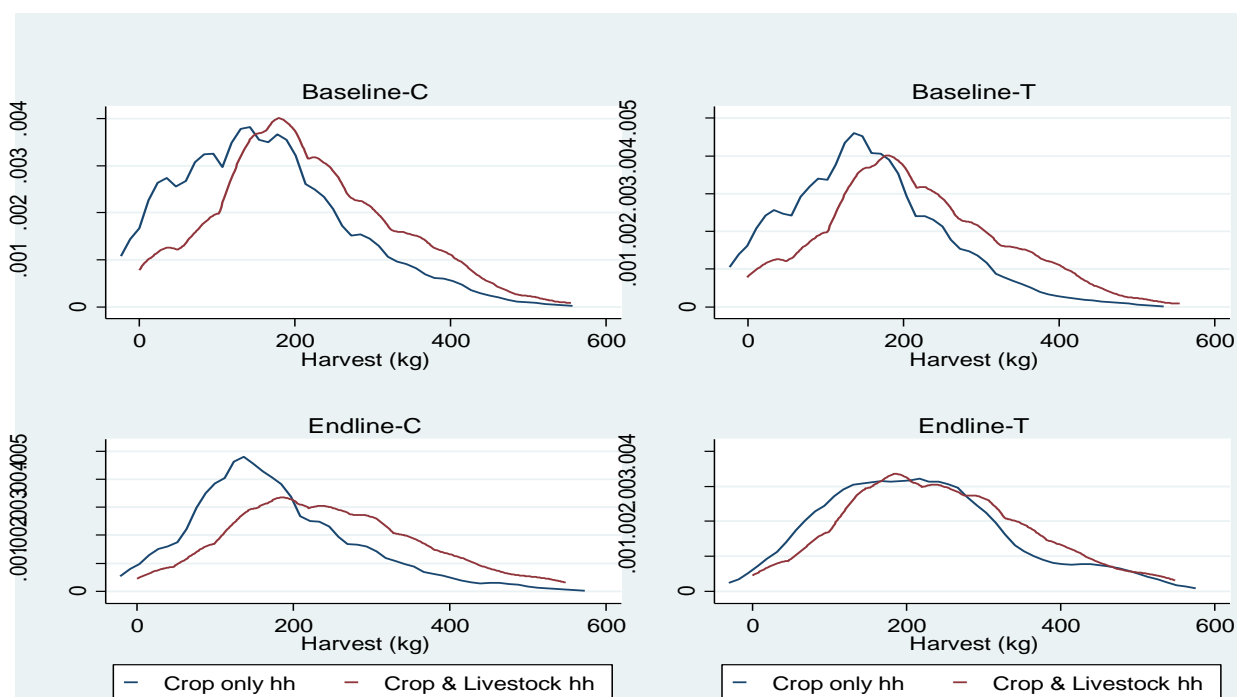
Fig 13.5.2: Kernel Density of Total crop harvest (kg) for crop only and crop & livestock households

Note: Crop harvest are trimmed 5% at either tail

14. Conclusion and Recommendations

The midline impact evaluation, which was based on six transfer payments (or one year's worth of payments) to SCTP households, showed small positive impacts in selected domains, and impacts were concentrated amongst the poorest households. Twelve months later, with an additional six payments, the SCTP appears to have transformed the lives of beneficiaries. Results from the evaluation now show strong impacts across almost all major domains and among all households, not just among the very poorest.

To better appreciate the full range of impacts the program has on beneficiaries, we have identified nine major outcome areas or domains and created an index for each domain based on specific indicators in each domain. For example, the 'asset' domain includes livestock, durable goods and agricultural assets (e.g. tools). The income and revenue domain includes non-farm enterprise and total value of crop production. Since each individual indicator is measured in a different unit we standardize all variables so that they are reported in standard deviation units (or z-scores) and can be compared across domains. Results are depicted graphically in Figure 14.1. For example, the effect of the program on consumption is approximately 0.3 standard deviation units (or z-scores), and this effect is statistically different from 0 because the confidence bound does not cross the vertical line drawn at 0. The figure shows that the SCTP has a significant impact in eight of nine domains, the sole exception being child nutritional status. We have also conducted sensitivity tests by adjusting the confidence intervals for multiple testing. These results are shown in Appendix F; in only one (Income and Revenue) does the adjusted confidence interval cross 0 when the unadjusted one does not.

Figure 14.1: Impact of the SCTP on Nine Major Domains (standardized units)
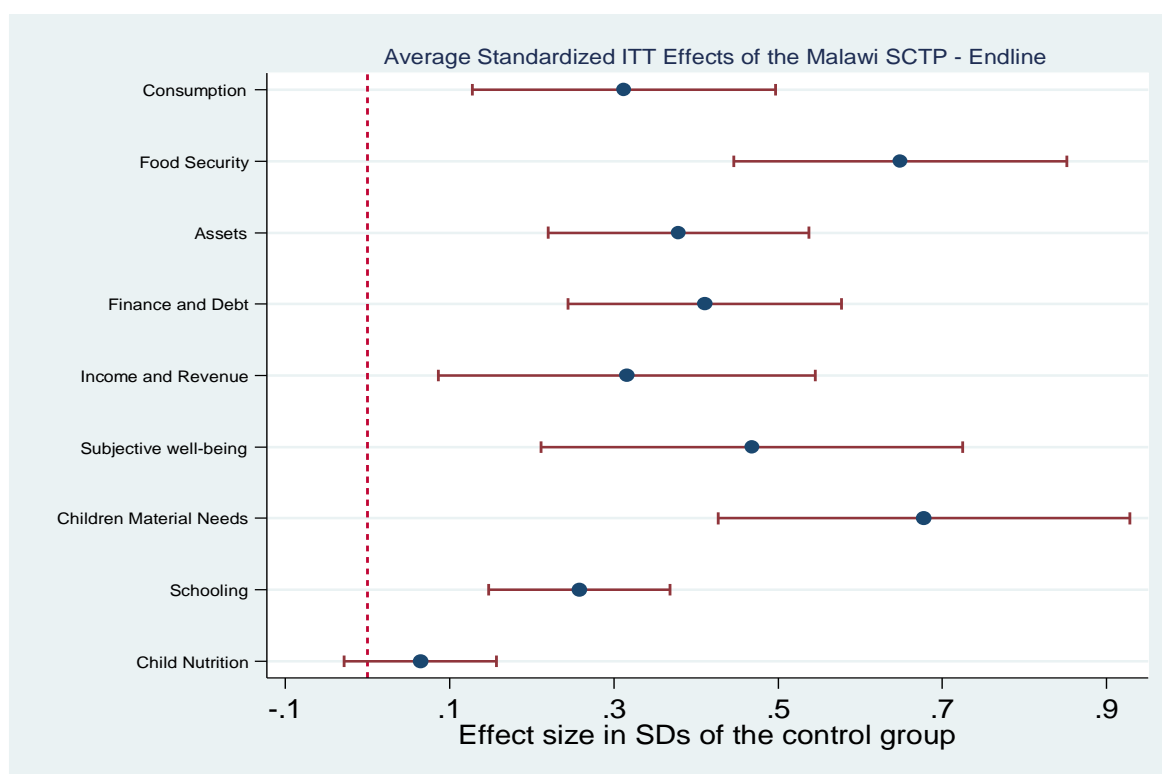
We summarize the pattern and size of impacts by monetizing all statistically significant impacts and comparing them to the average transfer received by households. Most impacts are already measured in MWK, for example consumption, debt repayments, purchase of agricultural inputs and savings. All figures are in annual August 2013 MWK and are reported in Table 14.1. The bottom of this table shows that in our data we are able to 'track' spending worth MWK44,283 while the average of the

reported annual transfer receipts from the program data base is MWK26,169. This implies a multiplier effect of 1.69 shown at the bottom of the table. In other words, beneficiaries have managed to translate each Kwacha received into an additional 0.69 Kwacha of benefits. Such a multiplier must be generated through increased incomes. We see a large impact on agricultural tools, fertilizer and livestock. These are suggestive of the ways that households have been able to 'make the cash work' to generate multipliers. We should note that the size of the multiplier estimated in Malawi is similar to that estimated for two unconditional cash transfer programs in neighbouring Zambia. These results speak directly to arguments that such programs foster dependency, or that cash transfers are not used wisely and so must be provided with 'conditions'. On the contrary, the results of the SCTP strongly suggest that unconditional cash transfer programs to the ultra-poor can be an important part of an inclusive growth strategy even in very poor countries.

Table 14.1: Tracking the transfers

	Estimated outlays (Annual MWK)
Consumption	41,520
Debt reduction	916
Agricultural Assets	124
Non Agricultural Assets	163
Agricultural Inputs	1179
Savings	381
Total Outlays	44,283
Average Transfer Received	26,169
Multiplier	1.69

Recommendations: The results of the evaluation point to several areas for future work or programme and policy action which we list here for consideration.

The SCTP targeting criteria (ultra-poor and labour contrained) leads to a unique profile of beneficiaries, households with elderly caring for orphans. Very few households have pre-school children, a group that is typically one of the most vulnerable in society. Several countries in Africa that target in a similar fashion to the SCTP have taken explicit action to reach households with pre-school children and to enhance the effect of their program on young child nutrition (Ghana, Ethiopia). These experiences might be of interest to government and partners in Malawi as the country seeks to build a comprehensive social safety net.

Though there are large and impressive impacts on schooling, there is also a potentially negative effect on child labour and engagement in hazardous work. This issue could be explored in further qualitative work to understand whether it is indeed a problem, and how it can be mitigated.

The value of the transfer is a crucial determinant of positive program impacts. With steady inflation in Malawi, this value is constantly eroding. The Ministry may want to consider appointing an independent review board to periodically review the value of the transfer against inflation and provide a recommendation for increases to ensure the program continues to meet its objectives.

Two issues stand out from the analysis of program implementation. First, wait times for beneficiaries to collect their payments are long. And second, many beneficiaries believe there are conditions associated with the cash transfer, and it was revealed during the end-line workshop that many district social welfare officers purposely tell beneficiaries about conditions which do not in fact exist. Clear program rules and expectations could be provided to beneficiaries to ensure they understand their rights.

Annex A: Summary of Malawi SCTP Study Design

A.1 TA and VC Selection

The selection of TAs was conducted at an evaluation planning meeting convened in Lilongwe in September 2012 where stakeholders from GoM, UNICEF, and KfW were present. The names of all TAs in a district were put into a hat[53] and two TAs were selected at random for each TA. In Salima, Maganga and Ndindi TAs[54] were selected and in Mangochi, Jalasi and M'bwana Nyambi TAs were selected. Once the TAs were selected for the study, MoGCDSW prioritized these locations for targeting in order to complete the process in time for data collection, which was to begin in May 2013.

Through a transparent process which included the participation of government officials at the local District Commissioner's Office (the DC, SCTP Desk Officer and the Social Welfare Officer) and members of the SCTP evaluation team, VCs were randomly selected from a hat and put on a list in the order they were selected. These proceedings were held in Salima and Mangochi on June 25th and July 12th, 2013 respectively. The number of eligible households varied greatly between VCs, ranging from 66 to 258 households in a VC. For the evaluation, the intention was to collect surveys from 3,500 eligible households (T and C) and 800 non-eligible households, for a total of 4,300 surveys. The surveys were to be split evenly across the two districts so it was expected that in each district, the field team would interview about 1,750 eligibles and 400 non-eligibles. Therefore, starting at the top of the randomly ordered list of VCs, the evaluation team calculated the number of VCs that would need to be visited based on the number of total SCTP-selected (i.e. eligible) households in the VC. Additionally, as the statistical power of the study was based on having a minimum number of VCs included, it was determined that there needed to be at least 29 VCs included in the study. The number of VCs was allocated across the two districts (Salima = 15 VCs; Mangochi = 14 VCs). Details are below in Table A.3.

Table A.1.1: Village Cluster Selection for SCTP Impact Evaluation Study

District	Traditional Authority	Total VCs	Study VCs
Salima	Maganga	11	8
	Ndindi	13	7
Mangochi	Jalasi	9	6
	M'bwana Nyambi	12	8
	Total	45	29

A.2 Household Selection

The baseline evaluation includes 3,531 SCTP-eligible households across both districts. The process for selecting households for interviews varied between the two districts. Salima VCs had a smaller number of selected households in each VC, allowing for all such households in a VC to be interviewed[55] while still reaching the target number of VCs required. Mangochi generally had very large numbers of selected households per VC. Therefore, in order to reach at least 14 VCs, a random

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[53] TAs that already had the programme were excluded from the random selection process. For this reason three TAs in Salima and four in Mangochi were excluded from the randomization exercise.

[54] When TAs were being randomly selected for Salima, the first TA that was drawn for Salima was Pemba TA. After discussion among the stakeholders, it was understood that Pemba TA was slated to be part of a UN Humanitarian Intervention which included a cash transfer component, so Pemba was disqualified for consideration in the study for this reason. Ndindi TA was selected randomly as an alternate.

[55] One exception was Kandulu VC in Ndindi TA. It had a large number of beneficiaries and interviewing all of them would have significantly exceeded the target sample size for the district. Therefore, the eligible households were listed in random order and the interviewed in the order they appeared on the list.

selection of eligible households was taken in each VC. See Table A.2.1 for a summary of the intended and actual number of surveys collected in each TA. In addition to the beneficiary interviews, the evaluation includes 821 non-eligible households from the two districts. Non-eligible households were selected randomly, and as such, include both poor and wealthier households.

Table A.2.1 Intended and Actual Number of Eligible Households Interviewed, by TA

District	Traditional Authority	Intended	Actual
Salima	Maganga	934	869
	Ndindi	890	906
Mangochi	Jalasi	750	753
	M'bwana Nyambi	1,000	1,003
	Total	3,574	3,531

A.3 Treatment and Control Assignment

The baseline survey was conducted "blind", meaning that treatment (T) and control (C) status were not assigned until after the baseline survey was completed in order to maintain maximum objectivity during data collection. After baseline data collection was concluded, the District Commissioner's Office in each of the two districts convened meetings of local and national level government officials, local traditional leaders, CSSC members and representatives from the SCTP evaluation team to determine which VCs would enter delayed-entry control status. At these meetings, a coin toss was conducted and half of the VCs in each TA were randomly assigned to the treatment group. Beneficiaries in these VCs will receive the programme immediately. The other half of the VCs were randomly assigned to the delayed-entry control group. The coin toss random assignment was held in Salima on September 24th and in Mangochi on September 30th, 2013.

Annex B: Additional Data Collection Information

B.1. Data Collection Instruments

Figure B.1.1: Endline Survey and Interview Guide Topics

QUANTITATIVE

Household Survey

Mortality and Changes in Household Membership
Roster and Orphan Status
Education — 3+ years
Health — All
Disability— 10+ years
Child Health and Anthropometry— 0-71 months
Fertility— women ages 12-49
Time-Use (chores, agriculture, other)— ages 6+
Labour (wage/ *ganyu*)— ages 10+
Hazardous labour—ages 6-25*
Household Enterprises
Transfers Received and Made
Other Income
Credit
Expectations for the Future
Life Distress*
Self-Assessed Poverty and Food Security
Social Safety Nets
Shocks and Coping Strategies
Expenditures
Land-Use
Crop Production and Sales
Agriculture and Livestock
Hired Labour
Household expenses for Livestock/Animal Production
Housing Conditions
Durable Goods
Operations

Young Person's Module— ages 15-22

Future Aspirations and Expectations
Social Support and Attitudes
Mental Health
Sexual Activity
Risk Taking Behaviours
Time Preference
Youth labour and time use*
Female menstruation*

Community Survey

Access to Educational and Health*
   Facilities and Services
Agricultural Resources
Ganyu Wage Rates
External Shocks
Community Services and Benefits
Community Norms and Culture (Alcohol and Violence)
Schooling details and Location (GPS)*
 Prices of Food and Non-Food Items

QUALITATIVE

Caretaker In-Depth Interview

Personal Background
Household Makeup
Household Economy
SCTP Experience & Impacts*
Aspirations and Expectations for Children*
Social Networks
Health and Family Well-Being

Youth In-Depth Interview

Personal Background
Household Economy
SCTP Experience & Impacts*
Education and School Experience
Child Labour and Time Use *
Personal Network Inventory
Family Support Systems
Well-Being
Sexual Behaviour

Key Informant Interviews*

SCTP Impacts on the Community

Focus Group Discussions

Knowledge of SCTP*
Social Stigma*
Community Impacts*
Programme Challenges, Recommendations, and Potential Linkages*

* Modules added to instruments at endline

Instruments available for download at: https://transfer.cpc.unc.edu/?page_id=196.

B.2. Training and Selection of Field Survey Staff

Training

Training of supervisors and enumerators for the endline quantitative data collection took place in Zomba from 28 September – 9 October 2015. Trainers from UNC, CSR, and UNICEF OoR led the training. The training focused on reviewing each question in the household and youth surveys, module by module, and translating the materials into Chichewa and Chiyao as they went. The team was also trained on using the tablet computers for data collection, and on ethics of human subject research and associated field protocols. Field piloting of the survey instruments was done as part of the training. Enumerators and supervisors participated in two days of piloting, one on the paper instrument (Saturday, 3 October) and one using tablets (Thursday, 8 October), with debriefing sessions after each pilot. Additional practice and pilots were required for those which experienced difficulties in the field pilot tests.

Qualitative research assistants were trained in Zomba from 3-5 March 2016. UNC and CSR lead qualitative researchers led the training. Four research assistants were trained in qualitative methods, interview techniques, reviewing the semi-structured interview guides, and human subjects research protocols. Research assistants translated the guides and prepared household summaries to aid them in the fieldwork.

Data capture

The data collection was carried out by CSR enumerators. Peter Mvula and Maxton Tsoka organized the field work and oversaw field teams. Support was provided by researchers and support staff from UNC and UNICEF's OoR. Quantitative data was captured on tablet computers during the interviews. Qualitative interviews were audio recorded and research assistants took notes throughout.

Selection of enumerators and research assistants

CSR selected the survey enumerators from a pool of applicants that were experienced in household and community surveys, many of whom had participated in prior rounds of data collection for the SCTP impact evaluation. There were 10 field teams, each consisting of a supervisor, five enumerators (balanced by gender) and a driver, for a total local field team of 70 people, led by two key investigators (Drs. Mvula and Tsoka). Each enumerator was assigned to interview two to three households per day. They were also responsible for administering the Young Person's module for households that had youth ages of 15 to 22. Supervisors organized the team's work and conducted community interviews. Interviews were conducted orally in the local language (Chichewa or Chiyao) to be culturally sensitive and provide clearer communications. All enumerators spoke fluent Chichewa, and each team had at least one Chiyao speaker when interviewing in predominantly Yao areas.

Four supervisors – two male and two female – who had led data collection for the endline quantitative surveys were selected to conduct the qualitative data collection. All four were highly experienced, and two of them had conducted the midline interviews with these same households.

Annex C: Mean Differences at Baseline for Attrition Analysis

C.1 Selective Attrition

Table C.1.1: Individual-Level Characteristics (Controls versus Treatment for Panel Households)

Variables	Control		Treatment		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Age (in years)	24.907	8,017	25.813	7,234	0.905	1.015	0.380
Child under-five	0.121	8,017	0.121	7,234	-0.000	0.009	0.980
Child ages 5-17	0.498	8,017	0.484	7,234	-0.014	0.012	0.241
Adult (18-64)	0.249	8,017	0.245	7,234	-0.004	0.014	0.749
Elderly (65 and older)	0.137	8,017	0.156	7,234	0.019	0.018	0.279
Orphan (one or both parents)	0.206	8,017	0.224	7,234	0.018	0.026	0.481
Female	0.571	8,017	0.572	7,234	0.001	0.007	0.913
Chronic illness	0.149	8,017	0.174	7,234	0.024	0.016	0.140
Any disability	0.007	8,017	0.006	7,234	-0.001	0.001	0.307
Currently in school	0.373	8,017	0.356	7,234	-0.017	0.022	0.450

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.2: Main Respondent Characteristics (Control versus Treatment for Panel Households)

Variables	Control		Treatment		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Female	0.852	1,726	0.831	1,577	-0.021	0.022	0.345
Age (in years)	56.904	1,726	58.908	1,577	2.004	2.198	0.370
Widowed	0.419	1,726	0.440	1,577	0.022	0.036	0.551
Divorced/Separated	0.645	1,726	0.645	1,577	0.000	0.036	0.991
Currently in school	0.007	1,726	0.010	1,577	0.003	0.003	0.255
Ever attended school	0.296	1,726	0.298	1,577	0.001	0.054	0.982
Highest grade completed	3.587	549	3.624	531	0.037	0.269	0.891
Chronic illness	0.408	1,726	0.471	1,577	0.062	0.043	0.157
Any disability	0.011	1,726	0.012	1,577	0.001	0.004	0.826

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.3: Household Demographic Characteristics (Control versus Treatment for Panel Households)

Variables	Control		Treatment		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Numbers of persons in household	4.579	1,726	4.533	1,577	-0.046	0.224	0.840
No. of children under 5	0.556	1,726	0.549	1,577	-0.007	0.059	0.912
No. of children 5-17	2.281	1,726	2.195	1,577	-0.086	0.132	0.519
Number of adults (18-64)	1.142	1,726	1.111	1,577	-0.031	0.105	0.766
Number of elderly (65+)	0.626	1,726	0.708	1,577	0.082	0.056	0.154
Number of orphans	0.943	1,726	1.017	1,577	0.074	0.126	0.563
Household has a disabled	0.033	1,726	0.027	1,577	-0.005	0.005	0.295
Number of working age (15-64)	1.493	1,726	1.469	1,577	-0.025	0.123	0.843
No. of dependents (<15 or >65)	3.085	1,726	3.064	1,577	-0.021	0.127	0.870
No. currently in school	1.707	1,726	1.614	1,577	-0.093	0.141	0.516
No. of persons per room	2.462	1,719	2.521	1,573	0.059	0.159	0.714

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.4: Household Welfare Indicators (Control versus Treatment for Panel Households)

Variables	Control Mean	N1	Treatment Mean	N2	Mean Diff	Diff SE	p-value
Per capita expenditure	47,861.229	1,713	50,279.054	1,555	2,417.825	3,520.717	0.498
Per capita food expenditure	37,119.067	1,713	39,222.506	1,555	2,103.439	2,804.087	0.459
Poor	0.690	1,726	0.667	1,577	-0.023	0.045	0.617
Ultra Poor	0.402	1,726	0.378	1,577	-0.024	0.050	0.629
Gap poor	41.765	1,206	41.487	1,078	-0.278	2.430	0.910
Gap ultra poor	31.192	717	31.568	630	0.375	2.567	0.885
Severity poor	22.348	1,206	21.986	1,078	-0.363	2.241	0.873
Severity ultra poor	14.127	717	13.979	630	-0.148	1.989	0.941
Household feels worse off compared to neighbours	0.508	1,726	0.576	1,577	0.067	0.059	0.263
Household feels worse off compared to friends	0.484	1,726	0.519	1,577	0.035	0.047	0.467
Owns current residence	0.911	1,726	0.921	1,577	0.010	0.008	0.224
Subjective wealth of household from 1(poor) to 6(rich)	1.198	1,726	1.194	1,577	-0.004	0.030	0.884
Subjective wealth of most of neighbours from 1(poor) to 6(rich)	1.850	1,726	1.912	1,577	0.062	0.099	0.534
Subjective wealth of most of friends from 1(poor) to 6(rich)	1.876	1,726	1.937	1,577	0.060	0.094	0.527
Worried that household did not have enough food in the past 7 days	0.826	1,726	0.838	1,577	0.011	0.041	0.789
Number of meals taken per day	1.951	1,726	1.910	1,577	-0.041	0.061	0.510
Household ate over one meal per day	0.818	1,726	0.795	1,577	-0.023	0.042	0.585
Number of months maize from last harvest lasted	3.916	1,725	3.955	1,577	0.040	0.238	0.869
Maize from last harvest lasted at least 3 months	0.496	1,726	0.491	1,577	-0.005	0.045	0.912
Number of months maize in grainery will last	1.198	1,705	1.190	1,566	-0.008	0.198	0.966
Maize in grainery will last at least 3 months	0.096	1,726	0.097	1,577	0.002	0.023	0.947

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.5: Household Productivity Indicators (Control versus Treatment for Panel Households)

Variables	Control Mean	N1	Treatment Mean	N2	Mean Diff	Diff SE	p-value
Owns enterprise	0.227	1,726	0.242	1,577	0.015	0.042	0.718
Enterprise earnings in the past month	2,252.017	405	2,515.029	412	263.012	597.630	0.663
Enterprise hired labour	0.007	407	0.004	416	-0.003	0.005	0.527
Any member with wage employment	0.061	1,726	0.050	1,577	-0.012	0.019	0.548
Any member doing ganyu labour	0.598	1,726	0.562	1,577	-0.036	0.052	0.497
Number of days of ganyu for household	89.681	1,048	90.102	917	0.421	5.688	0.942

Table C.1.5: Household Productivity Indicators (Control versus Treatment for Panel Households) (continued)

Average ganyu wage per day for household	510.857	1,047	576.387	917	65.530	38.973	0.104
Crop production household	0.962	1,726	0.955	1,577	-0.007	0.014	0.606
Agricultural Inputs							
Irrigation	0.047	1,726	0.047	1,577	-0.001	0.014	0.970
Fertilizer	0.655	1,726	0.666	1,577	0.011	0.063	0.863
Organic fertilizer	0.259	1,726	0.237	1,577	-0.022	0.031	0.488
Pesticides	0.018	1,726	0.028	1,577	0.010	0.010	0.339
Acres cultivated	1.418	1,655	1.414	1,511	-0.004	0.080	0.959
Cultivated							
Under one acre	0.241	1,655	0.258	1,511	0.017	0.034	0.628
One to two acres	0.524	1,655	0.490	1,511	-0.034	0.027	0.215
Two to four acres	0.204	1,655	0.218	1,511	0.015	0.028	0.597
Over four acres	0.031	1,655	0.034	1,511	0.002	0.007	0.746
Hired labour for crop production	0.037	1,726	0.044	1,577	0.007	0.010	0.494
Sold any crops	0.239	1,570	0.216	1,450	-0.023	0.041	0.577
Crops sold							
Maize	0.997	330	0.981	317	-0.016	0.011	0.164
Groundnuts	0.349	330	0.365	317	0.017	0.133	0.901
Soyabeans	0.439	330	0.307	317	-0.133	0.175	0.456
Rice	0.068	1,610	0.049	1,476	-0.020	0.034	0.567
Tanaposi	0.046	1,610	0.072	1,476	0.026	0.019	0.168
Agric. Assets owned							
Hand hoe	0.879	1,726	0.869	1,577	-0.009	0.024	0.694
Axe	0.131	1,726	0.143	1,577	0.011	0.025	0.653
Panga knife	0.227	1,726	0.237	1,577	0.010	0.032	0.752
Sickle	0.188	1,726	0.180	1,577	-0.007	0.023	0.747
Agric. Assets purchases in last 12 months							
Hand hoe	0.053	1,726	0.068	1,577	0.015	0.012	0.210
Axe	0.002	1,726	0.004	1,577	0.001	0.002	0.573
Panga knife	0.006	1,726	0.005	1,577	-0.001	0.003	0.747
Sickle	0.008	1,726	0.009	1,577	0.001	0.003	0.789
Raised any livestock	0.280	1,726	0.296	1,577	0.016	0.028	0.573
Livestock raised in last 12 months							
Calf	0.001	1,726	0.001	1,577	-0.001	0.001	0.389
Cow	0.001	1,726	0.001	1,577	0.000	0.001	0.863
Goat or sheep	0.106	1,726	0.115	1,577	0.009	0.021	0.669
Pigs	0.003	1,726	0.006	1,577	0.003	0.003	0.334
Chicken	0.189	1,726	0.205	1,577	0.016	0.021	0.442
Other livestock	0.031	1,726	0.035	1,577	0.004	0.009	0.651
Number of livestock owned							
Calf	0.002	1,726	0.001	1,577	-0.001	0.002	0.599
Cow	0.002	1,726	0.003	1,577	0.000	0.002	0.845
Goat or sheep	0.273	1,726	0.266	1,577	-0.007	0.072	0.925
Pigs	0.006	1,726	0.010	1,577	0.004	0.006	0.501
Chicken	0.589	1,726	0.666	1,577	0.077	0.102	0.458

Table C.1.5: Household Productivity Indicators (Control versus Treatment for Panel Households) (continued)

Livestock purchases in last 12 months							
Calf	0.000	1,726	0.000	1,577	0.000	0.000	
Cow	0.000	1,726	0.001	1,577	0.001	0.000	
Goat or sheep	0.016	1,726	0.010	1,577	-0.006	0.005	0.218
Pigs	0.001	1,726	0.002	1,577	0.001	0.002	0.420
Chicken	0.036	1,726	0.040	1,577	0.004	0.009	0.647
Other livestock	0.007	1,726	0.006	1,577	-0.001	0.002	0.668
Engaged in fishing	0.012	1,726	0.007	1,577	-0.005	0.005	0.287
Sold fish	0.302	25	0.204	10	-0.098	0.118	0.413
Hired labour for fishing	0.000	1,726	0.000	1,577	-0.000	0.000	0.317

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.6: Household Other Income, Benefits and Shocks (Control versus Treatment for Panel Households)

Variables	Control Mean	N1	Treatment Mean	N2	Mean Diff	Diff SE	p-value
Transfer made out of the household	0.333	1,726	0.289	1,577	-0.044	0.040	0.289
Household received a transfer	0.846	1,726	0.799	1,577	-0.048	0.044	0.283
Value of transfers received	48,525.717	1,726	42,125.077	1,577	-6,400.640	9,782.365	0.518
Value of transfers made	3,812.640	1,726	4,001.186	1,577	188.546	784.333	0.812
Value of maize received	1.257	1,726	1.412	1,577	0.155	0.976	0.875
Still owes on loan from 12+ months	0.065	1,726	0.066	1,577	0.002	0.017	0.925
Amount owed on loan from 12+ months	3,874.989	124	3,865.738	111	-9.251	1,272.356	0.994
Loan contracted in last 12 months	0.278	1,726	0.246	1,577	-0.032	0.027	0.252
Purchase on credit in last 12 months	0.280	1,726	0.297	1,577	0.017	0.032	0.599
Benefitted from any safety net programme	0.709	1,726	0.701	1,577	-0.008	0.058	0.886
Number of safety net programmes	1.127	1,726	1.151	1,577	0.024	0.236	0.920
Programme							
Free Maize	0.164	1,726	0.164	1,577	-0.000	0.096	0.999
Free Food (other than Maize)	0.135	1,726	0.157	1,577	0.022	0.083	0.792
Food/Cash-for-Work	0.086	1,726	0.067	1,577	-0.019	0.017	0.282
School Feeding	0.137	1,726	0.165	1,577	0.028	0.074	0.708
Voucher to buy fertilizer or seeds (FISP)	0.542	1,726	0.539	1,577	-0.003	0.067	0.969
Community Based Childcare	0.024	1,726	0.026	1,577	0.002	0.012	0.878
Experienced any shock in last 12 months	0.934	1,726	0.954	1,577	0.020	0.034	0.561
Number of shocks experienced	2.457	1,726	2.530	1,577	0.073	0.217	0.740
Shocks							
Droughts or Irregular Rains	0.641	1,726	0.606	1,577	-0.035	0.101	0.731
Floods/Landslides	0.059	1,726	0.085	1,577	0.026	0.045	0.571
Unusually High cost of Agric. inputs	0.424	1,726	0.465	1,577	0.041	0.065	0.528
Unusually high food prices	0.823	1,726	0.841	1,577	0.019	0.054	0.733
Serious accident or illness of hh member	0.170	1,726	0.176	1,577	0.007	0.025	0.792

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.7: Health Indicators (Control versus Treatment for Panel Households)

Variables	Control Mean	N1	Treatment Mean	N2	Mean Diff	Diff SE	p-value
Any member with illness/injury in past 2 weeks	0.731	1,726	0.774	1,577	0.043	0.026	0.105
Number of members with illness/injury	1.230	1,726	1.359	1,577	0.129	0.089	0.160
Proportion of household members with illness/injury	0.318	1,726	0.359	1,577	0.041	0.022	0.077
Sought care in facility for illness/injury (proportion)	0.647	1,265	0.570	1,235	-0.077	0.034	0.031
Subjective health status of members (1=Poor; 5=Excellent)	3.220	1,722	3.283	1,572	0.063	0.164	0.702
Any member hospitalized in last 12 months	0.152	1,726	0.137	1,577	-0.014	0.026	0.576
Number of members hospitalized	0.166	1,726	0.158	1,577	-0.008	0.033	0.812
Proportion of hh members hospitalized	0.037	1,726	0.035	1,577	-0.002	0.007	0.761
No. of children in nutrition program	0.023	1,726	0.021	1,577	-0.002	0.007	0.835
No. of children participating in health clinic	0.411	1,726	0.408	1,577	-0.003	0.049	0.952
No. of children with diarrhea in past 2 wks	0.091	1,726	0.091	1,577	-0.000	0.018	0.986
No. of children with fever in past 2 wks	0.161	1,726	0.140	1,577	-0.021	0.030	0.492
No. of children with cough in past 2 wks	0.160	1,726	0.157	1,577	-0.003	0.028	0.928
Number of stunted children	0.253	1,726	0.269	1,577	0.015	0.036	0.674
Number of underweight children	0.090	1,726	0.093	1,577	0.002	0.018	0.898
Number of wasted children	0.021	1,726	0.022	1,577	0.001	0.006	0.815
Number of severely stunted children	0.124	1,726	0.132	1,577	0.008	0.017	0.644
Number of severely underweight children	0.023	1,726	0.027	1,577	0.004	0.010	0.695
Number of severely wasted children	0.006	1,726	0.009	1,577	0.002	0.003	0.455

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.1.8: Youth Module Background Characteristics (Controls versus Treatment - Panel Youth)

Variables	Control Mean	N1	Treatment Mean	N2	Mean Diff	Diff SE	p-value
Age (years)	15.155	501	15.156	526	0.001	0.094	0.992
Male	0.514	501	0.539	526	0.026	0.043	0.554
Main respondent ever attended school	0.346	501	0.321	526	-0.024	0.071	0.732
Main respondent literate	0.236	501	0.197	526	-0.039	0.054	0.473
Main respondent female	0.874	501	0.869	526	-0.005	0.031	0.875
Main respondent age	52.190	501	54.830	526	2.640	2.153	0.230
Main respondent widow	0.360	501	0.393	526	0.033	0.052	0.530
Main respondent never married	0.047	501	0.020	526	-0.027	0.022	0.222
Salima district	0.501	501	0.481	526	-0.020	0.197	0.918
No. of children 6-11 years	1.334	501	1.316	526	-0.018	0.090	0.840
No of children 12-17 years	1.830	501	1.833	526	0.003	0.089	0.974
No of adults (18-64)	1.570	501	1.559	526	-0.011	0.135	0.935
Number of elderly (65+)	0.440	501	0.441	526	0.001	0.055	0.984
Numbers of persons in household	5.919	501	5.837	526	-0.081	0.241	0.738
Household members per sleeping room	5.609	501	5.563	525	-0.046	0.237	0.846
HH member moved away past 12 months	0.129	501	0.106	526	-0.023	0.029	0.429
Someone joined since August 2013	0.288	501	0.316	526	0.029	0.035	0.427
Price of maize grain per Kilo	158.078	501	162.536	526	4.458	37.525	0.906
Price of rice per Kilo	339.448	501	332.477	526	-6.971	20.582	0.737
Price of beans per Kilo	438.904	501	443.975	526	5.070	42.896	0.907
Price of tomatoes per Heap	46.443	501	70.136	526	23.693	15.132	0.129
Price of beef per Kilo	1,082.776	501	1,193.754	526	110.979	84.091	0.198
Price of salt per Sachet/Tube	30.318	501	23.780	526	-6.538	4.986	0.200
Price of sugar per Kilo	346.654	501	405.555	526	58.901	45.083	0.202
Price of cooking oil per Sachet/Tube	51.713	501	42.915	526	-8.798	12.083	0.473
Price of barsoap per Piece	76.412	501	72.024	526	-4.388	9.319	0.641
Price of panadol per Piece	16.211	501	20.157	526	3.946	2.953	0.192

Notes: Weighted results using youth-specific interview rates; standard errors obtained considering multi-stage sampling design

Table C.1.9: Youth Module Outcomes (Controls versus Treatment for Panel Youth)

Variables	Control		Treatment		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Ever had sex	0.273	499	0.301	522	0.028	0.046	0.554
Ever been pregnant	0.032	236	0.058	230	0.026	0.025	0.322
Ever been married	0.011	501	0.018	525	0.006	0.009	0.460
Age at sexual debut	13.566	133	13.739	148	0.174	0.432	0.691
Partner age at first sex	13.828	132	14.537	148	0.708	0.613	0.257
First sex with age disparate partner (>5 years)	0.034	132	0.050	148	0.016	0.026	0.542
Condom used at first sex	0.314	133	0.315	146	0.002	0.055	0.975
First sex forced	0.210	134	0.220	147	0.011	0.052	0.842
Ever given or received money for sex	0.461	134	0.490	148	0.029	0.086	0.739
Ever forced to have sex	0.216	134	0.372	147	0.155	0.067	0.028
Given or received money for sex with most recent partner (last 12 months)	0.563	80	0.495	105	-0.068	0.100	0.501
Condom used at last sex (last 12 months)	0.438	81	0.373	105	-0.066	0.069	0.349
Number of sexual partners (last 12 months)	0.908	134	1.168	148	0.260	0.132	0.058
Number of sex acts (last 3 months)	0.633	134	1.172	148	0.539	0.246	0.037
Unprotected sex (last 3 months)	0.427	41	0.299	58	-0.128	0.085	0.144
Partner age, most recent partner (last 12 months)	15.609	76	16.817	104	1.208	0.508	0.024
First sex with age disparate partner (>5 years)	0.074	76	0.172	104	0.097	0.061	0.119
Had multiple partners during the last 12 months	0.077	134	0.127	148	0.050	0.031	0.126
Self-assessed risk of HIV is moderate or high	0.134	444	0.152	463	0.018	0.042	0.668
Ever smoked cigarettes	0.007	501	0.004	526	-0.003	0.005	0.547
Ever drank alcohol, more than a few sips	0.014	501	0.031	526	0.018	0.010	0.090
CES-D	19.881	499	19.526	526	-0.355	0.412	0.397
Depressive symptoms (CES-D>=20)	0.459	499	0.438	526	-0.021	0.046	0.652

Notes: Weighted results using youth-specific interview rates; standard errors obtained considering multi-stage sampling design. Outcomes including aspirations and social support not included as they were not collected at baseline. CES-D stands for the Centre for Epidemiological Studies-Depression Scale, composed of 10-items, where a score of >20 is classified as having depressive symptoms.

C.2 Overall Attrition

Table C.2.1: Individual-Level Characteristics (Attriters versus Panel Households)

Variables	Attriters		Panel		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Age (in years)	28.280	827	25.352	15,251	-2.927	1.426	0.049
Child under-five	0.138	827	0.121	15,251	-0.017	0.012	0.163
Child ages 5-17	0.442	827	0.491	15,251	0.050	0.020	0.019
Adult (18-64)	0.237	827	0.247	15,251	0.010	0.011	0.361
Elderly (65 and older)	0.193	827	0.146	15,251	-0.047	0.020	0.025
Orphan (one or both parents)	0.201	827	0.215	15,251	0.015	0.026	0.582
Female	0.594	827	0.571	15,251	-0.023	0.016	0.169
Chronic illness	0.203	827	0.161	15,251	-0.041	0.017	0.021
Any disability	0.007	827	0.007	15,251	-0.001	0.003	0.854
Currently in school	0.331	827	0.365	15,251	0.034	0.027	0.230

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.2: Main Respondent Characteristics (Attriters versus Panel Households)

| Variables | Attriters | | Panel | | Mean | Diff | |
	Mean	N1	Mean	N2	Diff	SE	p-value
Female	0.750	228	0.841	3,303	0.092	0.028	0.003
Age (in years)	59.918	228	57.894	3,303	-2.024	1.903	0.297
Widowed	0.482	228	0.429	3,303	-0.052	0.036	0.160
Divorced/Separated	0.666	228	0.645	3,303	-0.021	0.038	0.586
Currently in school	0.014	228	0.008	3,303	-0.005	0.006	0.415
Ever attended school	0.273	228	0.297	3,303	0.024	0.039	0.532
Highest grade completed	3.996	72	3.605	1,080	-0.391	0.359	0.286
Chronic illness	0.522	228	0.439	3,303	-0.082	0.028	0.007
Any disability	0.020	228	0.012	3,303	-0.009	0.009	0.334

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.3: Household Demographic Characteristics (Attriters versus Panel Households)

| Variables | Attriters | | Panel | | Mean | Diff | |
	Mean	N1	Mean	N2	Diff	SE	p-value
Numbers of persons in household	3.558	228	4.556	3,303	0.998	0.174	0.000
No. of children under 5	0.490	228	0.552	3,303	0.062	0.051	0.236
No. of children 5-17	1.572	228	2.238	3,303	0.667	0.135	0.000
Number of adults (18-64)	0.844	228	1.127	3,303	0.283	0.052	0.000
Number of elderly (65+)	0.687	228	0.667	3,303	-0.020	0.042	0.636
Number of orphans	0.713	228	0.980	3,303	0.266	0.111	0.023
Household has a disabled	0.026	228	0.030	3,303	0.004	0.011	0.684
Number of working age (15-64)	1.046	228	1.481	3,303	0.435	0.069	0.000
No. of dependents (<15 or >65)	2.511	228	3.075	3,303	0.564	0.128	0.000
No. currently in school	1.177	228	1.661	3,303	0.484	0.141	0.002
No. of persons per room	2.223	228	2.491	3,292	0.268	0.149	0.083

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.4: Household Welfare Indicators (Attriters versus Panel Households)

Variables	Attriters Mean	N1	Panel Mean	N2	Mean Diff	Diff SE	p-value
Per capita expenditure	55,759.520	218	49,050.343	3,268	-6,709.178	2,719.935	0.020
Per capita food expenditure	43,639.336	218	38,153.562	3,268	-5,485.774	2,250.738	0.021
Poor	0.542	228	0.679	3,303	0.137	0.041	0.002
Ultra Poor	0.302	228	0.390	3,303	0.088	0.034	0.014
Gap poor	38.472	123	41.630	2,284	3.159	1.926	0.112
Gap ultra poor	27.283	68	31.372	1,347	4.089	2.103	0.062
Severity poor	19.480	123	22.172	2,284	2.692	1.543	0.092
Severity ultra poor	11.277	68	14.056	1,347	2.779	1.745	0.123
Household feels worse off compared to neighbours	0.535	228	0.542	3,303	0.007	0.032	0.829
Household feels worse off compared to friends	0.486	228	0.501	3,30d3	0.015	0.037	0.691
Owns current residence	0.897	228	0.916	3,303	0.019	0.027	0.487
Subjective wealth of household from 1(poor) to 6(rich)	1.237	228	1.196	3,303	-0.041	0.032	0.221
Subjective wealth of most of neighbours from 1(poor) to 6(rich)	1.919	228	1.881	3,303	-0.038	0.072	0.601
Subjective wealth of most of friends from 1(poor) to 6(rich)	1.927	228	1.906	3,303	-0.021	0.089	0.817
Worried that household did not have enough food in the past 7 days	0.808	228	0.832	3,303	0.024	0.024	0.321
Number of meals taken per day	1.915	228	1.931	3,303	0.016	0.037	0.669
Household ate over one meal per day	0.801	228	0.807	3,303	0.006	0.021	0.787
Number of months maize from last harvest lasted	3.373	228	3.935	3,302	0.563	0.202	0.009
Maize from last harvest lasted at least 3 months	0.404	228	0.493	3,303	0.089	0.037	0.021
Number of months maize in grainery will last	1.200	225	1.194	3,271	-0.006	0.108	0.953
Maize in grainery will last at least 3 months	0.110	228	0.096	3,303	-0.014	0.026	0.593

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.5: Household Productivity Indicators (Attriters versus Panel Households)

Variables	Attriters Mean	N1	Panel Mean	N2	Mean Diff	Diff SE	p-value
Owns enterprise	0.189	228	0.234	3,303	0.045	0.039	0.261
Enterprise earnings in the past month	4,417.151	49	2,385.818	817	-2,031.333	1,306.445	0.131
Enterprise hired labour	0.016	49	0.005	823	-0.011	0.015	0.485
Any member with wage employment	0.044	228	0.056	3,303	0.012	0.010	0.246
Any member doing ganyu labour	0.423	228	0.580	3,303	0.158	0.048	0.002
Number of days of ganyu for household	92.096	102	89.883	1,965	-2.213	9.035	0.808
Average ganyu wage per day for household	517.493	102	542.230	1,964	24.737	40.196	0.543
Crop production household	0.915	228	0.958	3,303	0.043	0.027	0.118
Agricultural inputs							
Irrigation	0.040	228	0.047	3,303	0.007	0.016	0.651
Fertilizer	0.589	228	0.661	3,303	0.072	0.036	0.058
Organic fertilizer	0.191	228	0.248	3,303	0.056	0.028	0.053
Pesticides	0.012	228	0.023	3,303	0.011	0.007	0.137
Acres cultivated	1.694	209	1.416	3,166	-0.278	0.582	0.636
Cultivated							
Under one acre	0.349	209	0.249	3,166	-0.100	0.031	0.004
One to two acres	0.467	209	0.507	3,166	0.041	0.039	0.303
Two to four acres	0.178	209	0.211	3,166	0.033	0.029	0.264
Over four acres	0.007	209	0.033	3,166	0.026	0.005	0.000
Hired labour for crop production	0.052	228	0.041	3,303	-0.012	0.017	0.510
Sold any crops	0.221	192	0.228	3,020	0.006	0.033	0.851
Crops sold							
Sold maize	0.985	44	0.990	647	0.005	0.016	0.746
Sold groundnuts	0.354	44	0.357	647	0.002	0.072	0.975
Sold soyabeans	0.378	44	0.377	647	-0.001	0.058	0.986
Sold rice	0.055	198	0.059	3,086	0.003	0.010	0.736
Sold tanaposi	0.074	198	0.059	3,086	-0.015	0.020	0.479
Agric. Assets owned							
Hand hoe	0.803	228	0.874	3,303	0.071	0.035	0.053
Axe	0.121	228	0.137	3,303	0.016	0.027	0.560
Panga knife	0.240	228	0.232	3,303	-0.008	0.024	0.754
Sickle	0.178	228	0.184	3,303	0.006	0.025	0.821
Agric. Assets purchases in last 12 months							
Hand hoe	0.051	228	0.060	3,303	0.009	0.013	0.501
Axe	0.000	228	0.003	3,303	0.003	0.000	
Panga knife	0.007	228	0.006	3,303	-0.001	0.005	0.803
Sickle	0.007	228	0.009	3,303	0.002	0.005	0.719
Raised any livestock	0.191	228	0.288	3,303	0.096	0.033	0.007
Livestock raised in last 12 months							
Calf	0.000	228	0.001	3,303	0.001	0.000	0.051
Cow	0.000	228	0.001	3,303	0.001	0.001	0.017
Goat or sheep	0.060	228	0.110	3,303	0.050	0.016	0.003
Pigs	0.000	228	0.004	3,303	0.004	0.002	0.014
Chicken	0.139	228	0.197	3,303	0.058	0.029	0.060
Other livestock	0.031	228	0.033	3,303	0.002	0.014	0.869
Number of livestock owned							
Calf	0.000	228	0.002	3,303	0.002	0.001	0.131
Cow	0.000	228	0.003	3,303	0.003	0.001	0.028
Goat or sheep	0.229	228	0.270	3,303	0.041	0.074	0.583
Pigs	0.000	228	0.008	3,303	0.008	0.003	0.021
Chicken	0.272	228	0.627	3,303	0.355	0.076	0.000

Table C.2.5: Household Productivity Indicators (Attriters versus Panel Households) (continued)

Livestock purchases in last 12 months							
Calf	0.000	228	0.000	3,303	0.000	0.000	
Cow	0.000	228	0.000	3,303	0.000	0.000	0.169
Goat or sheep	0.000	228	0.013	3,303	0.013	0.002	0.000
Pigs	0.000	228	0.002	3,303	0.002	0.001	0.056
Chicken	0.034	228	0.038	3,303	0.003	0.014	0.825
Other livestock	0.000	228	0.006	3,303	0.006	0.001	0.000
Engaged in fishing	0.019	228	0.009	3,303	-0.010	0.010	0.328
Sold fish	0.318	6	0.267	35	-0.051	0.170	0.768
Hired labour for fishing	0.000	228	0.000	3,303	0.000	0.000	0.326

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.6: Household Other Income, Benefits and Shocks (Attriters versus Panel Households)

Variables	Attriters Mean	N1	Panel Mean	N2	Mean Diff	Diff SE	p-value
Transfer made out of the household	0.257	228	0.311	3,303	0.054	0.026	0.049
Household received a transfer	0.844	228	0.823	3,303	-0.021	0.033	0.533
Value of transfers received	87,031.433	228	45,363.537	3,303	-41,667.896	29,796.260	0.173
Value of transfers made	3,579.653	228	3,905.789	3,303	326.136	697.765	0.644
Value of maize received	1.269	228	1.333	3,303	0.064	0.196	0.747
Still owes on loan from 12+ months	0.044	228	0.066	3,303	0.022	0.013	0.105
Amount owed on loan from 12+ months	5,029.834	10	3,870.361	235	-1,159.473	1,468.971	0.437
Loan contracted in last 12 months	0.229	228	0.262	3,303	0.033	0.030	0.283
Purchase on credit in last 12 months	0.281	228	0.289	3,303	0.008	0.031	0.804
Benefitted from any safety net programme	0.603	228	0.705	3,303	0.102	0.036	0.009
Number of safety net programmes	0.875	228	1.139	3,303	0.264	0.082	0.003
Programme							
Free Maize	0.139	228	0.164	3,303	0.025	0.029	0.385
Free Food (other than Maize)	0.100	228	0.146	3,303	0.046	0.019	0.025
Food/Cash-for-Work	0.046	228	0.077	3,303	0.031	0.013	0.031
School Feeding	0.091	228	0.151	3,303	0.060	0.024	0.017
Voucher to buy fertilizer or seeds (FISP)	0.458	228	0.540	3,303	0.082	0.030	0.010
Community Based Childcare	0.013	228	0.025	3,303	0.012	0.009	0.203
Experienced any shock in last 12 months	0.911	228	0.944	3,303	0.034	0.025	0.185
Number of shocks experienced	2.438	228	2.493	3,303	0.055	0.144	0.702
Shocks							
Droughts or Irregular Rains	0.561	228	0.623	3,303	0.062	0.036	0.100
Floods/Landslides	0.084	228	0.072	3,303	-0.012	0.019	0.544
Unusually High cost of Agric. inputs	0.434	228	0.444	3,303	0.010	0.037	0.780
Unusually high food prices	0.778	228	0.832	3,303	0.054	0.032	0.103
Serious accident or illness of hh member	0.185	228	0.173	3,303	-0.012	0.029	0.685

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.7: Health Indicators (Attriters versus Panel Households)

Variables	Attriters		Panel		Mean Diff	Diff SE	p-value
	Mean	N1	Mean	N2			
Any member with illness/injury in past 2 weeks	0.762	228	0.752	3,303	-0.010	0.030	0.750
Number of members with illness/injury	1.099	228	1.294	3,303	0.195	0.063	0.005
Proportion of household members with illness/injury	0.421	228	0.338	3,303	-0.083	0.031	0.012
Sought care in facility for illness/injury (proportion)	0.543	173	0.608	2,500	0.066	0.045	0.157
Subjective health status of members (1=Poor; 5=Excellent)	2.984	227	3.251	3,294	0.267	0.084	0.004
Any member hospitalized in last 12 months	0.139	228	0.145	3,303	0.005	0.021	0.801
Number of members hospitalized	0.147	228	0.163	3,303	0.015	0.025	0.546
Proportion of hh members hospitalized	0.044	228	0.036	3,303	-0.008	0.008	0.333
No. of children in nutrition program	0.039	228	0.022	3,303	-0.017	0.017	0.336
No. of children participating in health clinic	0.315	228	0.410	3,303	0.094	0.044	0.040
No. of children with diarrhea in past 2 wks	0.079	228	0.091	3,303	0.012	0.018	0.489
No. of children with fever in past 2 wks	0.147	228	0.151	3,303	0.004	0.026	0.879
No. of children with cough in past 2 wks	0.136	228	0.158	3,303	0.022	0.030	0.467
Number of stunted children	0.213	228	0.261	3,303	0.048	0.031	0.138
Number of underweight children	0.072	228	0.091	3,303	0.019	0.014	0.186
Number of wasted children	0.019	228	0.021	3,303	0.003	0.014	0.855
Number of severely stunted children	0.101	228	0.128	3,303	0.027	0.021	0.220
Number of severely underweight children	0.019	228	0.025	3,303	0.006	0.011	0.580
Number of severely wasted children	0.007	228	0.007	3,303	0.001	0.007	0.929

Notes: Weighted results; standard errors obtained considering multi-stage sampling design

Table C.2.8: Youth Module Background Characteristics (Attriters versus Panel Youth)

Variables	Attriters Mean	N1	Panel Mean	N2	Mean Diff	Diff SE	p-value
Age (years)	15.539	1,082	15.156	1,027	-0.383	0.073	0.000
Male	0.487	1,082	0.527	1,027	0.040	0.026	0.134
Main respondent ever attended school	0.360	1,082	0.333	1,027	-0.027	0.020	0.193
Main respondent literate	0.229	1,082	0.216	1,027	-0.013	0.024	0.583
Main respondent female	0.861	1,082	0.872	1,027	0.011	0.018	0.542
Main respondent age	54.688	1,082	53.570	1,027	-1.119	0.853	0.200
Main respondent widow	0.385	1,082	0.378	1,027	-0.007	0.025	0.780
Main respondent never married	0.057	1,082	0.033	1,027	-0.024	0.012	0.062
Salima district	0.428	1,082	0.490	1,027	0.062	0.025	0.020
No. of children 6-11 years	1.244	1,082	1.325	1,027	0.081	0.053	0.135
No of children 12-17 years	1.891	1,082	1.832	1,027	-0.060	0.047	0.217
No of adults (18-64)	1.622	1,082	1.564	1,027	-0.058	0.058	0.324
Number of elderly (65+)	0.488	1,082	0.441	1,027	-0.047	0.032	0.148
Numbers of persons in household	6.012	1,082	5.876	1,027	-0.136	0.115	0.249
Household members per sleeping room	5.668	1,082	5.585	1,026	-0.083	0.112	0.462
HH member moved away past 12 months	0.141	1,023	0.117	1,027	-0.023	0.012	0.065
Someone joined since August 2013	0.305	1,023	0.303	1,027	-0.002	0.019	0.919
Price of maize grain per Kilo	178.998	1,082	160.407	1,027	-18.591	15.231	0.232
Price of rice per Kilo	337.251	1,082	335.806	1,027	-1.445	4.713	0.761
Price of beans per Kilo	448.479	1,082	441.554	1,027	-6.926	4.464	0.132
Price of tomatoes per Heap	54.808	1,082	58.823	1,027	4.015	2.325	0.095
Price of beef per Kilo	1,154.110	1,082	1,140.764	1,027	-13.346	14.096	0.352
Price of salt per Sachet/Tube	29.137	1,082	26.901	1,027	-2.236	1.586	0.170
Price of sugar per Kilo	381.708	1,082	377.431	1,027	-4.277	6.337	0.505
Price of cooking oil per Sachet/Tube	45.867	1,082	47.116	1,027	1.249	1.178	0.298
Price of barsoap per Piece	72.833	1,082	74.119	1,027	1.286	0.997	0.208
Price of panadol per Piece	17.970	1,082	18.273	1,027	0.303	0.268	0.267

Notes: Weighted results using youth-specific interview rates; standard errors obtained considering multi-stage sampling design

Table C.2.9: Youth Module Outcomes (Attriters versus Panel Youth)

| Variables | Attriters | | Panel | | Mean | Diff | |
	Mean	N1	Mean	N2	Diff	SE	p-value
Ever had sex	0.357	1,080	0.287	1,021	-0.069	0.021	0.003
Ever been pregnant	0.126	555	0.045	466	-0.081	0.025	0.004
Ever been married	0.038	1,079	0.015	1,026	-0.024	0.005	0.000
Age at sexual debut	14.241	374	13.660	281	-0.581	0.213	0.011
Partner age at first sex	15.197	374	14.217	280	-0.980	0.283	0.002
First sex with age disparate partner (>5 years)	0.038	374	0.043	280	0.004	0.020	0.841
Condom used at first sex	0.365	379	0.315	279	-0.051	0.039	0.206
First sex forced	0.267	380	0.215	281	-0.051	0.033	0.134
Ever given or received money for sex	0.571	378	0.477	282	-0.094	0.040	0.024
Ever forced to have sex	0.366	379	0.301	281	-0.065	0.031	0.043
Given or received money for sex with most recent partner (last 12 months)	0.538	253	0.522	185	-0.016	0.046	0.732
Condom used at last sex (last 12 months)	0.409	251	0.400	186	-0.009	0.043	0.836
Number of sexual partners (last 12 months)	1.197	380	1.050	282	-0.147	0.126	0.253
Number of sex acts (last 3 months)	1.452	380	0.926	282	-0.526	0.186	0.009
Unprotected sex (last 3 months)	0.405	161	0.349	99	-0.056	0.046	0.230
Partner age, most recent partner (last 12 months)	16.587	244	16.336	180	-0.251	0.429	0.563
First sex with age disparate partner (>5 years)	0.073	244	0.133	180	0.060	0.036	0.106
Had multiple partners during the last 12 months	0.086	380	0.104	282	0.018	0.033	0.589
Self-assessed risk of HIV is moderate or high	0.189	968	0.143	907	-0.046	0.014	0.004
Ever smoked cigarettes	0.015	1,082	0.006	1,027	-0.010	0.005	0.078
Ever drank alcohol, more than a few sips	0.035	1,082	0.023	1,027	-0.012	0.008	0.146
CES-D	20.096	1,079	19.695	1,025	-0.401	0.290	0.178
Depressive symptoms (CES-D>=20)	0.482	1,079	0.448	1,025	-0.035	0.027	0.206

Notes: Weighted results using youth-specific interview rates; standard errors obtained considering multi-stage sampling design. Outcomes including aspirations and social support not included as they were not collected at baseline. CES-D stands for the Centre for Epidemiological Studies-Depression Scale, composed of 10-items, where a score of >20 is classified as having depressive symptoms.

Annex D: Heterogeneous Impacts

D.1 Adult Health and Children's Health

Table D.1.1: Heterogeneous Impacts on Self-Reported Health by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Poor health status (N_F=38,686; N_M=7,591)	-0.015 (-0.98)	0.002 (0.14)	-0.016 (1.20)	0.048	0.030	0.045	-0.008 (-0.53)	0.013 (0.58)	-0.021 (1.13)	0.050	0.037	0.060
Chronic illness (N_F=26,766; N_M=5,548)	-0.043 (-1.63)	-0.040* (-1.75)	-0.003 (0.17)	0.252	0.210	0.214	-0.002 (-0.06)	-0.074** (-2.12)	0.072** (2.46)	0.283	0.224	0.209
Disability (N_F=26,767; N_M=5,548)												
Any	-0.010 (-0.72)	0.005 (0.48)	-0.015 (1.16)	0.056	0.070	0.088	-0.009 (-0.59)	-0.033* (-2.00)	0.024 (1.34)	0.088	0.092	0.087
Seeing	-0.004 (-0.60)	0.003 (0.57)	-0.007 (1.03)	0.018	0.027	0.035	-0.004 (-0.37)	-0.001 (-0.12)	-0.003 (0.32)	0.024	0.028	0.028
Hearing	-0.001 (-0.17))	-0.002 (-0.78)	0.002 (0.37)	0.010	0.016	0.017	-0.000 (-0.01)	-0.000 (-0.03)	0.000 (0.02)	0.013	0.017	0.019
Walking/climbing steps	-0.007 (-0.66)	-0.003 (-0.36)	-0.004 (0.44)	0.034	0.040	0.047	-0.005 (-0.37)	-0.027 (-1.66)	0.022 (1.47)	0.050	0.056	0.053
Remembering/concentrating	-0.008 (-1.52)	-0.002 (-0.67)	-0.006 (1.15)	0.011	0.013	0.020	-0.004 (-0.37)	-0.004 (-0.51)	-0.001 (0.07)	0.011	0.012	0.020
Communicating	-0.001 (-0.38)	-0.000 (-0.06)	-0.001 (0.29)	0.008	0.009	0.012	0.000 (0.00)	0.001 (0.15)	-0.001 (0.12)	0.008	0.010	0.010

Table D.1.2: Heterogeneous Impacts on Self-Reported Health by Baseline Consumption

Dependent Variable	Baseline Poverty – Lower 50 Percent						Baseline Poverty – Upper 50 Percent					
	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Poor health status $(N_L=27,618; N_H=46,277)$	-0.009 (-0.56)	0.007 (0.49)	-0.016 (1.18)	0.043	0.028	0.038	-0.013 (-1.00)	0.004 (0.34)	-0.017 (1.31)	0.056	0.035	0.061
Chronic illness $(N_L=18,265; N_H=32,314)$	-0.048** (-2.13)	-0.038* (-1.73)	-0.009 (0.58)	0.213	0.180	0.188	-0.036 (-1.37)	-0.044* (-1.94)	0.008 (0.45)	0.311	0.250	0.245
Disability $(N_L=18,264; N_H=32,314)$												
Any	-0.004 (-0.31)	0.003 (0.23)	-0.006 (0.56)	0.049	0.064	0.073	-0.010 (-0.80)	-0.001 (-0.08)	-0.009 (0.73)	0.076	0.086	0.106
Seeing	0.000 (0.07)	0.003 (0.59)	-0.002 (0.44)	0.016	0.023	0.026	-0.004 (-0.69)	0.002 (0.36)	-0.006 (0.96)	0.023	0.031	0.044
Hearing	0.002 (0.53)	-0.004 (-1.37)	0.006 (1.52)	0.011	0.018	0.013	-0.000 (-0.06)	-0.002 (-0.61)	0.001 (0.34)	0.010	0.015	0.022
Walking/climbing steps	-0.002 (-0.25)	-0.003 (-0.37)	0.001 (0.16)	0.026	0.035	0.036	-0.007 (-0.68)	-0.006 (-0.83)	-0.001 (0.06)	0.050	0.052	0.062
Remembering/concentrating	-0.006 (-0.95)	-0.002 (-0.54)	-0.003 (0.56)	0.010	0.011	0.018	-0.008 (-1.27)	-0.002 (-0.64)	-0.006 (0.96)	0.013	0.015	0.023
Communicating	0.001 (0.18)	0.001 (0.30)	-0.000 (0.03)	0.008	0.009	0.010	-0.001 (-0.29)	0.000 (0.08)	-0.001 (0.30)	0.008	0.010	0.012

Table D.1.3: Heterogeneous Impacts on Self-Reported Health by Household Size

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Poor health status (N_S=14,870; N_L=31,407)	-0.036* (-1.99)	-0.002 (-0.12)	-0.034** (2.13)	0.079	0.042	0.071	-0.002 (-0.15)	0.006 (0.53)	-0.008 (0.66)	0.034	0.025	0.035
Chronic illness (N_S=11,684; N_L=20,630)	-0.039 (-0.85)	-0.059 (-1.55)	0.020 (0.62)	0.385	0.300	0.282	-0.035* (-1.83)	-0.035* (-2.00)	0.001 (0.04)	0.185	0.155	0.171
Disability (N_S=11,684; N_L=20,632)												
Any	-0.013 (-0.59)	0.001 (0.03)	-0.014 (0.58)	0.097	0.116	0.136	-0.008 (-0.89)	0.001 (0.09)	-0.009 (1.16)	0.041	0.047	0.058
Seeing	-0.016 (-1.44)	-0.001 (-0.16)	-0.014 (1.34)	0.031	0.040	0.059	0.003 (0.80)	0.005 (1.14)	-0.002 (0.44)	0.013	0.019	0.019
Hearing	0.001 (0.13)	0.001 (0.24)	-0.000 (0.04)	0.015	0.025	0.025	-0.001 (-0.38)	-0.003 (-1.26)	0.002 (0.72)	0.007	0.011	0.012
Walking/climbing steps	-0.008 (-0.45)	-0.007 (-0.48)	-0.001 (0.08)	0.064	0.072	0.078	-0.006 (-0.84)	-0.004 (-0.64)	-0.001 (0.24)	0.021	0.025	0.029
Remembering/concentrating	-0.010 (-1.02)	-0.006 (-1.22)	-0.004 (0.40)	0.017	0.021	0.029	-0.006 (-1.33)	0.002 (0.65)	-0.008 (1.64)	0.008	0.008	0.015
Communicating	0.002 (0.33)	0.004 (0.84)	-0.002 (0.37)	0.010	0.013	0.014	-0.002 (-0.65)	-0.002 (-0.75)	-0.000 (0.12)	0.007	0.007	0.009

Table D.1.4: Heterogeneous Impacts on Morbidity, Service Use, and Health Expenditures by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness or injury (N_F=38,582; N_M=7,578)	-0.059** (-2.19)	-0.069*** (-2.87)	0.010 (0.34)	0.297	0.260	0.279	-0.064 (-1.45)	-0.134*** (-4.57)	0.070* (1.75)	0.323	0.252	0.261
Sought treatment at public or private health facility (N_F=10,071; N_M=1,943)	0.120*** (3.34)	0.098*** (3.18)	0.023 (0.64)	0.511	0.572	0.560	0.112* (1.75)	0.053 (0.64)	0.059 (0.66)	0.495	0.506	0.528
Health expenditures (past 4 weeks, MWK)												
Any expenditure for illness or injury (N_F=38,551; N_M=7,573)	-0.006 (-0.27)	0.006 (0.54)	-0.012 (0.58)	0.051	0.164	0.161	0.012 (0.35)	-0.009 (-0.45)	0.021 (0.59)	0.069	0.168	0.158
Expenditure for illness and injury (N_F=9,961; N_M=1,929)	104.21 (1.70)	227.99*** (2.87)	-123.78 (0.05)	151.15	556.36	463.45	-130.53 (-0.60)	49.01 (0.51)	-179.54 (0.93)	218.37	541.33	626.17
Any expenditure for medical care not related to an illness (N_F=38,557; N_M=7,577)	-0.004 (-0.92)	0.006 (1.22)	-0.010** (2.48)	0.010	0.005	0.010	-0.009 (-1.13)	0.006 (1.04)	-0.016** (2.42)	0.010	0.003	0.017
Expenditure for medical care not related to an illness (N_F=9,965; N_M=1,930)	17.67 (1.38)	36.47&& (2.10)	-18.80 (1.27)	23.98	16.95	17.61	-81.03 (-0.98)	98.67 (1.10)	-179.68* (1.91)	17.33	8.01	78.81
Any expenditures for non-prescription medicines (N_F=38,558; N_M=7,571)	-0.026 (-1.16)	-0.002 (-0.10)	-0.023 (1.04)	0.170	0.136	0.137	-0.031 (-1.04)	-0.023 (-0.89)	-0.009 (0.28)	0.193	0.135	0.144
Expenditure for non-prescription medicines (N_F=9,964; N_M=1,928)	18.52 (0.71)	46.29* (1.78)	-27.77 (1.50)	94.10	86.31	68.09	19.74 (0.34)	181.07 (1.60)	-162.33* (1.80)	85.06	95.55	113.31

Table D.1.5: Heterogeneous Impacts on Morbidity, Service Use, and Health Expenditures by Baseline Consumption

Dependent Variable	Baseline Poverty – Lower 50 Percent						Baseline Poverty – Upper 50 Percent					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness or injury (N_L=27,533; N_U=46,160)	-0.049 (-1.63)	-0.068*** (-3.45)	0.020 (0.70)	0.279	0.247	0.255	-0.059** (-2.10)	-0.077*** (-3.46)	0.018 (0.62)	0.333	0.274	0.305
Sought treatment at public or private health facility (N_L=6,788; N_U=12,014)	0.120*** (2.78)	0.107*** (2.81)	0.013 (0.32)	0.542	0.573	0.550	0.121*** (3.39)	0.088*** (3.08)	0.032 (1.02)	0.470	0.549	0.562
Health expenditures (past 4 weeks, MWK)												
Any expenditure for illness or injury (N_L=27,515; N_U=46,124)	-0.008 (-0.41)	0.009 (0.74)	-0.017 (0.82)	0.036	0.161	0.158	-0.002 (-0.09)	0.005 (0.43)	-0.007 (0.33)	0.079	0.170	0.163
Expenditure for illness and injury (N_L=6,701; N_U=11,890)	77.58 (0.66)	247.05*** (3.04)	-169.46 (1.22)	61.43	572.28	508.02	65.64 (0.83)	201.28*** (3.00)	-135.64 (1.38)	281.55	533.05	465.24
Any expenditure for medical care not related to an illness (N_L=27,515; N_U=46,134)	-0.004 (-1.03)	0.005 (1.62)	-0.009** (2.43)	0.005	0.004	0.009	-0.005 (-1.13)	0.006 (1.37)	-0.011** (2.67)	0.016	0.004	0.015
Expenditure for medical care not related to an illness (N_L=6,701; N_U=11,895)	-26.42 (-1.15)	27.44* (1.96)	-53.86* (2.03)	7.14	9.53	39.08	0.33 (0.02)	44.74** (2.47)	-44.41** (2.13)	40.81	22.22	12.95
Any expenditures for non-prescription medicines (N_L=27,518; N_U=46,129)	-0.017 (-0.93)	0.003 (0.18)	-0.020 (0.91)	0.140	0.133	0.124	-0.026 (-1.14)	-0.004 (-0.18)	-0.022 (0.98)	0.220	0.139	0.157
Expenditure for non-prescription medicines (N_L=6,700; N_U=11,891)	42.04 (1.49)	80.20*** (2.91)	-38.16* (1.85)	51.88	94.06	68.99	17.85 (0.61)	69.02** (2.17)	-51.17*** (3.24)	139.34	80.78	81.94

Table D.1.5: Heterogeneous Impacts on Morbidity, Service Use, and Health Expenditures among Households with Four or Fewer Members

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness or injury (NS=14,854; NL=31,306)	-0.089** (-2.67))	-0.107*** (2.94)	0.017 (0.49)	0.393	0.303	0.329	-0.042 (-1.36)	-0.060*** (-3.32)	0.018 (0.60)	0.260	0.234	0.247
Sought treatment at public or private health facility (NS=4,692; NL=7,322)	0.112*** (2.84)	0.062 (1.45)	0.050 (1.22)	0.446	0.557	0.536	0.119** (2.75)	0.107*** (3.14)	0.012 (0.27)	0.551	0.565	0.569
Health expenditures (past 4 weeks, MWK)												
Any expenditure for illness or injury (NS=14,834; NL=31,290)	-0.007 (-0.29)	-0.001 (-0.04)	-0.006 (0.26)	0.071	0.180	0.172	0.001 (0.06)	0.010 (0.76)	-0.008 (0.36)	0.047	0.156	0.154
Expenditure for illness and injury (NS=4,674; NL=7,216)	74.37 (0.59)	130.18** (2.47)	-55.81 (0.51)	152.25	542.69	475.70	59.40 (0.51)	262.67** (2.63)	-203.27 (1.40)	171.16	562.00	497.11
Any expenditure for medical care not related to an illness (NS=14,847; NL=31,287)	-0.001 (-0.06)	0.009 (1.38)	-0.009 (1.57)	0.009	0.006	0.014	-0.006 (-1.54)	0.005 (1.20)	-0.011** (2.49)	0.010	0.003	0.010
Expenditure for medical care not related to an illness (NS=4,677; NL=7,218)	1.93 (0.05)	9.90 (0.42)	-7.97 (0.27)	17.12	26.99	30.29	-1.63 (-0.14)	72.82** (2.60)	-74.45** (2.49)	26.62	7.13	24.57
Any expenditures for non-prescription medicines (NS=14,839; NL=31,290)	-0.047 (-1.56)	-0.017 (-0.52)	-0.029 (1.06)	0.220	0.150	0.165	-0.013 (-0.62)	0.004 (0.20)	-0.017 (0.77)	0.153	0.127	0.124
Expenditure for non-prescription medicines (NS=4,677; NL=7,214)	-25.28 (-0.71)	2.64 (0.09)	-27.82 (0.99)	114.60	82.39	85.28	46.59 (1.31)	114.80** (2.13)	-68.21* (2.00)	77.26	91.77	67.64

Table D.1.6: Impacts on Child Anthropometry by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age *(N_F=3,895; N_M=640)*												
WAZ	0.043	0.006	0.037	-0.945	-0.977	-1.028	0.081	-0.057	0.138	-1.085	-1.031	-1.095
	(0.47)	(0.06)	(0.34)				(0.46)	(-0.32)	(0.92)			
Underweight	0.010	0.027	-0.017	0.181	0.169	0.175	0.039	0.141**	-0.102	0.157	0.175	0.190
	(0.34)	(0.89)	(0.54)				(0.58)	(2.14)	(1.54)			
Severely underweight	0.006	0.018	-0.012	0.052	0.042	0.038	-0.014	0.084**	-0.098**	0.033	0.023	0.047
	(0.34)	(1.05)	(0.70)				(-0.43)	(2.30)	(2.36)			
Weight-for-height *(N_F=3,858; N_M=637)*												
WHZ	0.052	-0.254**	0.305***	0.197	0.168	-0.021	0.486**	0.575**	-0.088	0.116	0.047	0.016
	(0.44)	(-2.54)	(3.06)				(2.35)	(2.17)	(0.41)			
Wasted	-0.028**	-0.015	-0.013	0.047	0.028	0.049	-0.021	-0.017	-0.004	0.032	0.031	0.034
	(-2.74)	(-0.94)	(0.84)				(-0.83)	(-0.66)	(0.16)			
Severely wasted	-0.004	-0.007	0.002	0.011	0.005	0.015	0.012	-0.000	0.012	0.012	0.015	0.006
	(-0.62)	(-1.02)	(0.50)				(1.61)	(-0.01)	(0.82)			
Height-for-age *(N_F=3,844; N_M=632)*												
HAZ	-0.029	0.087	-0.116	-1.930	-1.935	-1.807	-0.301	-0.513	0.213	-2.012	-1.876	-1.902
	(-0.19)	(0.72)	(0.74)				(-1.23)	(-1.45)	(0.77)			
Stunted	0.024	0.004	0.020	0.485	0.457	0.402	-0.016	-0.081	0.065	0.535	0.467	0.485
	(0.52)	(0.11)	(0.56)				(-0.15)	(-0.76)	(0.77)			
Severely stunted	0.024	0.039	-0.016	0.214	0.188	0.150	0.007	0.139**	-0.132**	0.216	0.144	0.179
	(0.73)	(1.46)	(0.57)				(0.11)	(2.52)	(2.08)			

Table D.1.7: Impacts on Child Anthropometry among Poorest 50 Percent of Households

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age *(N=3,102)*						
WAZ	0.058 (0.51)	0.081 (0.54)	-0.023 (0.18)	-1.014	-1.027	-1.049
Underweight	-0.006 (-0.18)	0.022 (0.79)	-0.028 (0.87)	0.185	0.170	0.195
Severely underweight	-0.001 (-0.06)	0.014 (0.90)	-0.015 (0.70)	0.047	0.039	0.040
Weight-for-height (N=3,076)						
WHZ	0.055 (0.54)	-0.241** (-2.52)	0.295*** (3.25)	0.126	0.098	-0.017
Wasted	-0.015 (-1.19)	-0.025 (-1.56)	0.010 (0.52)	0.047	0.040	0.044
Severely wasted	0.003 (0.45)	-0.005 (-0.71)	0.008 (1.19)	0.013	0.009	0.012
Height-for-age *(N=3,066)*						
HAZ	-0.012 (-0.07)	0.121 (0.81)	-0.133 (0.84)	-1.931	-1.953	-1.893
Stunted	0.015 (0.30)	-0.010 (-0.23)	0.024 (0.57)	0.498	0.455	0.427
Severely stunted	0.017 (0.52)	0.030 (1.13)	-0.013 (0.53)	0.217	0.176	0.150

Table D.1.8: Impacts on Child Anthropometry by Household Size

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age (N_S= 914; N_L=3,621)												
WAZ	0.109 (0.60)	-0.126 (-0.76)	0.236* (2.02)	-0.946	-0.836	-0.890	0.040 (0.34)	0.033 (0.23)	0.006 (0.05)	-0.969	-1.033	-1.090
Underweight	-0.011 (-0.14)	0.031 (0.50)	-0.042 (0.98)	0.175	0.128	0.144	0.018 (0.58)	0.042 (1.16)	-0.024 (0.58)	0.178	0.183	0.189
Severely underweight	-0.001 (-0.05)	0.065** (2.18)	-0.066** (2.43)	0.023	0.024	0.049	0.004 (0.28)	0.016 (1.07)	-0.012 (0.67)	0.054	0.044	0.036
Weight-for-height (N_S=906; N_L=3,589)												
WHZ	0.642 (1.25)	0.352 (0.80)	0.290 (1.27)	0.136	0.231	0.042	0.025 (0.27)	-0.252** (-2.76)	0.277*** (3.16)	0.194	0.124	-0.036
Wasted	-0.051 (-1.69)	-0.037 (1.33)	-0.014 (0.68)	0.060	0.015	0.045	-0.022* (-1.84)	-0.011 (-0.71)	-0.012 (0.68)	0.042	0.033	0.047
Severely wasted	-0.016 (-1.00)	-0.017 (-0.93)	0.001 (0.05)	0.023	0.005	0.015	-0.000 (-0.08)	-0.003 (-0.61)	0.003 (0.62)	0.009	0.007	0.013
Height-for-age (N_S=898; N_L=3,578)												
HAZ	-0.162 (-0.36)	-0.261 (-0.75)	0.098 (0.47)	-1.984	-1.748	-1.569	-0.051 (-0.30)	0.069 (0.50)	-0.120 (0.81)	-1.934	-1.984	-1.909
Stunted	0.069 (0.62)	-0.013 (-0.13)	0.082 (0.98)	0.506	0.462	0.338	0.000 (0.01)	-0.008 (-0.19)	0.008 (0.21)	0.490	0.457	0.441
Severely stunted	0.019 (0.26)	0.081 (1.26)	-0.062 (1.16)	0.211	0.163	0.127	0.021 (0.62)	0.038 (1.65)	-0.018 (0.60)	0.215	0.188	0.163

Table D.1.9: Impacts on Child Anthropometry by Child's Age in Months

Dependent Variable	Children Aged 6-23 Months						Children Aged 24-59 Months					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age (N_{6-23}= 1,234; N_{24-59}=3,301)												
WAZ	-0.114 (-0.52)	-0.285 (-1.46)	0.171 (0.78)	-0.842	-0.832	-0.735	0.115 (1.46)	0.043 (0.44)	0.073 (0.78)	-1.024	-1.038	-1.164
Underweight	0.019 (0.39)	0.127* (2.01)	-0.107 (1.58)	0.170	0.140	0.159	0.011 (0.35)	0.019 (0.70)	-0.009 (0.29)	0.181	0.180	0.185
Severely underweight	0.005 (0.24)	0.013 (0.45)	-0.007 (0.30)	0.062	0.041	0.026	0.001 (0.10)	0.037* (1.85)	-0.035* (1.73)	0.044	0.039	0.045
Weight-for-height (N_{6-23}= 1,220; N_{24-59}=3,275)												
WHZ	-0.022 (-0.07)	-0.193 (-0.64)	0.171 (0.94)	-0.013	-0.170	-0.108	0.201* (1.97)	-0.121 (-1.32)	0.322*** (2.96)	0.278	0.239	0.023
Wasted	-0.093*** (-3.49)	-0.065* (-1.91)	-0.028 (0.85)	0.088	0.035	0.089	-0.003 (-0.30)	0.007 (0.63)	-0.010 (0.74)	0.024	0.026	0.029
Severely wasted	0.021 (1.37)	-0.011 (-1.22)	0.032** (2.54)	0.012	0.022	0.018	-0.012* (-1.99)	-0.002 (-0.40)	-0.010* (1.72)	0.011	0.002	0.012
Height-for-age (N_{6-23}= 1,213; N_{24-59}=3,263)												
HAZ	-0.080 (-0.20)	-0.099 (-0.35)	0.020 (0.06)	-1.706	-1.562	-1.171	-0.084 (-0.65)	-0.050 (-0.35)	-0.034 (0.22)	-2.054	-2.053	-2.091
Stunted	0.068 (1.12)	0.032 (0.58)	0.036 (0.57)	0.372	0.402	0.290	0.000 (0.01)	-0.012 (-0.27)	0.013 (0.38)	0.549	0.478	0.465
Severely stunted	0.030 (0.82)	0.078* (1.75)	-0.049 (0.99)	0.181	0.134	0.078	0.018 (0.49)	0.050** (2.32)	-0.032 (1.02)	0.230	0.198	0.186

Table D.1.10: Impacts on Child Anthropometry by Child's Sex

Dependent Variable	Female Children						Male Children					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Weight-for-age (N_F= 2,271; N_M=2,264)												
WAZ	-0.059 (-0.66)	-0.148 (-1.44)	0.089 (0.89)	-0.976	-1.068	-1.000	0.125 (1.08)	0.080 (0.60)	0.045 (0.34)	-0.954	-0.917	-1.079
Underweight	0.006 (0.25)	0.039 (1.13)	-0.033 (0.75)	0.176	0.179	0.183	0.025 (0.65)	0.048 (1.27)	-0.023 (0.72)	0.179	0.162	0.171
Severely underweight	0.001 (0.05)	0.035* (1.98)	-0.035* (1.80)	0.055	0.039	0.037	0.002 (0.13)	0.016 (0.96)	-0.014 (0.77)	0.044	0.039	0.042
Weight-for-height (N_F= 2,249; N_M=2,246)												
WHZ	0.012 (0.10)	-0.278** (-2.15)	0.290** (2.42)	0.162	0.081	0.028	0.277 (1.64)	0.002 (0.01)	0.276*** (3.16)	0.211	0.205	-0.063
Wasted	-0.004 (-0.23)	-0.009 (-0.49)	0.005 (0.27)	0.036	0.024	0.029	-0.058*** (-4.05)	-0.023 (-1.20)	-0.035** (2.31)	0.054	0.032	0.066
Severely wasted	0.002 (0.17)	-0.000 (-0.01)	0.002 (0.18)	0.005	0.005	0.015	-0.009 (-0.99)	-0.011 (-1.33)	0.003 (0.41)	0.019	0.008	0.012
Height-for-age (N_F= 2,246; N_M=2,230)												
HAZ	-0.184 (-0.97)	0.086 (0.50)	-0.270* (1.72)	-1.871	-1.992	-1.786	-0.058 (-0.28)	-0.139 (-0.92)	0.082 (0.51)	-2.019	-1.873	-1.858
Stunted	0.025 (0.48)	0.008 (0.16)	0.017 (0.40)	0.492	0.461	0.407	0.030 (0.55)	-0.012 (-0.24)	0.042 (0.88)	0.493	0.456	0.422
Severely stunted	0.005 (0.12)	0.080*** (2.90)	-0.075** (2.13)	0.201	0.167	0.159	0.050 (1.33)	0.033 (0.86)	0.018 (0.55)	0.229	0.193	0.148

Table D.1.11: Heterogeneous Impacts on Young Child Feeding Practices by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Fed solid foods ≥ 3 times/day (N_F=4,409; N_M=731)	0.109** (2.68)	0.043 (0.96)	0.067 (1.45)	0.367	0.504	0.296	0.031 (0.27)	0.194 (1.26)	-0.164 (1.45)	0.397	0.431	0.404
Consumed Vitamin-A rich foods in past day (N_F=4,404; N_M=731)	0.042 (0.73)	-0.013 (-0.24)	0.055 (1.42)	0.699	0.809	0.685	0.026 (0.25)	-0.007 (-0.08)	0.033 (0.42)	0.630	0.858	0.740

Table D.1..12: Impacts on Young Child Feeding Practices among Poorest 50 Percent of Households

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Fed solid foods ≥ 3 times/day (N=3,522)	0.154*** (2.99)	0.111** (2.06)	0.043 (1.01)	0.289	0.475	0.259
Consumed Vitamin-A rich foods in past day (N=3,518)	0.075 (1.20)	-0.002 (-0.04)	0.078 (1.62)	0.662	0.823	0.694

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Table D.1.13: Impacts on Young Child Feeding Practices by Household Size

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Fed solid foods ≥ 3 times/day (N_S=1,053; N_L=4,087)	0.050 (0.52)	-0.004 (-0.04)	0.054 (0.56)	0.424	0.463	0.298	0.116** (2.30)	0.089 (1.47)	0.027 (0.44)	0.362	0.504	0.317
Consumed Vitamin-A rich foods in past day (N_S=1,053; N_L=4,082)	0.084 (1.04)	0.063 (0.67)	0.021 (0.29)	0.654	0.809	0.677	0.034 (0.54)	-0.026 (-0.48)	0.059 (1.49)	0.695	0.819	0.699

Table D.1.14: Impacts on Young Child Feeding Practices by Child's Sex

Dependent Variable	Female Children						Male Children					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Fed solid foods ≥ 3 times/day (N_F=2,575; N_M=2,565)	0.109* (1.97)	0.067 (1.03)	0.043 (0.84)	0.379	0.508	0.321	0.074 (1.28)	0.052 (0.91)	0.022 (0.33)	0.364	0.482	0.303
Consumed Vitamin-A rich foods in past day (N_F=2,572; N_M=2,563)	0.042 (0.56)	0.059 (0.95)	-0.017 (0.39)	0.677	0.827	0.715	0.035 (0.57)	-0.086 (-1.46)	0.121*** (2.77)	0.702	0.807	0.669

Table D.1.15: Impacts on Young Child Morbidity and Use of Curative Care by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness (N_F=4,319; N_M=718)	0.010 (0.18)	0.024 (0.56)	-0.015 (0.23)	0.425	0.376	0.407	0.160* (1.84)	-0.085 (-1.00)	0.245** (2.57)	0.399	0.456	0.308
Diarrhoea	-0.025 (-0.74)	0.038* (1.71)	-0.063** (2.17)	0.170	0.120	0.165	0.039 (0.52)	-0.025 (-0.41)	0.063 (0.97)	0.128	0.184	0.121
Fever	0.050 (1.03)	0.021 (0.65)	0.029 (0.54)	0.239	0.228	0.233	0.093 (1.30)	0.051 (0.72)	0.042 (0.55)	0.234	0.256	0.191
Cough	0.055 (1.18)	0.055 (1.45)	0.000 (0.01)	0.253	0.167	0.143	-0.017 (-0.21)	-0.202*** (-2.87)	0.186** (2.49)	0.281	0.158	0.107
Sought treatment at public or private health facility												
Diarrhoea (N_F=628; N_M=97)	0.053 (0.67)	0.048 (0.50)	0.004 (0.07)	0.721	0.896	0.870	0.495*** (4.96)	0.319** (2.36)	0.176* (1.72)	0.564	1.000	0.866
Fever (N_F=1,015; N_M=163)	0.111* (1.71)	0.184*** (2.82)	-0.074 (1.25)	0.684	0.921	0.898	0.147 (1.37)	0.069 (0.44)	0.078 (0.60)	0.651	0.920	0.909
Cough (N_F=757; N_M=131)	0.089 (1.35)	0.022 (0.34)	0.066 (0.92)	0.723	0.933	0.828	0.052 (0.31)	0.046 (0.18)	0.005 (0.03)	0.667	0.744	0.849

Table D.1.16: Impacts on Young Child Morbidity and Use of Curative Care in Poorest 50 Percent of Households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Any illness *(N=3,434)*	-0.005	-0.021	0.015	0.425	0.371	0.383
	(-0.10)	(0.51)	(0.29)			
Diarrhoea	-0.018	0.015	-0.033	0.159	0.133	0.166
	(-0.45)	(0.57)	(0.78)			
Fever	0.048	0.024	0.024	0.227	0.235	0.230
	(0.98)	(0.64)	(0.48)			
Cough	-0.003	0.014	-0.017	0.268	0.147	0.140
	(-0.06)	(0.34)	(0.40)			
Sought treatment at public or private health facility						
Diarrhoea *(N=500)*	0.016	0.071	-0.056	0.741	0.896	0.884
	(0.17)	(0.64)	(0.73)			
Fever *(N=814)*	0.100	0.154**	-0.054	0.710	0.962	0.892
	(1.51)	(2.46)	(0.83)			
Cough *(N=603)*	0.036	0.092	-0.056	0.722	0.894	0.863
	(0.54)	(1.12)	(0.82)			

Table D.1.16: Impacts on Young Child Morbidity and Use of Curative Care by Household Size

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness (N_S=1,045; N_L=3,992)	0.020 (0.17)	0.098 (1.08)	-0.079 (0.81)	0.409	0.422	0.438	0.038 (0.85)	-0.015 (-0.38)	0.053 (0.98)	0.423	0.376	0.376
Diarrhoea	-0.064 (-1.01)	0.053 (0.94)	-0.117* (1.97)	0.172	0.122	0.207	-0.000 (-0.01)	0.023 (0.95)	-0.023 (0.84)	0.163	0.131	0.141
Fever	0.058 (0.86)	0.061 (0.86)	-0.003 (0.04)	0.241	0.249	0.221	0.053 (1.15)	0.014 (0.42)	0.039 (0.77)	0.238	0.227	0.229
Cough	0.004 (0.06)	0.004 (0.06)	0.001 (0.01)	0.306	0.187	0.135	0.046 (1.02)	0.011 (0.31)	0.034 (0.79)	0.248	0.158	0.139
Sought treatment at public or private health facility												
Diarrhoea (N_S=163; N_L=562)	-0.111 (-0.76)	-0.147 (-1.08)	0.036 (0.26)	0.632	0.804	0.817	0.133* (2.01)	0.135 (1.68)	-0.002 (0.03)	0.716	0.953	0.897
Fever (N_S=229; N_L=949)	0.184** (2.48)	0.189* (1.89)	-0.006 (0.08)	0.520	0.913	0.968	0.123** (2.07)	0.165** (2.62)	-0.042 (0.65)	0.708	0.923	0.876
Cough (N_S=180; N_L=708)	0.037 (0.24)	-0.192 (-1.21)	0.229* (1.97)	0.674	0.959	0.835	0.067 (1.07)	0.093 (1.22)	-0.026 (0.31)	0.723	0.886	0.829

Table D.17: Impacts on Young Child Morbidity and Use of Curative Care by Sex of Child

Dependent Variable	Female Children						Male Children					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Any illness (N_F=2,529; N_M=2,508)	0.047 (0.71)	-0.003 (-0.05)	0.049 (0.74)	0.419	0.392	0.376	0.028 (0.41)	0.032 (0.60)	-0.004 (0.05)	0.423	0.384	0.410
Diarrhoea	-0.001 (-0.03)	0.006 (0.17)	-0.007 (0.17)	0.163	0.145	0.134	-0.029 (-0.77)	0.049 (1.56)	-0.078* (1.94)	0.166	0.116	0.184
Fever	0.035 (0.68)	-0.007 (-0.18)	0.042 (0.74)	0.249	0.218	0.218	0.083 (1.47)	0.066 (1.31)	0.017 (0.46)	0.227	0.244	0.237
Cough	0.051 (1.07)	0.037 (1.09)	0.014 (0.28)	0.274	0.170	0.138	0.036 (0.75)	0.007 (0.14)	0.029 (0.72)	0.239	0.162	0.138
Sought treatment at public or private health facility												
Diarrhoea (N_F=354; N_M=371)	0.088 (0.91)	-0.019 (-0.21)	0.108 (1.58)	0.731	0.917	0.892	0.123 (1.42)	0.169 (1.31)	-0.045 (0.46)	0.673	0.917	0.852
Fever (N_F=573; N_M=605)	0.124 (1.53)	0.237*** (3.28)	-0.113* (1.76)	0.657	0.922	0.902	0.127* (1.86)	0.152** (2.34)	-0.025 (0.35)	0.705	0.919	0.896
Cough (N_F=459; N_M=429)	0.082 (1.20)	-0.037 (-0.47)	0.119 (1.29)	0.687	0.875	0.837	0.074 (0.88)	0.155 (1.63)	-0.081 (0.80)			

Table D.1.18: Impacts on Young Child Preventive Care by Sex of Household Head

Dependent Variable	Female-Headed Households						Male-Headed Households					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Participation in nutrition programme (N_F=4,319; N_M=718)	-0.009 (-0.56)	-0.016 (-0.96)	0.007 (0.35)	0.038	0.034	0.048	-0.099** (-2.28)	-0.124** (-2.20)	0.024 (0.43)	0.031	0.019	0.078
Participation in under-five clinic (N_F=4.319; N_M=718)	-0.043 (-0.85)	0.010 (0.21)	-0.053 (1.40)	0.716	0.677	0.750	-0.109 (-1.05)	-0.014 (-0.17)	-0.095 (0.96)	0.780	0.679	0.772
Check-up at well-baby/under-five clinic in last six months (N_F=4,318; N_M=718)	-0.055 (-0.66)	0.016 (0.17)	-0.071 (1.37)	0.465	0.457	0.546	-0.018 (-0.17)	0.033 (0.31)	-0.051 (0.55)	0.589	0.524	0.470
Possession of a child health passport (N_F=4,399; N_M=731)	0.046 (1.62)	0.025 (0.93)	0.021 (0.87)	0.844	0.933	0.934	-0.020 (-0.55)	-0.034 (-0.70)	0.014 (0.31)	0.907	0.944	0.972

Table D.1.19: Impacts on Young Child Preventive Care among Poorest 50 Percent of Households

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Participation in nutrition programme *(N=3,434)*	-0.036* (-2.04)	-0.038* (-2.34)	0.001 (0.08)	0.040	0.033	0.057
Participation in under-five clinic *(N=3,434)*	-0.007 (-0.12)	0.033 (0.67)	-0.040 (0.96)	0.711	0.691	0.726
Check-up at well-baby/under-five clinic in last six months *(N=3,433)*	-0.033 (-0.41)	0.022 (0.23)	-0.055 (0.97)	0.460	0.472	0.524
Possession of a child health passport *(N=3,514)*	0.035 (1.20)	0.015 (0.46)	0.020 (0.68)	0.843	0.937	0.937

Table D.1.20: Impacts on Young Child Preventive Care by Household Size

Dependent Variable	Households with ≤ 4 Members						Households with > 4 Members					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Participation in nutrition programme *(N_S=1,045; N_L=3,992)*	0.001 (0.03)	-0.009 (-0.22)	0.010 (0.25)	0.031	0.031	0.056	-0.034* (-1.94)	-0.034* (-1.72)	0.010 (0.47)	0.038	0.032	0.051
Participation in under-five clinic *(N_S=1,045; N_L=3,992)*	-0.022 (-0.41)	0.015 (0.19)	-0.036 (0.58)	0.740	0.752	0.802	-0.063 (-0.97)	0.003 (0.06)	-0.066 (1.47)	0.723	0.652	0.735
Check-up at well-baby/under-five clinic in last six months *(N_S=1,045; N_L=3,991)*	-0.060 (-0.57)	-0.028 (-0.21)	-0.032 (0.37)	0.538	0.542	0.591	-0.057 (-0.69)	0.024 (0.26)	-0.080 (1.47)	0.473	0.441	0.515
Possession of a child health passport *(N_S=1,051; N_L=4,079)*	0.027 (0.73)	0.020 (0.47)	0.008 (0.19)	0.865	0.931	0.931	0.036 (1.31)	0.017 (0.63)	0.019 (0.90)	0.851	0.935	0.943

Table D.1.21: Impacts on Young Child Preventive Care by Sex of Child

Dependent Variable	Female Children						Male Children					
	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Participation in nutrition programme *(N_F=2,529; N_M=2,508)*	-0.028 (-1.18)	-0.025 (-1.05)	-0.004 (0.11)	0.043	0.037	0.054	-0.015 (-0.88)	-0.040* (-1.83)	0.025 (1.40)	0.031	0.028	0.051
Participation in under-five clinic *(N_F=2,529; N_M=2,508)*	-0.060 (-0.98)	0.032 (0.61)	-0.092** (2.08)	0.731	0.677	0.762	-0.041 (-0.58)	-0.010 (-0.16)	-0.031 (0.65)	0.720	0.678	0.743
Check-up at well-baby/under-five clinic in last six months *(N_F=2,529; N_M=2,507)*	-0.024 (-0.27)	0.053 (0.54)	-0.077 (1.32)	0.487	0.489	0.544	-0.078 (-0.99)	-0.018 (-0.20)	-0.060 (0.96)	0.479	0.448	0.524
Possession of a child health passport *(N_F=2,569; N_M=2,561)*	0.039 (1.16)	0.016 (0.48)	0.023 (0.96)	0.870	0.941	0.938	0.037 (1.29)	0.024 (0.96)	0.013 (0.50)	0.835	0.929	0.942

D.2 Children's Activities: Schooling and Labour

Table D.2.1: Impacts on Children's Activities by Poverty: Poorest

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Currently attending school	0.091**	0.119***	-0.027	0.675	0.897	0.812
	(2.72)	(3.96)	(1.31)			
N	13,726	13,726		2,132	2,174	2,509
Currently attends school and did not temporarily withdraw in past 12 months	0.143***	0.127***	0.016	0.579	0.864	0.719
	(3.97)	(3.65)	(0.60)			
N	13,725	13,725		2,132	2,174	2,509
Hours of economic activities in past week	-0.236				1.687	1.952
	(-0.66)					
N	4,683				2,174	2,509
Hours of household chores yesterday	0.090				1.142	1.119
	(0.79)					
N	4,683				2,174	2,509
Child labor for elimination	0.103***				0.553	0.446
	(3.71)					
N	4,683				2,174	2,509
Excessive hours of economic activities	0.028*				0.208	0.187
	(1.75)					
N	4,683				2,174	2,509
Carried out hazardous economic activities	0.113***				0.493	0.392
	(3.14)					
N	4,683				2,174	2,509

Table D.2.2: Impacts on Children's Activities by Poverty: Not poorest

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Currently attending school	0.084**	0.099***	-0.015	0.703	0.899	0.864
	(2.61)	(3.34)	(0.61)			
N	7,977	7,977		1,210	1,374	1,443
Currently attends school and did not temporarily withdraw in past 12 months	0.112***	0.132***	-0.020	0.614	0.853	0.781
	(3.36)	(3.65)	(0.61)			
N	7,976	7,976		1,210	1,374	1,443
Hours of economic activities in past week	0.303				1.833	1.792
	(1.23)					
N	2,817				1,374	1,443
Hours of household chores yesterday	0.059				1.309	1.280
	(0.43)					
N	2,817				1,374	1,443
Child labor for elimination	0.080**				0.562	0.496
	(2.19)					
N	2,817				1,374	1,443
Excessive hours of economic activities	-0.013				0.190	0.200
	(-0.66)					
N	2,817				1,374	1,443
Carried out hazardous economic activities	0.104**				0.512	0.429
	(2.44)					
N	2,817				1,374	1,443

Table D.2.3: Impacts on Children's Activities by Household Size: Smallest households

Dependent Variable	Endline Impact	Midline Impact	Impact Diff (EL-ML)	Baseline Treated Mean	Endline Treated Mean	Endline Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Currently attending school	0.056	0.085*	-0.029	0.713	0.910	0.831
	(1.25)	(2.01)	(0.90)			
N	5,966	5,966		862	1,057	1,116
Currently attends school and did not temporarily withdraw in past 12 months	0.082*	0.095**	-0.013	0.628	0.865	0.745
	(1.93)	(2.13)	(0.35)			
N	5,966	5,966		862	1,057	1,116
Hours of economic activities in past week	0.589*				1.972	1.993
	(1.73)					
N	2,173				1,057	1,116
Hours of household chores yesterday	0.063				1.561	1.509
	(0.50)					
N	2,173				1,057	1,116
Child labor for elimination	0.083***				0.593	0.502
	(2.84)					
N	2,173				1,057	1,116
Excessive hours of economic activities	0.027				0.222	0.203
	(1.46)					
N	2,173				1,057	1,116
Carried out hazardous economic activities	0.091**				0.534	0.443
	(2.24)					
N	2,173				1,057	1,116

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Table D.2.4: Impacts on Children's Activities by Household Size: Not smallest households

Dependent	Endline	Midline	Impact Diff	Baseline	Endline	Endline
Variable	Impact	Impact	(EL-ML)	Treated Mean	Treated Mean	Control Mean
	(1)	(2)	(3)=(1)-(2)	(4)	(5)	(6)
Currently attending school	0.101***	0.124***	-0.023	0.676	0.892	0.832
	(3.32)	(4.84)	(1.11)			
N	15,737	15,737		2,480	2,491	2,836
Currently attends school and did not temporarily withdraw in past 12 months	0.151***	0.147***	0.004	0.579	0.857	0.741
	(4.59)	(4.49)	(0.13)			
N	15,735	15,735		2,480	2,491	2,836
Hours of economic activities in past week	-0.244				1.645	1.849
	(-0.83)					
N	5,327				2,491	2,836
Hours of household chores yesterday	0.089				1.054	1.040
	(0.77)					
N	5,327				2,491	2,836
Child labor for elimination	0.089***				0.541	0.448
	(3.14)					
N	5,327				2,491	2,836
Excessive hours of economic activities	0.007				0.191	0.187
	(0.48)					
N	5,327				2,491	2,836
Carried out hazardous economic activities	0.104***				0.486	0.391
	(2.84)					
N	5,327				2,491	2,836

D.3 Heterogeneous Impacts on Production

Table D.3.1: Impacts on Crop Production Inputs - Baseline Upper 50 per cent

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Crop production household	0.004	-0.012	0.016	0.909	0.958	0.939
	(0.18)	(-0.56)	(1.06)			
Number of plots	0.054	0.039	0.014	1.244	1.285	1.249
	(0.78)	(0.74)	(0.24)			
Total area cultivated (acres)	-0.051	-0.006	-0.045	1.511	1.474	1.399
	(-0.21)	(-0.04)	(0.25)			
Average plot size (acres)	0.016	-0.035	0.052	1.116	1.145	1.052
	(0.08)	(-0.28)	(0.39)			
Household labour input (days)	-0.965	-4.256	3.291	80.685	90.687	82.677
	(-0.11)	(-0.48)	(0.46)			
Total irrigated area (acres)	-0.054	-0.086	0.033	0.135	0.051	0.038
	(-1.04)	(-1.60)	(0.97)			
No. of diff. crops	0.020	-0.057	0.077	1.636	1.811	1.697
	(0.23)	(-0.57)	(0.80)			
Improved seed variety	0.020	-0.019	0.039	0.060	0.092	0.066
	(0.70)	(-0.71)	(1.20)			
Plots with soil/water conservation structure	-0.049	-0.016	-0.032	0.330	0.465	0.493
	(-0.68)	(-0.23)	(0.52)			
Use of pesticide	-0.010	0.007	-0.016*	0.018	0.010	0.012
	(-1.08)	(0.84)	(1.99)			
Use fertilizer/manure	0.127*	-0.063	0.190***	0.668	0.631	0.430
	(1.76)	(-1.30)	(3.64)			
N	4,552	4,552		716	749	791

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Table D.3.2: Impacts on Crop Harvests and Sales - Baseline Bottom 50 per cent

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Total Quantity of Harvest (Kg)	66.581***	10.713	55.869***	160.372	274.995	186.683
	(5.10)	(0.58)	(3.22)			
Total Quantity of Harvest (Kg) - Top 5 crops	66.355***	11.224	55.131***	155.661	263.008	177.523
	(5.40)	(0.66)	(3.15)			
Total value of harvests (MWK)	12,857.550***	-1,309.019	14,166.568***	26,906.869	48,332.181	30,391.480
	(5.01)	(-0.44)	(5.30)			
Total value of harvests (MWK) - Top 5 crops	12,681.150***	-930.484	13,611.634***	26,008.376	45,594.000	29,194.447
	(5.48)	(-0.33)	(5.13)			
Any crop sales	0.069*	0.017	0.052	0.150	0.287	0.187
	(1.81)	(0.43)	(1.49)			
Total sales (MWK)	1,432.374*	745.363	687.011	965.136	4,254.947	1,730.330
	(1.95)	(1.25)	(0.82)			
N	5,037	5,037		794	794	885

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Table D.3.3: Impacts on Livestock Production, Consumption and Sales - Baseline Bottom 50 per cent

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Livestock production household	0.331***	0.192***	0.139***	0.252	0.660	0.269
	(7.91)	(4.04)	(4.33)			
Livestock ownership index	0.846***	0.362***	0.484***	-0.313	0.761	-0.201
	(6.59)	(3.35)	(6.45)			
TLU Owned	0.067***	0.039***	0.028**	0.026	0.106	0.040
	(5.06)	(2.96)	(2.50)			
Consumed livestock	0.132***	0.051	0.081***	0.080	0.253	0.108
	(3.59)	(1.55)	(3.25)			
TLU Consumed	0.008***	0.003	0.005**	0.003	0.012	0.004
	(3.18)	(1.39)	(2.68)			
Purchased livestock	0.223***	0.265***	-0.042	0.049	0.312	0.057
	(6.73)	(6.03)	(1.30)			
TLU Purchased	0.024***	0.031***	-0.007	0.002	0.028	0.007
	(4.37)	(5.78)	(1.27)			
Sold any livestock	0.046**	0.009	0.038**	0.058	0.110	0.042
	(2.31)	(0.52)	(2.45)			
TLU Sold	0.005*	-0.002	0.007***	0.007	0.009	0.002
	(1.90)	(-1.10)	(3.53)			
N	5,037	5,037		794	794	885

Notes: Estimations use difference-in-differences modelling among panel households. Binary outcomes are estimated using LPM. See Table 13.1.1 for additional explanatory notes on model specification, including a list of control variables utilized. * 10% significance ** 5% significance; *** 1% significance.

Annex E: Inflation in the SCTP Evaluation Study Sample

Differential price inflation across treatment and control VCs between baseline and follow-up can be a cause for concern. If the cash transfers induce inflation in the local economy, its overall effect would be attenuated towards zero. In order to check for this, we utilized price data on key consumption items collected through the community questionnaire that was implemented at the community level, as part of the survey fieldwork.

We checked to see if there had been any excess inflation/deflation in treatment communities compared to control communities. Table E.1.1 reports difference-in-difference estimates that compare the change in price from baseline between treatment and comparison communities. This is similar to the programme impact estimates reported in the main text, except that this analysis is conducted at the village cluster level rather than household level, and we do not include any controls. We find no significant inflationary effects for the key consumption items. There only appears to be an impact of the price per piece of Panadol, only at the 10 per cent level of significance. Even this is negative, which means it is now cheaper to buy Panadol in treatment communities than before.

Table E.1.1: SCTP Impacts on Prices

Dependent Variable	Endline Impact (1)	Midline Impact (2)	Impact Diff (EL-ML) (3)=(1)-(2)	Baseline Treated Mean (4)	Endline Treated Mean (5)	Endline Control Mean (6)
Maize grain per Kilo	5.486 (0.11)	11.664 (0.22)	-6.178 (0.12)	155.975	158.929	155.667
Rice per Kilo	9.068 (0.34)	-18.845 (-0.70)	27.913 (1.04)	328.956	450.357	453.667
Beans per Kilo	-25.653 (-0.33)	-10.842 (-0.14)	-14.811 (0.19)	431.152	619.286	640.000
Tomatoes per Heap	-20.751 (-1.26)	-22.213 (-1.34)	1.462 (0.09)	73.667	64.732	56.417
Beef per Kilo	-99.502 (-0.85)	-68.669 (-0.59)	-30.833 (0.26)	1,160.931	1,471.429	1,490.000
Salt per Sachet/Tube	6.263 (0.74)	9.651 (1.14)	-3.388 (0.40)	22.767	32.976	35.222
Sugar per Kilo	-36.417 (-0.60)	-19.043 (-0.31)	-17.373 (0.29)	399.365	608.393	604.333
Cooking oil per Sachet/Tube	13.140 (1.34)	4.143 (0.42)	8.997 (0.92)	44.738	47.500	40.667
Bar soap per Piece	-0.976 (-0.11)	4.214 (0.47)	-5.190 (0.58)	71.905	78.929	81.333
Panadol per Piece	-5.155* (-1.67)	-5.274* (-1.71)	0.119 (0.04)	20.060	19.821	20.917
Chitenji (cloth) per piece	-88.512 (-0.82)	-127.381 (-1.18)	38.869 (0.37)	1,393.750	1,453.571	1,443.333
Firewood per heap	136.565 (1.35)	35.896 (0.35)	100.669 (1.01)	141.269	261.030	161.693
Charcoal per 50kg bag	-114.376 (-0.37)	27.645 (0.09)	-142.021 (0.47)	1,022.931	1,431.364	1,589.082
Foam Mattress per piece	3,969.802 (1.57)	1,565.278 (0.62)	2,404.524 (0.97)	14,801.389	17,517.857	15,683.333
N	85	85		12	14	15

Notes: t stats in parentheses. * 5% significance; ** 1% significance;

Annex F: Domain Effects Adjusted for Multiple Testing

Figure F.1.: Impact of SCTP on Domain Indexes with Confidence Intervals Adjusted for Multiple Testing
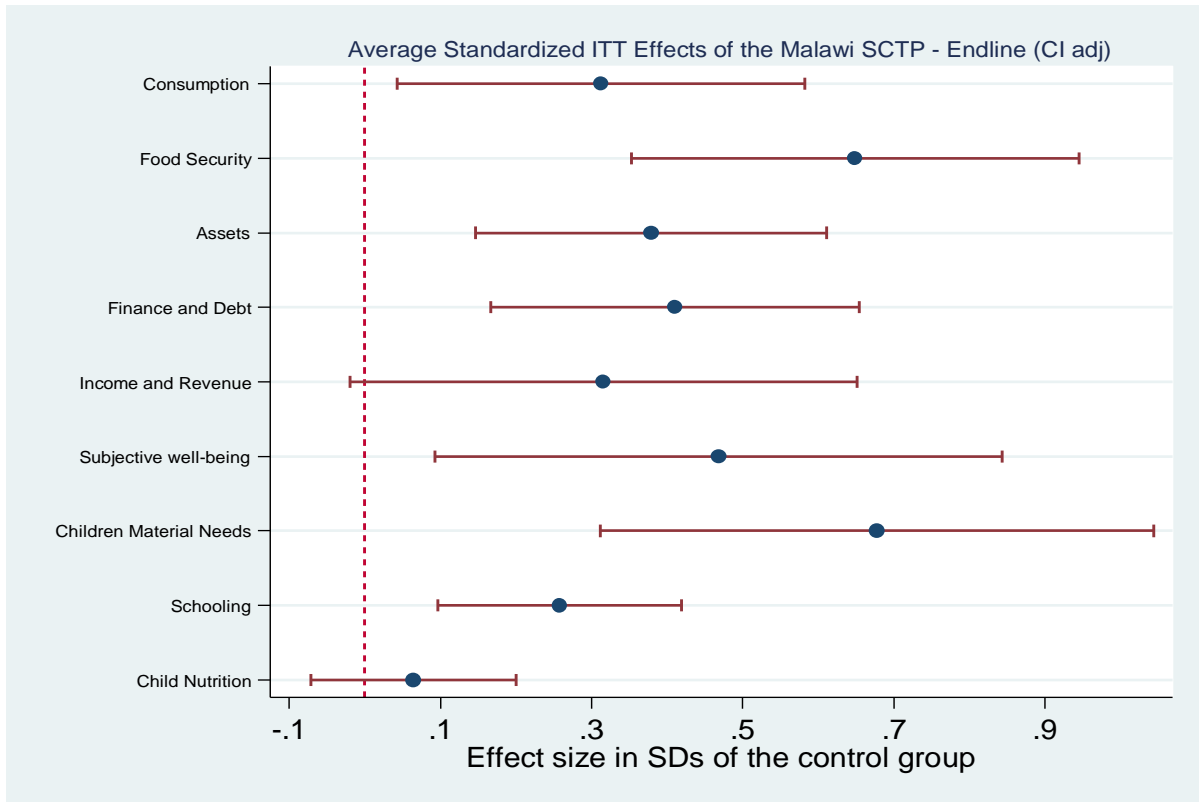
Table F.1: Endline Domain Impacts in Z-Scores with 95% Confidence Intervals and Adjusted Confidence Intervals

| Variable | Unadjusted CI | | | Adjusted for Multiple Testing | | |
| | | 95% CI adj | | | 95% CI adj | |
	Impact	Lower bound	Upper bound	Impact	Lower bound	Upper bound
Consumption	0.313	0.128	0.497	0.269	0.042	0.583
Food Security	0.649	0.446	0.851	0.428	0.352	0.945
Asset	0.379	0.220	0.537	0.162	0.146	0.611
Finance and Debt	0.411	0.244	0.577	0.122	0.167	0.654
Income and Revenue	0.315	0.086	0.545	0.047	-0.020	0.651
Subjective well-being	0.468	0.211	0.725	0.390	0.093	0.843
Child Material Well-Being	0.678	0.427	0.928	0.349	0.312	1.044
Schooling	0.258	0.147	0.368	0.285	0.096	0.419
Child Nutrition	0.064	-0.029	0.157	0.024	-0.072	0.200

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