

**EVALUATION OF THE SOCIAL CASH TRANSFER PILOT PROGRAMME,
TIGRAY REGION, ETHIOPIA**

ENDLINE REPORT

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Executive Summary

In 2011, the Bureau of Labour and Social Affairs (BoLSA), Regional Government of Tigray, with support from the United Nations Children’s Fund (UNICEF), introduced the Social Cash Transfer Pilot Programme (SCTPP) in two *woredas*, Abi Adi and Hintalo Wajirat. The SCTPP aims to improve the quality of life for vulnerable children, older persons, and persons with disabilities. It has three overarching objectives:

- Generate information on the feasibility, cost-effectiveness, and impact of a social cash transfer scheme administered by the local administration.
- Reduce poverty, hunger, and starvation in all households that are extremely poor and at the same time labor constrained; and
- Increase access to basic social welfare services such as healthcare and education.

The International Food Policy Research Institute, together with its collaborators, the Institute of Development Studies and the Department of Economics, Mekelle University, has produced four reports on the evaluation of the SCTPP. The inception report (Berhane et al. 2012a) outlined the approach proposed for this evaluation work. The baseline report provided basic descriptive statistics on the well-being, livelihoods, schooling, and health of individuals and households of both SCTPP participants and nonparticipants living in Abi Adi and Hintalo Wajirat as well as assessing a number of operational aspects of the SCTPP (Berhane et al. 2012b). The midline report updated descriptive statistics relating to programme implementation and provided information on trends in maternal level outcomes, child level outcomes and household level outcomes (Berhane et al. 2013).

This is the fourth report associated with our evaluation of the Social Cash Transfer Pilot Programme (SCTPP) implemented by the Bureau of Social and Labour Affairs (BoLSA), regional Government of Tigray. It has three objectives:

- The core objective is to assess the contribution of the SCTPP to improvements in household welfare, broadly defined. In addition, it:
- Updates and summarizes work on the operational aspects of the SCTPP, including the role of Community Care Coalitions; targeting; and pay processes; and
- Provides basic descriptive statistics on the well-being, livelihoods, schooling, and health of individuals and households of both SCTPP participants and nonparticipants living in Abi Adi and Hintalo Wajirat.

Work presented in this report is based on two rounds of qualitative data collected in August 2012 and April 2014 and seven rounds of quantitative data. Two full length household surveys were fielded in May/June 2012 and May/July 2014. Five shorter monitoring surveys were fielded in October 2012, March, July and November 2013 and March 2014. The final survey included 91.3 percent of households interviewed in May 2012. Attrition was concentrated in two *tabias* in Hintalo Wajirat where for religious reasons, respondents declined to continue to participate. Attrition was not correlated with program participation.

At the outset, BoLSA decided that access to the SCTPP would not be randomized. For this reason, this report uses matching methods of program evaluation—specifically inverse-probability-weighted regression-adjusted estimators—to construct a comparison group by “matching” treatment households to comparison group households based on observable characteristics.

There are three main findings:

- a. BoLSA demonstrated that it could effectively implement an ongoing cash transfer program. The SCTPP effectively communicated with beneficiaries, reached its target group and provided full transfers on a timely and consistent basis.
- b. The SCTPP improved household food security and reduced hunger.
- c. The SCTPP had modest effects on schooling and asset formation. There were no large or measurable impacts on a range of other outcomes.

A novel feature of the SCTPP is the creation of Community Care Coalitions (CCCs). These are community-led groups that serve as a support mechanism for the vulnerable populations in the community. CCCs are hybrid organizations with representation from both government and civil society organizations. CCCs play a critical role in beneficiary identification and selection and assisting in payment processes. They are intended to play a prominent role in the provision of complementary social services and to raise additional resources. Qualitative and quantitative data both indicate that CCCs understand and execute the roles assigned to them. They are well regarded by SCTPP beneficiaries. They clearly exert considerable effort to raise additional funds and are able to identify and distribute these to households in need of assistance. But this is not a substitute for a formal social safety net. Reflecting the poverty of the localities in which these CCCs operate, the resources they raise benefit only a relatively small number of households. Especially in rural areas, it appears that many CCCs are operating at the limit of volunteerism; that is, that they are not able to take on any additional time commitments.

Targeting processes in the SCTPP work well. *Woreda* and *tabia* officials, CCC members, and SCTPP participants demonstrated sound knowledge of the eligibility criteria and confirmed that the targeting procedures had been correctly applied in all communities surveyed. At baseline, there is very little evidence of inclusion error. However, there is considerable undercoverage. Many households that do satisfy the eligibility criteria were excluded from the SCTPP because of budget constraints. Although there was broad acceptance of the eligibility criteria and the targeting decisions, these households that were initially selected, but later cut, were most likely to perceive the targeting process as unfair. The CCCs played an important role in explaining the eligibility criteria and increasing acceptance of targeting processes among nonselected households.

Retargeting was limited. There were a few instances where households were subsequently dropped from the SCTPP either because they had been erroneously included or because their living conditions had changed so much that assistance was no longer needed. Given a fixed budget, this meant that the number of new entrants was limited to the number of places on the programme that opened up subsequent to the death of a beneficiary. Inclusion of

new households drew heavily on existing targeting criteria. However, unlike the initial targeting process, there appears to have been less effort to communicating to non-beneficiaries how re-targeting was undertaken. Efforts were made to ensure that these inclusions maintained the existing gender balance of the programme and that this process was communicated to the wider community.

SCTPP payment processes consistently worked well across the two years of this study. Virtually all beneficiaries reported that they receive their payments on time with more than 90 percent report being paid in full, and 82 percent reporting that they were treated courteously by program staff. This high level of program performance was maintained throughout the life of the program. SCTPP payments are remarkably regular. Once the program was fully operational, more than 95 percent of beneficiaries received their payments each month. This high frequency of payments were maintained over the full duration of the SCTPP. There are few recorded complaints.

While payments are made reliably, the level of payment is low. The median per capita payment was 77 birr per month. Transfers were not adjusted to account for inflation during this two year study. A novel feature of the SCTPP is the use of designates, a person authorized by the beneficiary to collect payments on their behalf. While the use of designates provided some clear advantages, in 2012 designated persons were often rewarded in cash or in kind and sometimes conflicts arose as a result of this designation process. The 2012 data indicated that in 21 percent of cases when the beneficiary sent someone else to collect payment, that person was paid to do so. Both issues had been largely resolved by endline. By May 2014, designated persons were increasingly likely to be household (and nearly always family) members and these individuals were much less likely to be paid for their assistance. The proportion of designates who received a payment fell to 7.6 percent and out of the 563 beneficiaries who reported using a designate, only 18 (3.5 percent) reported paying the designate more than 50 birr. Problems with designating someone else appeared to be exceptions rather than rule. When problems were encountered, different arrangements for collection were made quickly, usually with the help of the CCCs.

SCTPP beneficiaries report spending approximately 65 percent of their transfers on food. Across a wide range of measures, household food security of SCTPP beneficiaries improved; for example, the food gap fell in both Abi Adi and Hintalo Wajirat by approximately 0.50 months. Adults and children eat more meals. Both diet quantity (as measured by caloric availability) and diet quality (as measured by the Dietary Diversity Index and the Food Consumption Score) improved. The SCTPP had a causal impact on many of these outcomes. It reduced the food gap by 0.24 months in May 2012. It increased the availability of calories by 94 kcal per adult equivalent in May 2012 and 158 kcal per adult equivalent in May 2014. Relative to comparison households, this represents an increase of 3.6 and 6.0 percent respectively. It improved diet quality, as measured by the Dietary Diversity Index, in May 2012 and May 2014 by 13.4 and 11.7 percent respectively. In Hintalo Wajirat, it reduced seasonal fluctuations in children's food consumption.

The SCTPP has no effect on school outcomes in Abi Adi. It has a modest effect on enrollment and schooling efficiency in Hintalo Wajirat. It has large, positive and statistically significant impacts for girls 6-11 years of age and living in Hintalo Wajirat. It raised the likelihood on enrollment by 13.3 percentage points, schooling efficiency by 14 percentage points and grade attainment by a half grade.

There was a small reduction in time spent by girls in work on household nonfarm businesses but no other impacts on child labor.

Over the two years covered by our quantitative surveys, SCTPP beneficiaries accumulate assets in a variety of forms. They have more farm equipment, livestock and consumer durables. Some of these increases are large. In 2012, 25 percent of SCTPP households in Abi Adi had a mobile phone as did 4 percent in Hintalo Wajirat. By May 2014, this had increased to 55 percent of households in Abi Adi and 29 percent of households in Hintalo. In 2012, 25 percent of SCTPP households in Hintalo Wajirat owned livestock; by 2014, this had increased to 51 percent. However, the contribution of the SCTPP to this is modest. In Hintalo, the SCTPP increased our farm productive assets index by two percent and our consumer durables index by 0.8 percent. It increased the likelihood that they own any form of livestock or animals by seven percent with this driven largely by increase in poultry.

The qualitative fieldwork uncovered specific examples of the SCTPP providing working capital for participants to start small businesses. But there is no evidence of the SCTPP leading to large gains in household incomes from farming or nonfarm own business activities.

We do not find impacts on nonfood consumption, pre-school nutritional status, maternal body mass index or women's mental health. It is possible that the size of the transfer was too small to generate detectable effects. Some of the nonimpacts may also reflect a lack of statistical power (i.e., an insufficient number of observations to detect impacts) rather than an actual absence of impact.

We assessed whether the SCTPP had an unintentional negative effect on informal transfers and trust and social cohesion. We find evidence that beneficiaries received fewer informal transfers from their family and friends due to the SCTPP, particularly in Abi Adi. We find no evidence that the SCTPP negatively affected trust and social cohesion in Abi Adi, and while we find some evidence that the program weakened social cohesion in Hintalo, overall levels of reported trust and social cohesion were rising for all groups. There is mixed evidence on whether SCTPP cash finances increased participation in semi-formal social protection mechanisms such as savings groups and burial societies.

In all social protection interventions there is a tension between providing transfers to large number of beneficiaries but with lower levels of transfers, or restricting the number of beneficiaries and providing them with higher transfers. If the goal of programs like the SCTPP is to reach all those who need these transfers *and* have meaningful impacts, budgets need to be set accordingly.

1. Introduction

1.1 Introduction

In 2011, the Regional Government of Tigray, with support from the United Nations Children's Fund (UNICEF), introduced the Social Cash Transfer Pilot Programme (SCTPP) in two *woredas*, Abi Adi and Hintalo Wajirat. The SCTPP aims to improve the quality of life for vulnerable children, the elderly, and persons with disabilities. It has three overarching objectives:

- The core objective is to assess the contribution of the SCTPP to improvements in household welfare, broadly defined. In addition, it:
- Updates and summarizes work on the operational aspects of the SCTPP, including the role of Community Care Coalitions; targeting; and pay processes; and
- Provides basic descriptive statistics on the well-being, livelihoods, schooling, and health of individuals and households of both SCTPP participants and nonparticipants living in Abi Adi and Hintalo Wajirat.

The International Food Policy Research Institute, together with its collaborators, the Institute of Development Studies and the Department of Economics, Mekelle University, are responsible for the evaluation of the SCTPP. Their first report (Berhane et al. 2012a) outlined the approach they proposed for this evaluation work. The second report used quantitative data collected at the individual, household, and *tabia* level in May-June 2012 and qualitative data collected using key informant interviews, focus group discussions, and participatory appraisal activities in July-August 2012 (Berhane et al. 2012b). This work provided basic descriptive statistics on the well-being, livelihoods, schooling, and health of individuals and households of both SCTPP participants and nonparticipants living in Abi Adi and Hintalo Wajirat, and assessed a number of operational aspects of the SCTPP, including the role of Community Care Coalitions; pay processes; targeting; and appeals and grievances. The midline report updated descriptive statistics relating to program implementation and provided information on trends in maternal level outcomes, child level outcomes and household level outcomes (Berhane et al. 2013).

This is the fourth report associated with our evaluation of the Social Cash Transfer Pilot Programme (SCTPP) implemented by the Bureau of Social and Labour Affairs (BoLSA), regional Government of Tigray. It has three objectives:

- Update and summarize work on the operational aspects of the SCTPP, including the role of Community Care Coalitions; targeting; and pay processes.
- Provide basic descriptive statistics on the well-being, livelihoods, schooling, and health of individuals and households of both SCTPP participants and nonparticipants living in Abi Adi and Hintalo Wajirat; and
- Assess the contribution of the SCTPP to improvements in household welfare, broadly defined.

1.2 Report Structure

The report is structured as follows.

Chapter 2: Data sources and methods. This chapter describes the data sources and methods that underpin this report. It summarizes the choices made in developing treatment and comparison groups, the timing and content of the quantitative household surveys, survey implementation and attrition. It describes the objectives of the complementary qualitative fieldwork, its content and implementation.

Chapter 3: Quantitative Methods for evaluating the impact of the SCTPP. This chapter describes the statistical methods we use to isolate the causal impacts of the SCTPP. Because some of this material is fairly technical, we begin with a nontechnical overview accessible to a wide set of readers. We complement this with a more technical presentation aimed at readers more comfortable with advanced econometric techniques.

Chapter 4: Community Care Coalitions. A novel feature of the SCTPP is the creation of Community Care Coalitions (CCCs), community-led groups that operate at the *tabia* level and serve as a support mechanism for the vulnerable populations in the community. CCCs were the subject of extensive review in the baseline report (Berhane et al. 2012b). Given the many positive findings noted in the baseline report, this chapter we focus on two broad sets of questions: Has the impressive performance of the CCC's been maintained; and have the modest concerns raised in the earlier report become more or less prominent. We begin with information gleaned at the regional, *woreda*, and *tabia* levels. We assess whether their composition is consistent with what is laid out in the SCTPP operational manuals. We consider the perspectives from CCCs themselves and also the perceptions of households in both Abi Adi and Hintalo Wajirat.

Chapter 5: Targeting. The targeting of the SCTPP was the focus of extensive review in the baseline report (Berhane et al. 2012b, chapter 7). This showed that, consistent with program objectives, the SCTPP targets households that are extremely poor and labor-constrained. Given this strong targeting performance, this chapter has two functions. First, it provides a shortened version of the findings presented in the baseline report. Second, we examine the extent to which re-targeting took place over the lifetime of the program, why this occurred and how it was implemented.

Chapter 6: Payment Processes. Payment processes and payment delivery systems are important components of any cash transfer program. No matter how well designed and targeted, failure to pay beneficiaries in a timely and complete fashion will drastically limit the impact of any transfer program. For this reason, payment processes were a major focus of the baseline report on the SCTPP (Berhane et al. 2012b). This showed that across numerous aspects of program implementation, the SCTPP performed exceptionally well. In light of this, the focus of this chapter lies in updating our 2012 assessment. We examine participants experiences with payment processes, whether there had been improvements in access, the use of designates (where there had been some concerns noted in the 2012 report), and receipt of payments.

Chapter 7: The impact of SCTPP on food security, diets and expenditures. One of the key aims of the SCTPP is to improve the quality of lives of disadvantaged community members across a number of dimensions including food security and consumption. With this in mind, we begin this chapter with a descriptive analysis looking at how households spend their transfers and the nature of food insecurity in both Abi Adi and Hintalo Wajirat. With this background in place, we assess the impact of the SCTPP on measures of household food security, diets and expenditures. We use data collected through the SCTPP quantitative household survey fielded, mainly at baseline (2012) and endline (2014) and, in a more limited way, the monitoring surveys and the qualitative fieldwork.

Chapter 8: The impact of the SCTPP on children's nutritional status. An important component of wellbeing is nutritional status. In this chapter, we assess the extent to which the SCTPP improved nutrition in pre-school children. We begin with descriptive statistics on how these outcomes are measured and how they have evolved over the period 2012-14. We then assess the extent to which the SCTPP has contributed to these changes.

Chapter 9: The impact of the SCTPP on children's schooling and child labor. Improving schooling outcomes is a core objective of the SCTPP. With this in mind, data were collected on schooling (enrolment, attendance) and grade attainment were collected for all children 6 to 18 in all survey rounds. In this chapter, we assess the extent to which this objective has been met. We begin with contextual information on schooling in Ethiopia in general and in Abi Adi and Hintalo in particular. We provide descriptive statistics on how these outcomes have changed over the period 2012-14. Finally, we assess the extent to which the SCTPP has contributed to these changes. We then move on to consider whether the SCTPP has affected the prevalence or quantity of child labor. As with our work on schooling, we begin with descriptive statistics before moving onto the impact analysis.

Chapter 10: The impact of the SCTPP on maternal health. One of the core goals of the SCTPP was to improve children's schooling outcomes, as well as their health and nutrition. Because a mother's health often has impacts on the outcomes of her children, we took care to measure key indicators of maternal health. While other chapters discuss these outcomes for children, the current chapter discusses measures of maternal health. We begin by discussing our metrics of physical maternal health, then provide descriptive statistics of these measures in 2012 at baseline and 2014 at endline. We then assess the extent to which the SCTPP has contributed to these changes. In addition to physical health, the chapter also discusses mental maternal health, a potentially important contributor to good child care.

Chapter 11: The impact of SCTPP on household income generation. Can social protection interventions do more than protect or increase consumption? This chapter addresses this question, assessing whether the SCTPP enhanced household income generating activities.

Chapter 12: The impact of the SCTPP on asset holdings. The primary objectives of the SCTPP are to reduce poverty and hunger, improve schooling outcomes and the nutritional status of pre-school children. However, the program's log frame notes that the SCTPP expects

that beneficiaries will use their transfers in an “economically sound and socially responsible way” (Tigray 2011a, 28), including the investment of transfers in income generating assets. In this chapter, we assess the impact of the SCTPP on assets. Consistent with the indicator in the log frame, we start with those assets that can generate income such as farm tools and livestock. We also assess whether beneficiaries invested in assets that improved their living standards such as bednets or mobile phones.

Chapter 13: The impact of the SCTPP on trust and informal social protection. While the SCTPP was designed to improve the lives of its beneficiaries, similar programs have sometimes had unintended negative effects. This chapter examines the possibility of negative effects in two areas: informal transfers and trust and social cohesion. We first look for evidence that informal support to beneficiaries was affected by the SCTPP. Next, governments and practitioners sometimes worry that because formal programs may interrupt informal supports, the program may unintentionally reduce trust and social cohesion in the community. We also look for evidence that the SCTPP had this negative effect. Finally, we report qualitative evidence on whether the SCTPP has any impact on participation in semi-formal social protection mechanisms and associations.

2. Data Sources and Methods

2.1 Introduction

There are three distinguishing features of the data sources and methods used in this report. First, all results are based on primary data collection undertaken between May 2012 and July 2014. Second, mixed methods—data collection techniques using both qualitative and quantitative methods—have been employed. Doing so provides a richer pool of data and greater analytic power than would have been available with either of these methods used alone. Third, we adopt a “cascading” approach whereby data are collected at all levels: regional, *woreda*, *tabia*, household, and individual.

The inception report (Berhane et al. 2012a) provides a detailed explanation of the choices made in developing the impact evaluation strategy. It includes an explanation of the choice of locations for the data collection, the need for three groups in the quantitative household survey, referred to in Berhane et al. (2012a) as the treatment, control and random samples, the choice and content of survey instruments, and sample size calculations. We do not repeat those detailed explanations here. Instead, we describe how these methods have been implemented in the context of generating information for this report.

2.2 Implementation of the Quantitative Surveys

2.2.1 Overview

We begin with an extended description of the baseline; this description draws heavily on Berhane et al. (2012b).

The quantitative surveys have been fielded in the two *woredas* where the SCTPP operates, the town of Abi Adi and Hintalo Wajirat, a rural *woreda* south of Mekelle. In Hintalo Wajirat, however, initially only seven of the 22 *tabias* were covered by the program (see Figure 2.1). These *tabias* had been nonrandomly selected by the SCTPP for ease of program implementation and reduction of administration costs. They are adjacent geographically, and located east of the main north-south highway. The selected *tabias* are Tsehafiti, Sebebera, Gonka, Senale, May Nebri, Ara Alemsigeda, and Adi Keyih. Subsequently, additional funding became available that permitted the extension of the SCTPP to an additional *tabia* in Hintalo-Wajirat. This *tabia*, Bahr Tseba, is also included in the quantitative baseline survey.¹

Each *tabia* is comprised of three to four smaller administrative regions, known as *ketenas* in Abi Adi and *kushets* in Hintalo Wajirat. Our sample is drawn from all *ketenas* in Abi Adi. As part of the preparatory work for the survey, we undertook a preliminary reconnaissance to assess whether there were physical barriers that affect the feasibility of implementing our surveys in the more remote *kushets* of Hintalo. This led to three *kushets* being excluded from the sample. In all cases, rugged terrain, geographically dispersed households, and the absence

¹ Payments to beneficiaries in Bahr Tseba commenced just after the May 2012 survey was completed.

of roads or paths meant that finding and interviewing households in these localities was simply infeasible, given the time available to complete the survey.² We note that their exclusion may mean that some results presented in the following chapters may not be representative of the entire rural, beneficiary population of Hintalo; for example, access to pay points for SCTPP beneficiaries or school attendance by children. However, since the population of these *kushets* is relatively small, we perceive this bias will be minor.

Participants in the SCTPP were selected via a multistage process. A crucial component of this process was the use of lists of households eligible for the SCTPP. These lists were then used to form *kushet/ketene*-level rankings of all households that appeared to meet the targeting criteria.³ Households selected for inclusion in the SCTPP constitute the population from which the “treatment” sample is drawn. The Bureau of Labor and Social Affairs (BOLSA) provided us with the list of beneficiaries from which we sampled. There were four beneficiary types within this list: the elderly, the disabled, child-headed households, and female-headed households. Examining these lists, it appeared that there was a preponderance of elderly households (households with members aged 60 or older) among households that were ultimately chosen as beneficiaries. To ensure that we would have a sufficient number of children in our sample, we oversampled non-elderly households.

Households that appeared on these initial lists but who were ultimately not selected for the SCTPP constitute the population from which the “control” sample has been drawn. In addition to the control group of nonselected eligible households, a second nontreated group was also sampled from lists of households residing in each *tabia*. These are households that were never considered for inclusion in the SCTPP either because they were less poor and/or because of the presence of able-bodied adults. This group was randomly sampled from non-eligible (i.e., non-ranked) households in order to assess targeting effectiveness and accurately identify area-specific trends.⁴

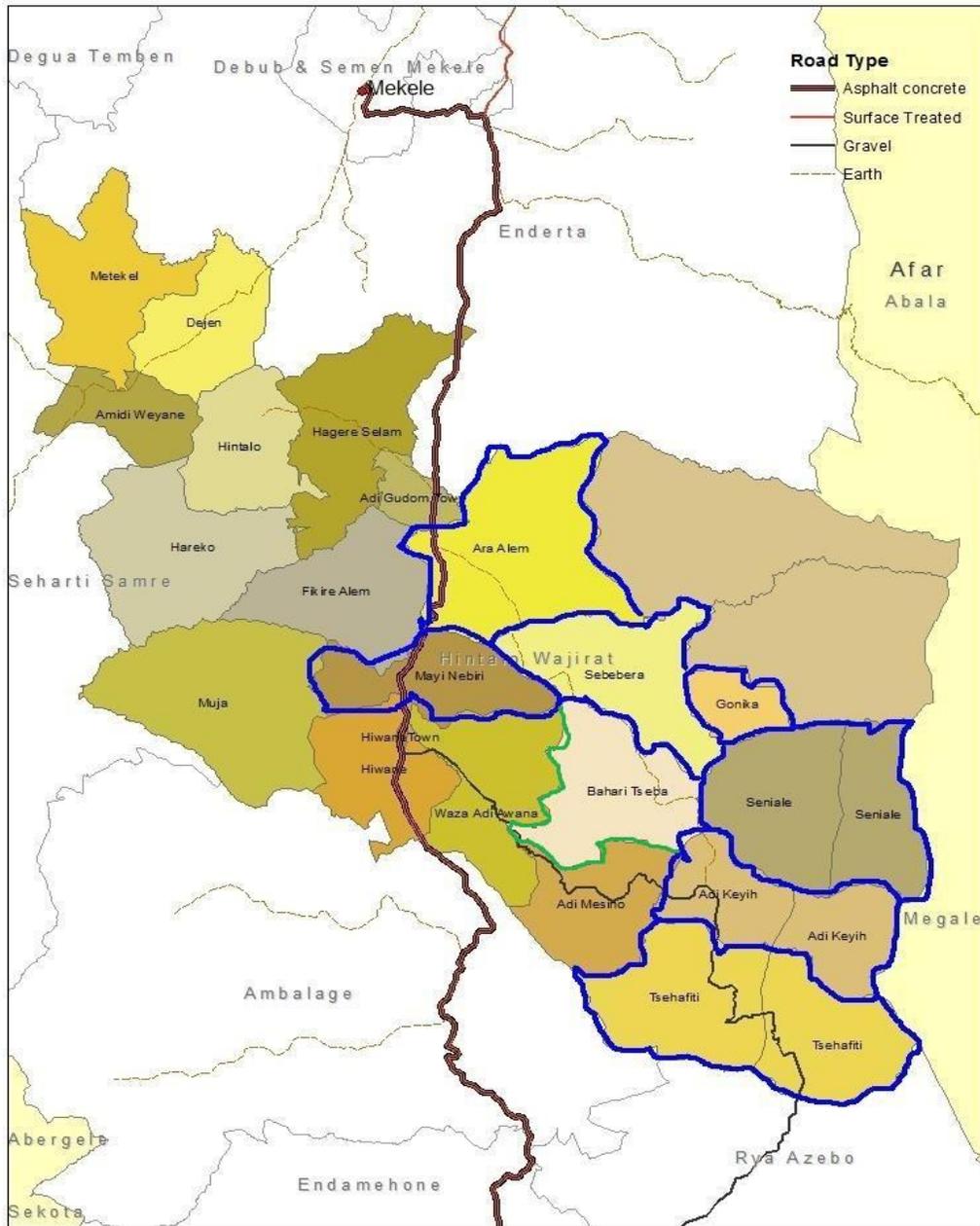
Thus, the quantitative survey sample consists of households that receive SCTPP benefits (treatment sample), households that met the targeting criteria but do not receive the SCTPP benefits (control sample, also referred to as “eligible, not-selected”), and households that did not meet the targeting criteria and do not receive SCTPP benefits (random sample). The number of households interviewed by location and treatment status is given in Table 2.1. Note that because Bahr Tseba was added to the SCTPP nearly a year after the program started, we report results for Bahr Tseba separately.

² These were Genti (Senale), Girmberom (Gonka), and Alelibat (Tsehafti).

³ Chapter 5 describes this process in detail.

⁴ Data from this group are also used for the village Computable General Equilibrium (CGE) models.

Figure 2.1 Location of SCTPP *tabias* within Hintalo Wajirat



Source: Generated by authors.

Table 2.1 Initial sample sizes, by location and treatment status

Beneficiary status	Location			Totals
	Abi Adi	Hintalo Wajirat (excluding Bahr Tseba)	Bahr Tseba	
Beneficiary (treatment sample)	613	866	217	1,696
Control (eligible, not selected)	537	802	200	1,539
Random sample	130	254	48	432
Total	1,280	1,922	465	3,667

These sample sizes reflect the intersection of two factors. First, prior to implementation of the first survey, we conducted power calculations. We used household-level data collected as part of the evaluation of Ethiopia's Productive Safety Net Programme in central, eastern and southern Tigray. These data gave us a sense of levels of outcomes, their standard deviation and the magnitude of the intra-cluster correlations, also called design effects, which we could expect in this sample. Given this household level information together with the emphasis of the SCTPP on reducing dimensions of poverty, increasing incomes and fostering inclusiveness, we calculated the minimum sample sizes needed to detect the following impacts: a one month reduction in the food gap; a ten percent increase in livestock holdings; a 10 percentage point increase in the use of fertilizer; a ten percentage point increase in the use of credit; and a 50 birr increase in net transfers to other households. The maximum sample size needed to detect these effects was 830 beneficiary and 830 control households. Second, we were constrained by the number of actual beneficiaries and controls in the program. This was a particular problem in Abi Adi where the number of beneficiaries was less than this needed sample size.

It should also be noted that these sample sizes refer to households. For some outcomes, however, we are interested in individual effects. Amalgamating Bahr Tseba with the rest of Hintalo Wajirat, we have the following numbers (Table 2.2).

Table 2.2 Initial sample sizes, individuals, by location and age

Beneficiary status	Location		
	Abi Adi	Hintalo Wajirat	All
0 to 2 years	144	195	339
2 to 5 years	287	534	821
5 to 9 years	685	1,233	1,918
10 to 17 years	1,226	2,435	3,661
18 to 60 years	1,469	2,880	4,349
60 years and older	433	1,318	1,751

The striking feature of Table 2.2 is the presence of relatively few children below the age of two years. This suggests that we should be cautious in interpreting impacts (or lack of impact) on children in this age group; the sample size may be simply too small to detect an effect.

The first household survey was fielded in May and June, 2012. Throughout this report, we will refer to this as the baseline survey. It should be noted, however, that it is not a true baseline as it was fielded after the SCTPP had begun implementation. This was followed by a

series of monitoring surveys. Five were fielded between October 2012 and March 2014. An endline survey was fielded in June and July 2014. Survey dates are given in Table 2.3.

Table 2.3 Survey timing, by round

Survey	Start date	Finish date
Household Survey 1 (Baseline)	6 May 2012	26 June 2012
Monitoring Survey 1	6 October 2012	27 October 2012
Monitoring Survey 2	9 March 2013	29 March 2013
Monitoring Survey 3	20 July 2013	11 August 2013
Monitoring Survey 4	6 November 2013	26 November 2013
Monitoring Survey 5	3 March 2014	25 March 2014
Household Survey 2 (Endline)	16 May 2014	17 July 2014

The idea behind the monitoring surveys was fourfold: i) to generate data on SCTPP processes that might change over time (such as the reliability of payments; re-targeting); ii) to generate data on outcomes that might have seasonal components (e.g., crop production); iii) to explore, in more depth, selected topics; and iv) to ensure continuity of contact with respondents. Table 2.4 lists the topics covered in each survey round.

Table 2.4 Topic covered, by survey round

	Baseline	MS1	MS2	MS3	MS4	MS5	Endline
Household roster and schooling							
Demographic composition: Listing and updates	✓	✓	✓	✓	✓	✓	✓
In and out migration		✓	✓	✓	✓	✓	✓
Schooling and child labor	✓	✓	✓	✓	✓	✓	✓
Farm activities							
Land characteristics and tenure	✓			✓	✓		✓
Crop production	✓				✓	✓	
Sales	✓		✓		✓	✓	
Agricultural practices and technology	✓		✓				✓
Hired labor	✓						
Labor sharing	✓						
Assets							
Production equipment and consumer durables	✓						✓
Housing stock	✓						✓
Livestock ownership	✓	✓	✓	✓	✓	✓	✓
Income from livestock	✓						✓
Social capital	✓						✓
Income from nonagricultural sources							
Wage Employment	✓	✓	✓	✓	✓	✓	✓
Own Business Activities	✓	✓	✓	✓	✓	✓	✓
Transfers and remittances	✓						✓
Credit	✓						✓
SCT							
Targeting	✓						
Operations	✓						✓
Payments	✓	✓	✓	✓	✓	✓	✓
Participation in PSNP or other safety nets	✓						✓
Consumption							
Nonfood expenditures	✓						✓
Food expenditures and consumption	✓						✓
Food availability, access, coping strategies	✓	✓	✓	✓	✓	✓	✓
Child food consumption, frequency and diversity	✓	✓	✓	✓	✓	✓	✓
Shocks, time preferences, trust							
Shocks	✓						✓
Time preferences	✓				✓	✓	✓
Trust, control, agency and respect	✓						✓
Maternal and child health							
Child health	✓	✓	✓	✓	✓	✓	✓
Infant feeding	✓	✓	✓	✓	✓	✓	✓
Nutrition knowledge and practices	✓	✓	✓	✓	✓	✓	✓
Maternal health	✓	✓	✓	✓	✓	✓	✓
Access to antenatal care	✓						✓
Anthropometry	✓	✓	✓	✓	✓	✓	✓
Water and sanitation				✓			
Heart rate variability						✓	

2.2.2 Survey retention and attrition

An attempt was made to survey all households in all rounds. Table 2.5 shows our success in this regard.

Table 2.5 Number of households surveyed, by round

Survey round	Number of households interviewed	Percent of baseline
Baseline	3,667	-
Monitoring Survey 1	3,546	96.7%
Monitoring Survey 2	3,503	95.5
Monitoring Survey 3	3,483	95.0
Monitoring Survey 4	3,434	93.6
Monitoring Survey 5	3,466	94.5
Endline	3,351	91.3

Source: Baseline, endline, and monitoring surveys.

Table 2.5 shows that approximately 120 households were lost between the baseline survey and Monitoring Survey 1 (MS1). Numbers drifted slightly down over subsequent monitoring surveys to 3,466 by MS5. There was a further loss of an additional 115 households between MS5 and the endline survey. The endline survey included 91.3 percent of households interviewed at baseline. This means that our attrition rate was 8.7 percent or 4.35 percent per year. This was somewhat higher than we had expected; based on our experience with the Ethiopian Rural Household Survey (ERHS) and the Productive Safety Net Programme evaluation surveys, we had assumed an attrition rate of 2.5 percent per year. Given this, we explored several aspects of this sample attrition: its causes; and its correlates.

During each survey, the field team tracked reasons why households were not re-surveyed. In each round, we lost a certain number of households through death of the head and the subsequent disintegration of the household. This accounted for a loss of approximately 150 households over the course of the surveys. We lost 92 households through refusal to continue with the survey. These refusals were all found in Hintalo Wajirat and within Hintalo, nearly all of these refusals occurred in Ara Alem *tabia*. Finally, there was a significant amount of temporary out-migration from both Abi Adi and Hintalo; in Hintalo this had a strong temporal pattern, spiking during periods (including the endline) when there were no agricultural activities to be undertaken or in localities where the Meher harvest had been poor. This was noticeable, for example, prior to MS4 where the Meher had been poor in *tabias* in Senale, Adi Keyih, and Tsehafti.

Of particular concern is whether the attrition we observe is random or systematic and if it is systematic, over which characteristics. To assess this, we begin by correlating survey retention (the converse of attrition)—defined as being observed in both the baseline and endline—and treatment status. Results are shown in Table 2.6.

Table 2.6 Survey retention, by treatment status

	SCTPP beneficiaries	Control households	Random sample
Percentage of households in both baseline and endline	90.0%	93.2%	90.5%

Source: Baseline and endline surveys.

Table 2.7 shows that retention rates are broadly similar for SCTPP, control and randomly sampled households with retention slightly lower (i.e., attrition slightly higher) for SCTPP beneficiaries compared to control households. Next, we look at retention rates by household location, demographic characteristics and wealth.

Table 2.7 Survey retention, by treatment status

		Percentage of households in both baseline and endline
Woreda	Abi Adi	93.1%
	Hintalo Wajirat	90.5
Abi Adi, by tabia	Kebele 1	93.8
	Kebele 2	92.9
	Kebele 3	92.8
Hintalo, by tabia	Adi Keyih	92.7
	Ara Alemsigeda	85.6
	Bahr Tseba	91.0
	Gonka	91.5
	May Nebri	90.3
	Sebebera	85.9
	Senale	92.4
	Tsehafti	94.8
Sex of household head	Female	90.5
	Male	92.7
Schooling of household head	No schooling	91.5
	Any schooling	91.0
Age of household head	Age less than 60 years	91.9
	Age greater than 60 years	90.8
Household size	1 person	83.1
	2 people	90.4
	3 people	93.6
	4 people	94.3
	5 people	97.4
	6 people	96.5
	7 people	95.7
	8 or more	97.0
Housing	One room dwelling	90.7
	Dwelling has 2+ rooms	93.5
	Dwelling structure has cracks, leaks, is dilapidated or falling apart	88.6
	Dwelling in good condition	92.3

Source: Baseline and endline surveys.

Table 2.7 shows that across many characteristics, there are no major differences in the likelihood that a household was interviewed at both baseline and endline. These include schooling, age, and tabias within Abi Adi. There are small differences in retention across sex of household head (retention is higher for male headed households), whether the households' dwelling has more rooms (retention is higher when the home has two or more rooms) and is slightly higher for households with six, seven or eight or more people compared to households with three or four. There are, however, major differences in several categories. Attrition is higher (i.e., retention is lower) in two tabia within Hintalo Wajirat - Ara Alem and Sebebera—with only 85 percent of households retained by endline in these localities. Households with only one member were most likely to attrit, with only 83 percent being surveyed at both baseline and endline.

Lastly, we estimate a probit model of the correlates of retention from baseline to endline. Results are shown in Table 2.8.

Table 2.8 Correlates of retention

	Covariate	Marginal effect	Standard Error
Beneficiary status	SCTPP Beneficiary	0.0086	0.010
Household lives in	Ara Alemsigeda	-0.0861	0.041**
	Sebebera	-0.0682	0.038**
Household head	Is female	-0.0015	0.010
	Has no schooling	0.0128	0.011
	Age	0.0057	0.002**
	Age squared	-0.0001	0.000**
Number of household members	One	-0.1486	0.057**
	Two	-0.0870	0.045**
	Three	-0.0425	0.038
	Four	-0.0355	0.038
	Five	0.0150	0.028
	Six	-0.0099	0.040
	Seven	-0.0220	0.050
Housing characteristics	One room dwelling	-0.0075	0.011
	Dwelling has cracks, leaks, is dilapidated or falling apart	-0.0197	0.012*

Notes: Standard errors clustered at the kushet level. *, significant at the 10 percent level; **, significant at the 5 percent level. Constant included but not reported.

Table 2.8 reports the results of the probit in terms of marginal effects. This shows that, conditional on other covariates, a household living in Ara Alemsigeda was 8.6 percent less likely to be retained at endline than other households. Retention rises with age, but at a declining rate. Households with only one member are 14.8 percent more likely to attrit. These covariates are statistically significant at the five percent level. Once we control for these characteristics, there is no association between SCTPP beneficiary status and the likelihood that a household attrits. The correlation between household size and survey retention is not surprising. In one person households, if that person dies or moves to another household, the household is no longer in existence. Over the course of the surveys, we also developed an understanding of the higher attrition rates in Ara Alemsigeda and Sebebera.

At the beginning of each interview, the purpose of the survey was explained to respondents. It was stressed that participation was voluntary and we received their informed consent before asking questions. In general, we received generous cooperation from our respondents, who patiently answered our many questions. However, during the baseline survey, we did encounter wide-scale refusal in several *kushets* within Ara Alemsigeda. The reasons for this refusal remain somewhat unclear, although we think they are connected with poor experiences with another survey that had been fielded in these localities at some point in the past. Initial attempts to assuage respondents' concerns through the intervention of *tabia* and *kushet* administrators were unsuccessful. The regional BOLSA office then intervened by liaising with representatives of the Ethiopian Orthodox Church, who organized and held a public meeting to discuss these concerns and to reassure respondents of the value of the survey. This very helpful intervention allowed us to complete the baseline survey in these localities. Subsequently, however, many of these households changed their minds. While every effort was made to re-assure them that the results would remain confidential, and that no harm would come to them for participating, a number of households refused to participate in the first monitoring survey and over time, these refusals increased in number as well as spreading to nearby *kushets* in Sebebera.

2.2.3 Survey implementation

Prior to all surveys going to the field, training was given to individuals hired as survey enumerators. This included reviewing a paper copy of the questionnaire, undertaking mock and practice interviews with respondents in a village north of Mekelle, and pilot testing the questionnaire. Training took nine days for the baseline, 13 days for the endline and three days for the monitoring survey. Initially, the actual survey was conducted on Personal Digital Assistants (PDAs). Once the enumerators were comfortable with the paper version of the survey instrument, training turned to use of the PDAs. In later rounds, we switched from PDAs to notebook computers.

Prior to commencing the survey, discussions were held with the BOLSA office on how to organize the fieldwork, who to meet in each site, and how local guides could be identified. Following their advice, senior staff from the survey team first met *tabia* officials, notably the *tabia* chairperson and manager. The assistance of these officials during the fieldwork proved invaluable.

In each round, the survey team was divided into three sub-teams. One sub-team worked exclusively in Abi Adi while the other two focused on Hintalo Wajirat. All sub-teams included both men and women. Following advice from the community, only male enumerators worked in the most remote and inaccessible *tabia*, Gonka.

During the endline survey, a "check back" survey was conducted along with the main survey to check the quality and consistency of data collected. Four enumerators, one supervisor and one data entry personnel were recruited for the check back survey. A short questionnaire extracted from the main survey questionnaire was developed for check back survey. After receiving training for two days, the check back survey team conducted the survey on 744

randomly selected households in six of the eight *tabias* in Hintalo Wajirat and in all *kebeles* in Abi Adi.

Several factors contributed to the successful completion of the quantitative household survey. The most important of these was the high level of cooperation and assistance that the survey team received from local administrators and local communities. We perceive that the PDAs worked well, particularly in ensuring that survey questions were asked. The PDAs were programmed to automate “skip patterns” and this contributed to more smoothly flowing interviews. During the planning stage, we decided to have a relatively high ratio level of supervisors to enumerators (one to five) and we perceive that this contributed to the successful and timely completion of the survey.

All surveys encounter challenges and ours was no exception. None of these proved insurmountable, but they did pose problems that required a number of ad hoc solutions.

Our view is that the benefits of the PDAs outweighed their drawbacks but this is not to say that there were no drawbacks. The single largest challenge was keeping their batteries charged; when battery life was low, it took longer for the PDAs to record data and obviously they could not be used when the battery was dead. One solution that was adopted was to give enumerators paper copies of the questionnaire; in places where the batteries could not be easily recharged or if the battery died in the middle of an interview, information could be put on a paper copy then subsequently transferred to a PDA. Access to electricity was a particular problem in Gonka, where during the baseline survey it proved necessary to hire a camel and a mule to transport the PDAs several hours each night to the closest location, where they could be recharged before bringing them back early the next day. Remoteness also posed challenges in parts of Bahr Tseba, Senale, Tsehafti, and Adi Keyih, where it could take as much as four hours to find and interview a single household. A second problem with the PDAs was their relatively limited memory capacity. Over the course of the survey, we replaced PDAs with Asus-type notebook computers. This overcame the problems with memory but not with battery life; also, enumerators reported that the larger screen made it easier to enter data.

In some *tabias*, we had a little difficulty finding households named on the sample lists. In some cases, this was due to misspellings of names. There were instances where a child was listed rather than the caregiver (s)he lived with. We encountered several households where a beneficiary parent lived with a son or daughter but both were found on sample lists—one in beneficiary and the other in control group. In a number of *tabias*, it proved more difficult than expected to find replacements when we could not find, or could not interview, a household found in the control group. During the baseline survey, this led to some delays in completing the fieldwork.

In addition to the household survey, supervisors completed a quantitative community questionnaire in each *tabia*. Respondents included the *tabia* chairman, representatives from health clinics and schools, and government Development Agents. We ensured that respondents included both men and women and that members of the *tabia* Community Care Coalition were present.

2.3 Qualitative Fieldwork

Two rounds of qualitative fieldwork were undertaken, in August 2012 and in April 2014. The 2012 qualitative fieldwork undertaken had four objectives:

- To elicit perceptions of participants, nonparticipants, program staff, and other stakeholders of targeting criteria, procedures, and outcomes;
- To assess the performance of the SCTPP in terms of receipt of payments and grievance procedures;
- To assess how the SCTPP interfaces with informal social protection mechanisms and changes community dynamics; and
- To understand how the Community Care Coalitions (CCCs) function in terms of implementing the SCTPP as well as complementary services.

Results from this work fed into the baseline report (Berhane et al. 2012b) and were used to inform subsequent quantitative survey instruments. The 2014 qualitative fieldwork undertaken had five objectives:

- To elicit perceptions of participants, nonparticipants, program staff and other stakeholders of changes in participant lists, procedures and outcomes.
- To assess the performance of the SCTPP in terms of receipt of payments, involvement of dedicated person and grievance procedures.
- To investigate the impact of the SCTPP in terms of spending, household and children's outcomes.
- To understand how the Community Care Coalitions (CCCs) function in terms of implementing the SCTPP as well as complementary services, and what role CCCs could play after the SCTPP ends.
- To assess how the SCTPP interfaces with informal social protection mechanisms and changes in community dynamics.

In both 2012 and 2014, this work was undertaken in Abi Adi and in purposively selected *tabias* in Hintalo Wajirat: May Nebri, Senale, Bahr Tseba and in the town of Adi Gudem where the WOLSA Secretariat is based. Fieldwork took approximately three days to complete in each *tabia*. A total of 53 data collection activities were undertaken including Key Informant Interviews (KIIs), Focus Group Discussions (FGDs), Case Studies (CSs), and Participatory Rural Appraisal (PRA). Activities by *tabia* and survey round are presented in Annex 2.1. Data collected during the pilot testing of fieldwork instruments - in Are Alemisgada in 2012 and Sebebera in 2014 - has also been included in the analysis. Annex 2.2 provides the respondent identifier codes that are used to source the qualitative information presented in subsequent chapters.

In each *woreda*, KIIs were undertaken with the *woreda* officials charged with the SCTPP as well as the *woreda* social workers. KIIs were also undertaken with the *tabia* chairmen and

tabia social workers in each *tabia*. An overview of KII respondents at the *woreda* and *tabia* level is presented in Table 2.9.

Table 2.9 Number of participants in key informant interviews, by sex

<i>Tabia/Respondent category</i>	Number of participants		
	Male	Female	Total
<i>May Nebri</i>			
<i>Woreda</i> official	0	1	1
<i>Woreda</i> social worker	1	1	2
<i>Tabia</i> chairman	1	0	1
<i>Tabia</i> social worker	1	0	1
Subtotal	3	2	5
<i>Bahr Tseba</i>			
<i>Tabia</i> chairman	1	0	1
<i>Tabia</i> social worker	1	0	1
Subtotal	2	0	2
<i>Senale</i>			
<i>Tabia</i> chairman	1	0	1
<i>Tabia</i> social worker	1	0	1
Subtotal	2	0	2
<i>Abi Adi</i>			
<i>Woreda</i> official	0	1	1
<i>Woreda</i> social worker	1	0	1
<i>Tabia</i> chairman	1	0	1
<i>Tabia</i> social worker	1	0	1
Subtotal	3	1	4
Totals	10	3	13

Source: Qualitative fieldwork.

Selection of respondents for FGDs, CSs, and PRA activities was undertaken in cooperation with the *Woreda* Office of Labor and Social Affairs (WOLSA) program officer in each of the two respective *woredas*, the WOLSA social worker, and the *tabia* chairman. The WOLSA social worker accompanied the team to the *tabia* on each first day of fieldwork in a new *tabia* to ensure arrangements were made according to plan.

In both 2012 and 2014, the implementation of the qualitative fieldwork benefitted from assistance from the WOLSA offices who were very helpful in organizing the fieldwork at both *woreda* and *tabia* levels. At the *tabia* level, the support of *tabia* managers and *woreda* social workers was helpful in arranging the fieldwork. They were flexible and able to accommodate ad hoc changes in schedule. We note that the *woreda* social worker and *tabia* chairpersons and managers did not interfere when interviews and discussions were undertaken with participants, nonparticipants, CCCs, and other community members. This allowed respondents to speak freely. The community poverty profile exercise (PRA activity) proved particularly helpful in assessing exclusion and inclusion from the SCTPP.

The team encountered several challenges when completing the qualitative fieldwork. In both 2012 and 2014, the recruitment of respondents in the rural *tabia* close to the main road,

May Nebri, suffered from “tarmac bias.” It proved difficult to recruit respondents from more remote localities. In Bahr Tseba and Senaele, which are further away from the main tarmac road, most of the respondents were selected from remote communities with fieldworkers walking 20-30 minutes from the *tabia* center to conduct case studies. In both 2012 and 2014, it was not feasible to recruit participants from the remotest areas, which were as much as three-to-four hours walk from the *tabia* center.

In Senale during the 2012 survey, fieldworkers experienced some initial reluctance to cooperate due to other activities and also limited knowledge of the SCTPP. Difficult road conditions in Senale *tabia* increased travel time for fieldworkers and respondents. Cooperation with the *tabia* managers and *woreda* social workers ensured that the recruitment of respondents was not compromised. The death of Prime Minister Meles on August 20, 2012, during the fieldwork in Abi Adi resulted in changes to the fieldwork schedule in order to ensure that all survey instruments could be fielded.

At the beginning of the 2014 survey, despite extensive communication and letters sent by IDS and UNICEF prior to our arrival, there were initially some issues in obtaining permission from BoLSA for starting the fieldwork. This appeared to be the result of confusion between the fieldwork for this evaluation and a simultaneous visit by UNICEF consultants looking at the scalability of SCTPP for other regions. Fortunately, this was resolved quickly with assistance from the UNICEF office in Tigray.

We end by noting that the field testing of the Case Study questionnaires revealed that it is crucial to recruit respondents who speak freely, respond openly to questions, and are not prevented from doing so due to old age or severe disability. In cooperation with the *tabia* chairperson, *tabia* manager, and social worker, the most appropriate respondents were recruited. When the fieldworkers were faced with a reluctance to answer questions, they explained the purposes of the study and emphasized that they were not program or government officials. This was also important in ensuring that respondents felt comfortable in speaking openly.

2.4 Annex: Summary of Qualitative Fieldwork Tables

Table 2.10 Summary of qualitative fieldwork, 2012

Respondents	Mekelle	Abi Adi	Hintalo – Wajirat town (Adi Gudem)	Hintalo – Wajirat I (May Nebri)	Hintalo-Wajirat II (Senale)	Hintalo-Wajirat III (Bahr Tseba)	Method	Total
Program staff	BOLSA secretariat	WOLSA secretariat, <i>tabia</i> chairperson	WOLSA secretariat	<i>Tabia</i> chairperson	<i>Tabia</i> chairperson	<i>Tabia</i> chairperson	Key Informant Interviews	7
Community members		Community group		Community group	Community group	Community group	Participatory Rural Appraisal	4
Social workers		WOLSA social worker, Community social worker	WOLSA social worker	Community social worker	Community social worker	Community social worker	Key Informant Interviews	6
Community Care Coalitions (CCCs)		Community Care Coalitions		Community Care Coalitions	Community Care Coalitions	Community Care Coalitions	Focus Group Discussions	4
SCTPP participants		Participant group (2)		Participant group (2)	Participant group (2)	Participant group (2)	Focus Group Discussions	8
SCTPP nonparticipants		Control group, Comparison group		Control group, Comparison group	Control group, Comparison group	Control group, Comparison group	Focus Group Discussions	8
SCTPP participant household		Participant households		Participant households	Participant households	Participant households	Case Studies	8
SCTPP nonparticipant household		Control group		Control group	Control group	Control group	Case Studies	8
Total	1	14	2	12	12	12		53

Table 2.11 Summary of qualitative fieldwork, 2014

Interview guides	Respondents	Hintalo – Wajirat town (Adi Gudem)						Method	Total
		Mekele	Abi Adi	Hintalo –Wajirat I (May Nebri)	Hintalo-Wajirat II (Seneale)	Hintalo-Wajirat III (Bahri Tseba)			
1	Program staff	BOLSA secretariat	WOLSA secretariat , tabia chairperson	WOLSA secretariat	tabia chairperson	tabia chairperson	tabia chairperson	KII	7
2	Social workers		WOLSA social worker, Community social worker	WOLSA social worker	Community social worker	Community social worker	Community social worker	KII	6
3	Community Care Coalitions (CCCs)*		CCC		CCC	CCC	CCC	FGD	4
4	SCTPP participants**		Participant group (1xM, 1xF)		Participant group (1xM, 1xF)	Participant group (1xM, 1xF)	Participant group (1xM, 1xF)	FGD	8
	elderly SCTPP participants		Participant group (F)		Participant group (F)	Participant group (M)	Participant group (M)	FGD	4
5	SCTPP nonparticipants**		Control group (M), Comparison group (F)		Control group (F), Comparison group (M)	Control group (M), Comparison group (F)	Control group (F), Comparison group (M)	FGD	8
6	SCTPP participant household		Participant households (1xM, 1xF)		Participant households (1xM, 1xF)	Participant households (1xM, 1xF)	Participant households (1xM, 1xF)	CS	8
7	SCTPP nonparticipant household		Control group (1xM, 1xF)		Control group (1xM, 1xF)	Control group (1xM, 1xF)	Control group (1xM, 1xF)	CS	8
	Total	1	14	2	12	12	12		53

Notes: Control = eligible but not included in program. Comparison = better off and not eligible. * FGD with CCC should not include social worker or tabia manager. ** FGD with participants or nonparticipants should not include a CCC member.

2.5 Annex: Respondent Identifier Codes

Tabias

AA	Abi Adi
BT	Bahr Tseba
MN	May Nebri
S	Senale
Pilot	Sebebera
Are	Ara Alemsigeda
M	Mekelle

Respondents

RO	Regional Official
WO	<i>Woreda</i> Official
WSW	<i>Woreda</i> Social Worker
TO	<i>Tabia</i> Official (chairperson)
TSW	<i>Tabia</i> Social Worker
CCC	Community Care Coalition
PF	Participants Female
PM	Participants Male
CnF	Control Female
CnFM	Control Female Male (mixed)
CmM	Comparison Male
CmFM	Comparison Female Male (mixed)
CPF	Case Study Participant Female
CPM	Case Study Participant Male
CCnF	Case Study Control Female
CCnM	Case Study Control Male
CCmF	Case Study Comparison Female
CCmM	Case Study Comparison Male

Note that in this report, unless otherwise stated, quotations are taken from information provided during the 2014 (endline) qualitative fieldwork.

3. Quantitative Methods for evaluating the impact of the SCTPP

3.1 Overview

A major objective of our study is to track changes in specified measures of the wellbeing of SCTPP beneficiaries. Are SCTPP households more food secure in 2014 than they were in 2012? Are their children more likely to attend school? A second objective is to understand the contribution of the SCTPP to these changes. This is challenging. For example, in addition to the role played by the SCTPP, education-related outcomes could improve because of growth in household incomes, better access to schools, changes in parental attitudes towards schooling and so on. In this chapter, we outline the statistical methods we use to isolate the causal impacts of the SCTPP. Because some of this material is fairly technical, we adopt the following approach. In section 3.2, we provide a nontechnical overview which we hope is accessible to a wide set of readers. In section 3.3, we complement this with a more technical presentation aimed at readers more comfortable with advanced econometric techniques.

3.2 Quantitative methods for impact evaluation: A nontechnical overview of the ideal

The fundamental problem for a quantitative impact evaluation of a program like the SCTPP is that we only observe what happens to beneficiaries who are receiving benefits; we do not observe what would happen to the same households if they did not receive benefits. This is called the problem of the counterfactual. Our ability to make statements about the causal impact of the SCTPP rests on how well we can address this problem.

At the core of the ideal approach to impact evaluation is the use of the longitudinal household and individual data such as that described in chapter two applying “difference-in-differences” or “double difference” methods. These data are collected from households receiving SCTPP transfers and those that do not (“with the program” / “without the program”). To see why both “before/after” and “with/without” data are necessary, consider the following hypothetical situation. Suppose our evaluation only collected data from beneficiaries. Suppose that in between the first survey and the follow-up, some adverse event occurred (such as a drought) which makes these households worse off. In such circumstances, beneficiaries may be worse off—the benefits of the program being more than offset by the damage inflicted by the drought. These effects would show up in the difference over time in addition to the effects attributable to the program. More generally, restricting the evaluation to only “before/after” comparisons makes it impossible to separate program impacts from the influence of other events that affect beneficiary households. To ensure that our evaluation is not adversely affected by such a possibility, it is necessary to know what these indicators would have looked like had the program not been implemented: we need a second dimension to our evaluation design which includes data on households “with” and “without” the program.

To see how the double difference method works, consider Table 3.1 (Maluccio and Flores 2005). The columns distinguish between groups with and without the program—that is, households who were receiving SCTPP transfers and those that were not. We denote groups

receiving (with) the program Group *I* (*I* for intervention) and those not receiving (without) the program as Group *C* (*C* for control group). The rows distinguish between before and after the program (denoted by subscripts 0 and 1). Before the program begins, the difference in outcomes between the two groups is given by $(I_0 - C_0)$. Observing households sometime after the program has begun gives us the difference between the groups as $(I_1 - C_1)$. The double-difference estimate is obtained by subtracting the preexisting differences between the groups, $(I_0 - C_0)$, from the difference after the program has been implemented, $(I_1 - C_1)$.

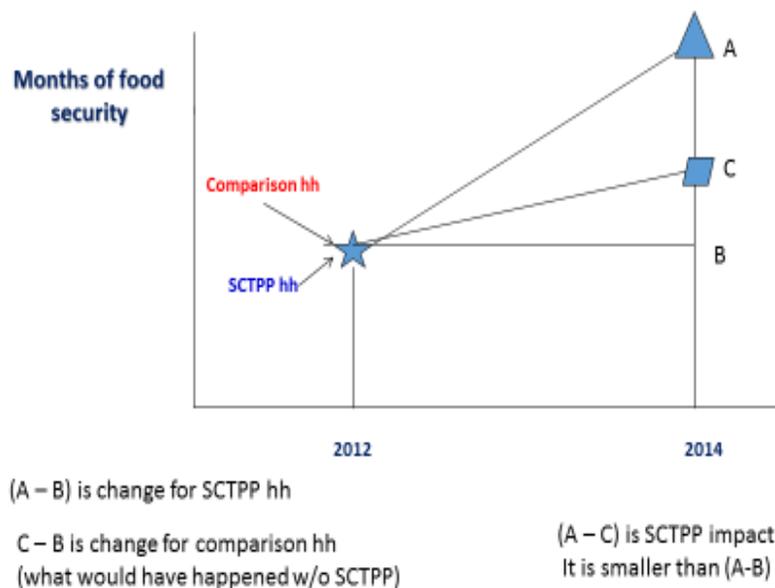
Table 3.1 Calculation of the double-difference estimate of average program effect

Survey round	Intervention group (Group <i>I</i>)	Control group (Group <i>C</i>)	Difference across groups
Follow-up	I_1	C_1	$I_1 - C_1$
Baseline	I_0	C_0	$I_0 - C_0$
Difference across time	$I_1 - I_0$	$C_1 - C_0$	Double-difference $(I_1 - C_1) - (I_0 - C_0)$

Another way of looking at this idea is through a diagram. Consider Figure 3.1.

We begin with the star shape. This gives the number of months of household food security for SCTPP households in 2012. The blue triangle shows household food security for SCTPP households in 2012 and so the change in food security is the difference between “A” (endline food security) and “B” (baseline food security). In this hypothetical example, the difference between B and A tells us how much food security has improved for SCTPP beneficiaries. But just because their food security has improved does not mean that the SCTPP caused food security to improve. Consider a second group of households that we will call comparison households. In 2012, they too have a “B” level of food security. At endline, in 2014, their food security has improved to “C” (the blue trapezoid). The difference between C and B, the change for these comparison households, tells us that some of the improvement we observe in SCTPP households would have occurred even without the SCTPP being in place. The impact of the SCTPP is the smaller difference, A minus C, or the difference between A and B (what happens to SCTPP beneficiaries) and the difference between C and B (what happens to comparable non-beneficiaries, hence the double difference).

Figure 3.1 Using difference-in-differences to assess the hypothetical impact of the SCTPP on household food security



1

3.3 Quantitative methods for impact evaluation: inverse-probability-weighted regression-adjusted estimators

To this point, our discussion has been vague about these comparison or control households. These are households who are similar to beneficiaries but who do not receive benefits. Identifying them is not straightforward. To do this, we must address the problem of *selection bias*. *Selection bias* arises when beneficiaries differ in some systematic way from non-beneficiaries. For example, in chapter five where we discuss the targeting of the SCTPP, we note that beneficiary households are more likely to contain a disabled person than a household selected at random (Table 5.5). One could imagine that the presence of a disabled burden creates additional time demands on other household members. In households with a disabled member, female children may find themselves having to do additional domestic tasks which adversely affects their schooling. A straight comparison between girls' schooling outcomes between an SCTPP beneficiary and non-beneficiary will be confounded by these other differences in household characteristics.

In the project inception report (Berhane et al. 2012a), we discussed several methods for addressing the selection bias problem: matching; and regression discontinuity design (RDD). However, RDD proved to be infeasible. RDD requires a ranked list of beneficiaries and non-beneficiaries and knowledge of how the cut-off point distinguishing these groups. We were able

to obtain the ranked list of beneficiaries but in most communities, ranked lists of eligible non-beneficiaries were not constructed and so it was not possible to use RDD. Matching methods of program evaluation construct a comparison group by “matching” treatment households to comparison group households based on observable characteristics. The impact of the program is then estimated as the average difference in the outcomes for each treatment household from a weighted average of outcomes in each similar comparison group household from the matched sample.

Matching estimators requires access to data on households that have similar characteristics to beneficiaries, but who do not receive program benefits. As explained in chapter two, one such group are the “control group”; households that were originally placed on the list of prospective beneficiaries but who ultimately—because of budget constraints—were not included in the SCTPP. We know these households were similar to beneficiaries in one important way—they were considered sufficiently poor to be eligible for SCTPP.

We ensured that the surveys we implemented could support the use of matching methods. Matching methods provide reliable, low-bias estimates of program impact under the following conditions: (i) the same data source is used for participants and nonparticipants, (ii) the data include meaningful *X* variables capable of identifying program participation and outcomes, and (iii) participants and nonparticipants have access to the same markets (Heckman, Ichimura, and Todd 1997; 1998). Because the same survey instrument would be applied everywhere, criterion (i) will be satisfied. The May 2012 survey was designed to include a rich set of variables that will identify program participation and outcomes related to food security, nutrition, education and other outcomes of interest as required by criterion (ii). Criterion (iii) was met by sampling treatment and control households within Abi Adi and within Hintalo Wajerat. Matching can be accomplished in several ways. The best known is propensity score matching (PSM). PSM uses a fully specified probit regression to estimate the treatment model, or the process by which respondents are selected into the treatment or comparison groups. It then compares each treatment observation to only one control observation in computing the individual treatment effect. PSM uses a fully nonparametric technique to estimate the outcome model. The individual treatment effect is calculated as a simple difference between the outcome for the treatment unit and its nearest control unit; this estimate does not control for other variables that may also affect the outcome variable.⁵

In preliminary work, we estimated program impacts using PSM. However, the results reported in this document are based on a matching method that improves on PSM, Inverse probability weighted regression adjustment (IPWRA). IPWRA improves on PSM in two ways. First, the outcome model in IPWRA is fully specified and can include controls for the

⁵ A second method is nearest neighbor matching (see Abadie and Imbens 2006). Differences between NNM and PSM derive primarily from the rule used to select comparable non-beneficiaries and the weights used to construct the difference in weighted average outcomes. NNM, a form of “covariate matching,” matches beneficiaries to non-beneficiaries based directly on the observable characteristics. Each beneficiary is matched to the group of non-beneficiaries with the smallest average difference in pre-program characteristics, where this difference is determined using a multi-dimensional metric across all control variables.

observations concurrent or baseline characteristics. For example, suppose we were interested in the effect of the SCTPP on children's schooling. The IPWRA allows the researcher to explicitly control for whether the child in the outcome model is male or female; because PSM only looks at the difference between each treated unit and its nearest control unit as measured by the propensity score, it does not explicitly control for child's gender unless child's gender is included in the treatment model. The improvement in efficiency due to the inclusion of these control variables in the IPWRA over PSM is analogous to the improvement in precision one finds when including additional covariates in the evaluation of a randomized control trial: while comparing the difference between outcomes in the randomly selected treatment and control groups is unbiased, including covariates in addition to the treatment status absorbs variance and thus allows a more precise estimate of the treatment effect. A further benefit is that it is no longer necessary to ensure balance across the baseline covariates that appear in the probit used to estimate the propensity scores as these also appear in the IPWRA. Second, PSM compares each treatment observation to only one (or a few) control observations that have a similar likelihood of being treated. In essence, PSM puts a weight of 1 on the nearest control observation and a weight of 0 on all other observations. IPWRA implicitly compares every unit to every other, while placing higher weights on observations that have a similar likelihood of being in the treatment or comparison group and lower weights on observations that are dissimilar. Because more observations are included in the model that compares a treatment unit to its hypothetical counterfactual, statistical precision is increased.

In addition to gains in efficiency, the IPWRA has one very attractive feature in comparison to PSM: it is doubly robust. Consider first PSM. If the treatment model is misspecified (i.e., the model is missing a variable or the functional form is incorrect), PSM will provide inconsistent estimates. By contrast, if the treatment model of the IPWRA is misspecified, its estimates of the treatment effect will still be consistent so long as the outcome model is not also misspecified. The reverse is also true: if the treatment model is appropriately specified but the outcome model is misspecified, IPWRA still delivers consistent estimates. While we are confident in all of our specifications, we appreciate this double robust property as a fall back (Imbens and Wooldridge 2009).

Inverse probability weighted regression adjustment is accomplished in three steps. First, the probability that an observation is treated is estimated using a treatment model, usually with a probit or logit regression. The predicted probabilities are used to re-weight the sample by the inverse of the probability that each observation is in the treatment or control group. Second, the expected outcome is estimated for each observation using a weighted outcome model that includes both the observable characteristics used to estimate the treatment model and additional information. For example, if the outcome of interest is child's BMI, the outcome model may include the child's age in addition to the household demographic characteristics that were included in the treatment model. Baseline data on outcomes can also be used in this way to more precisely estimate treatment effects at endline. The outcome model is used to predict the expected outcome for each observation twice: once from the perspective (weights) of the probability of being treated and again from the perspective (weights) of the probability of being in the control group. Finally, the average outcome for treatment and control

observations is calculated. The difference between these two averages is the estimated treatment effect.

To see how IPWRA works, consider a very simple model of household food security (Y) where this outcome is a function of household wealth (W). We have two groups of households, SCTPP beneficiaries ($B=1$) and non-beneficiaries ($B=0$). We estimate these models of food security for the two groups separately.

$$Y_{B=1} = \alpha_{B=1} + \beta_{B=1} W + \varepsilon_{B=1} \quad (1)$$

and

$$Y_{B=0} = \alpha_{B=0} + \beta_{B=0} W + \varepsilon_{B=0} \quad (2)$$

We could estimate (1) and (2) separately and calculate predicted values for $Y_{B=0}$ and $Y_{B=1}$. Having done so, it would be tempting to take the difference in these predicted values and call that the impact of the SCTPP. The problem of course is that beneficiaries are not randomly selected; there is correlation for example between $\varepsilon_{B=1}$ and $\alpha_{B=1}$. This can be resolved by weighting these regressions, see Imbens and Wooldridge (2009, 38-39) where the weights are derived from the inverse propensity scores. This yields the average treatment effects on the treated (ATET).

For the SCTPP, we implement this approach as follows. We define an SCTPP beneficiary as a household who at the time of the first survey in May 2012, identified itself as an SCTPP beneficiary and confirmed that it had been receiving SCTPP payments. Our comparison households are a subset of the control households described in chapter two. Specifically, they are households who appeared on the long list of prospective beneficiaries but were not selected for inclusion in the SCTPP. In addition, they were not receiving benefits from other programs such as the PSNP or government pensions. Restricting our sample to these two groups, we use a logit model to predict program participation. Based on the targeting criteria for the SCTPP, along with our assessment of how these have been implemented (see chapter five), the following types of covariates (measured as of May 2011) are used as predictors: Household demographic characteristics: Number of household members; Household dependents (number of members under two years of age, under five years of age, under ten years of age, under 18 years of age; number of members 61 years of age or older); Household access to labor: number of working members; number of disabled persons; Household head characteristics: age, sex, schooling; and Household wealth: livestock holdings; quality of housing. Results for these logits, estimated separately for Abi Adi and Hintalo Wajirat are shown in Table 3.2.

Table 3.2 Logit estimates of correlates of program participation, by *woreda*

Covariates	Abi Adi		Hintalo Wajirat	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Number of household members	0.843	0.211**	0.077	0.142
Number of members < 2y	-0.457	0.300	-0.177	0.300
Number of members < 5y	0.275	0.243	0.103	0.201
Number of members < 10y	-0.379	0.167**	0.223	0.137
Number of members < 18y	-0.850	0.228**	-0.080	0.155
Number of members > 61y	0.039	0.245	0.121	0.160
Number of members unemployed	0.321	0.401	-0.011	0.319
Number of able-bodied members	-0.726	0.195**	-0.094	0.136
Household head is female	0.674	0.213**	0.935	0.146
Household head is a child	2.827	1.024**	-2.678	1.065**
Age of household head	0.012	0.007	0.012	0.005**
Household head has no schooling	-0.116	0.169	-0.192	0.172
Index of livestock holdings	-3.329	2.057	-3.605	0.846**
Number of working members	-0.136	0.130	-0.059	0.085
Number of disabled members	0.037	0.247	0.362	0.177**
Dwelling has only one room	0.660	0.204**	0.438	0.136**
Dwelling structure has cracks, leaks, is dilapidated or falling apart	0.574	0.165**	0.174	0.132
Constant	-1.852	0.526**	-1.549	0.374**

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level.

A requirement for the use of inverse propensity scores is that there is common support. That is, the probability of being a participant (nonparticipant) is both non-zero and less than one for all observations. One way of assessing this is to plot the propensity scores for both participants and nonparticipants and see if the distributions of these overlap. Figures 3.2a and 3.2b show common support for Abi Adi and Hintalo Wajirat respectively. Common support is satisfied in both sub-samples.

Figure 3.2a Density functions showing common support, Abi Adi

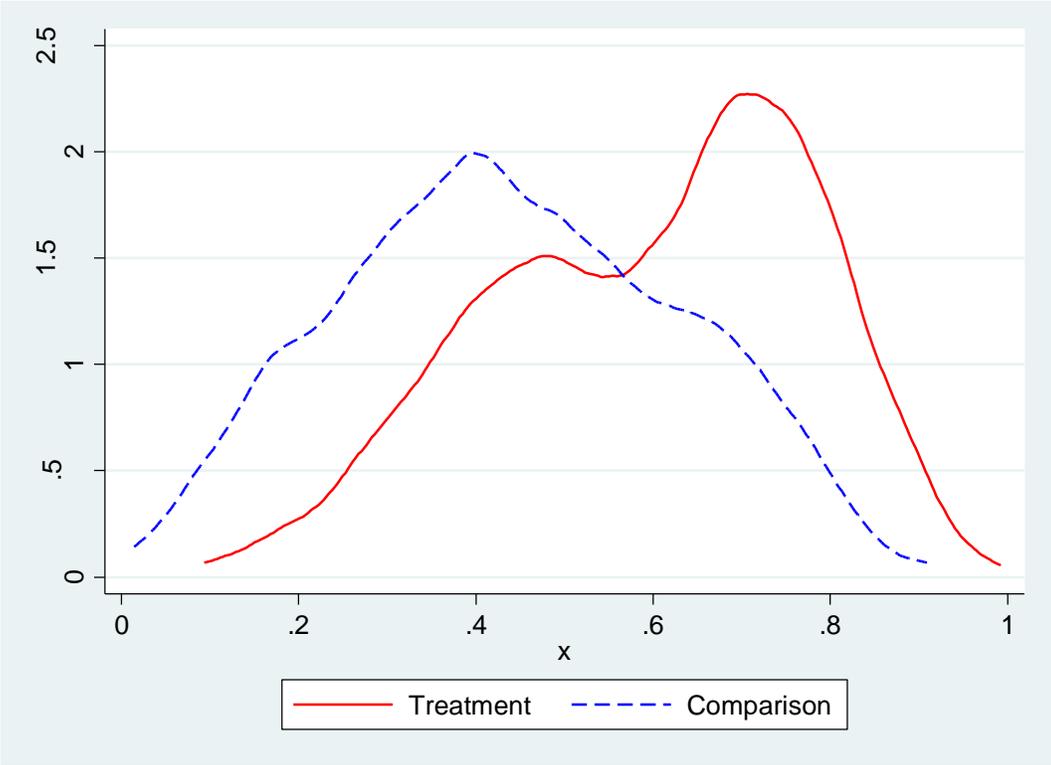
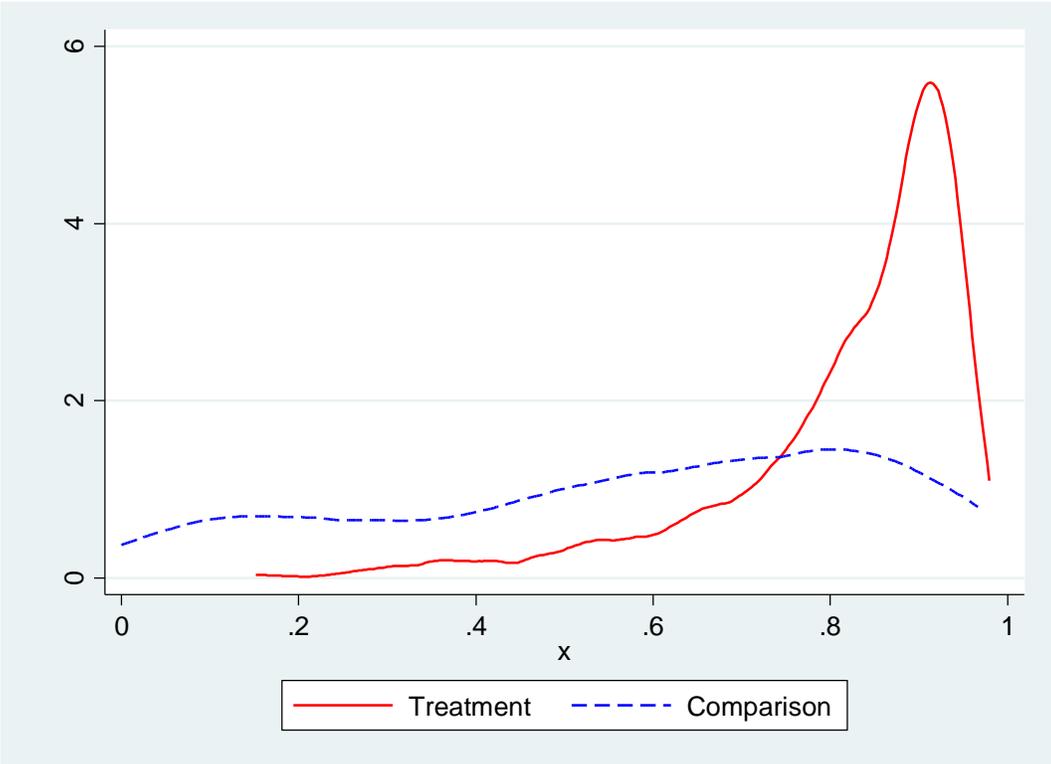


Figure 3.2b Density functions showing common support, Hintalo Wajirat



3.4 Caveats and limitations to our approach

The double difference is our preferred approach. However, in the case of the SCTPP evaluation, there is a complication. The first survey (fielded in May 2012) occurred eight months after the SCTPP had started. This occurred because the contract for the impact evaluation was not awarded until after the SCTPP had started. For a number of outcomes, this is problematic. Suppose the SCTPP had an immediate effect on the *level* of food security but not the *trend*. If this is the case, implementing the double difference (given that the first survey was fielded after the start of the program) will show no impact. So in some chapters, we will also estimate what are called single difference models, comparing outcomes between beneficiary and comparison households at single points in time (i.e., looking at impact in May 2012 or in May 2014). As an example, a single difference estimate for May 2014 (calculated using IPWRA), as shown in Figure 3.1, is the difference between A and C. A single difference estimator assumes that there are no permanent average differences in outcomes between treatment and control groups. This is a strong and untestable assumption. Fortunately, for some outcomes we can recover pre-intervention outcomes and thus use double-difference estimates. Based on our experience with other evaluations, we included a series of recall questions on key outcomes (such as agricultural investments, livestock holdings, some dimensions of food security) in the May-June 2012 survey. The recall period is 12 months (i.e., May 2011) which precedes the initiation of payments and those allowing us to recover the “before/after” design. The endline survey was fielded in May-June 2014 and so our double difference estimates for outcomes where we have recall data will be the difference in changes in outcomes between 2011 and 2014 for treatment households and the changes in outcomes between 2011 and 2014 for control households. For other outcomes where it was not be feasible to obtain recall data, children’s dietary diversity being an example, we can use data collected during our monitoring surveys. By collecting the same information and several points in time, we will be able to assess whether seasonal changes in these outcomes differ across treatment and control households. For example, we can examine whether the change in children’s diets during the peak of the hungry season (May to September) is smaller in treatment households than in control households.

As with any method of estimating treatment effects, several assumptions are needed to justify the use of IPWRA. First, the conditional independence assumption must hold for the estimation of average treatment effects. This assumption states that no unobservable variable affects both the likelihood of treatment and the outcome of interest, after conditioning on covariates. Because the IPWRA includes more covariates (in the outcome model) than does PSM (which only includes the covariates in the treatment model), this assumption is more likely to hold with IPWRA than with PSM. Second, the i.i.d. assumption must hold. This assumption means that the potential outcomes and treatment status of each individual are independent of the potential outcomes and treatment status of all other individuals in the sample. This assumption also must hold for both IPWRA and PSM. Third, the overlap assumption must hold. This assumption states that every observation in the sample must have a positive estimated probability of being treated. This assumption must hold for both IPWRA and PSM, and because the treatment model of IPWRA and PSM are often estimated using the same method (e.g.

probit or logit models) the assumption is theoretically equivalent for both methods. Note that the statistical package we employ for our work (STATA 13) automatically restricts to observations in the common support. The plots of the estimated likelihood of treatment by location and treatment status shown above indicate that in both Abi Adi and in Hintalo Wajirrat, we have common support.

Lastly, we re-iterate a point made in chapter two. We have statistical power to detect the following impacts: a one month reduction in the food gap; a ten percent increase in livestock holdings; a 10 percentage point increase in the use of fertilizer; a ten percentage point increase in the use of credit; and a 50 birr increase in net transfers to other households. We were constrained in the sample sizes we could collect by the number of beneficiaries in Abi Adi and the budget available for data collection. We investigate a broader range of outcomes with these but caveat that the absence of detectable impact does not necessarily mean that no impact exists, rather that we cannot detect impact with the sample available to us.

3.5 Summary

In this chapter, we have outlined the methods we have used to estimate impact. Key points are the following:

- Our treatment group are SCTPP beneficiaries. Our comparison households are households that appear in the control sample and who are not receiving benefits from other programs.
- As much as possible, we use double-difference impact estimates.
- We use inverse probability weighted regression adjustment (IPWRA) estimators to generate impact. This addresses the problems of nonrandom selection into the program as well as the problem of the counterfactual. As discussed above, this is a more robust method than the more commonly used propensity score matching.
- There are limitations to the methods we use. The most serious are that: for some outcomes we can only estimate single difference models; and we may have insufficient statistical power to discern impact.

4. Community Care Coalitions

4.1 Introduction

A novel feature of the SCTPP is the creation of Community Care Coalitions (CCCs), community-led groups that operate at the *tabia* level and serve as a support mechanism for the vulnerable populations in the community. CCCs are hybrid organizations with representation from both government and civil society organizations. Program staff at regional and *woreda* level indicated that across Tigray, the majority of the CCCs were established in 2010 and 2011, just prior to the start of the SCTPP.

CCCs have three main tasks associated with the implementation of the SCTPP. They play a critical role in beneficiary identification and selection, including interviewing potential program participants and leading community-level meetings where selection is reviewed. Together with the *woreda* social welfare workers, CCC members are responsible for informing beneficiaries about where and when to collect payments. CCC members are also present at the payment point to assist SCTPP program staff and DECSI,⁶ monitor the process and solve problems that may arise. In addition to providing direct support to program implementation, CCCs are intended to play a prominent role in the provision of complementary social services in cooperation with social welfare workers, something considered a core component of the SCTPP: “[. . .] CCCs and the *woreda* social welfare worker will be the front-line responders responsible for supporting and facilitating access to basic services. They will also act as a referral mechanism should the participants require additional support services” (Tigray 2011a 14).

CCCs were the subject of extensive review in the baseline report (Berhane et al. 2012b). This showed that all localities had Community Care Coalitions. All levels—regional, *woreda*, *tabia*, and the CCCs themselves—had a good understanding of their roles. Their membership reflected what was envisaged in the SCTPP operations manuals, including actively mobilizing additional resources for poor people in Abi Adi and Hintalo Wajirat. All these results suggested that Community Care Coalitions (CCCs) are functioning well. However, there were indications that participants in the CCCs, particularly by nongovernment actors, may have been close to their limit in terms of how much time they could devote to CCC activities. While the level of resource mobilization was impressive, this had only a limited effect in terms of the numbers of additional poor households that could receive assistance in these poor communities and as such these clearly could not substitute for interventions such as the SCTPP.

Given these positive findings in the baseline report, in this chapter we focus on two broad sets of questions: Has the impressive performance of the CCC’s been maintained; and have the concerns raised in the earlier report become more or less prominent. To address these questions, we examine the operation of the CCCs from a variety of perspectives. We begin with information gleaned at the regional, *woreda*, and *tabia* levels. We assess whether their

⁶ DECSI is the microfinance institution contracted to deliver payments.

composition is consistent with what is laid out in the SCTPP operational manuals. We consider the perspectives from CCCs themselves, including their success in resource mobilization, and also the perceptions of households in both Abi Adi and Hintalo Wajirat.

4.2 Community Care Coalitions: Membership and Functions

We begin by updating information collected in 2012 on membership in the CCCs. This is reported in Table 4.1

Table 4.1 Membership in Community Care Coalitions, by year and *tabia*

<i>Tabia</i>	2012						Number of		
	Is there a member of or representative from					Males	Females	Total	
	<i>Tabia</i> cabinet	Elders	Youth	Women's groups	Development agent				
Tsehafiti	Y	Y	Y	Y	Y	12	3	15	
Sebebera	Y	Y	Y	Y	Y	13	4	17	
Gonka	Y	Y	Y	Y	Y	10	5	15	
Senale	Y	N	Y	Y	Y	10	3	13	
May Nebri	Y	Y	Y	Y	Y	9	3	12	
Ara Alemsigeda	Y	Y	Y	Y	Y	19	5	24	
Adi Keyih	Y	Y	Y	Y	Y	15	3	18	
Bahr Tseba	Y	N	Y	Y	Y	10	5	15	
Abi Adi, <i>Kebele</i> 1	Y	Y	Y	Y	N	16	8	24	
Abi Adi, <i>Kebele</i> 2	Y	Y	Y	Y	Y	21	3	24	
Abi Adi, <i>Kebele</i> 3	Y	Y	Y	Y	N	13	7	20	
Total	11	9	11	11	9	148	49	197	
	2014								
Tsehafiti	Y	Y	Y	Y	Y	11	4	15	
Sebebera	Y	Y	Y	Y	Y	6	2	8	
Gonka	Y	N	N	Y	N	9	2	11	
Senale	Y	Y	N	N	N	8	1	9	
May Nebri	Y	Y	Y	Y	Y	16	5	21	
Ara Alemsigeda	Y	Y	N	Y	Y	6	4	10	
Adi Keyih	Y	Y	Y	Y	Y	20	1	21	
Bahr Tseba	Y	Y	N	Y	Y	6	1	7	
Abi Adi, <i>Kebele</i> 1	Y	Y	Y	Y	N	17	7	24	
Abi Adi, <i>Kebele</i> 2	Y	N	Y	Y	Y	22	29	51	
Abi Adi, <i>Kebele</i> 3	Y	Y	Y	Y	Y	17	7	24	
Total	11	9	7	10	8	138	63	201	

Source: Tabia quantitative survey.

Although there is turnover, generally, the number and types of members have remained unchanged. All CCCs continue to include a representative from the *tabia* cabinet and most have representatives from elders, youth and women's groups. Average size of a CCC remained unchanged at around 18 members, though this masks a large increase in the size of the CCC in one *kebele* in Abi Adi and reductions in Sebebera, Ara Alemsigeda and Bahr Tseba. While the number of women appears to rise, this is wholly due to an increase, from three to 29 members in one *kebele* in Abi Adi. In the majority of *tabia*, the number of female members fell and in three (Senale, Adi Keyih and Bahr Tseba), there was only one female member left by 2014.

As part of both the qualitative and quantitative fieldwork, we assessed whether the functions of the CCCs had changed over time. Results from key informant interviews and focus group discussions indicated no changes to CCC roles or tasks had occurred since the start of SCTPP.

There was no change in the main tasks and responsibilities of the CCCs. Because, there is a CCC implementation guideline manual and they work accordingly in an organized manner [WO/AA].

No changes to the tasks and responsibilities of the CCC [TSW/BT].

There is no change in the task and responsibilities of CCC [CCC #4/S].

Informants reported that these tasks still focused on community resource mobilization, supporting the poor, providing social development advice, targeting and replacing SCTPP participants, and providing follow up and assistance with payments for SCTPP participants. These reported tasks are in line with the original tasks outlined in the baseline report (beneficiary identification and selection, assisting with the payment process, providing complementary social services), although greater emphasis was now being given to resource mobilization. Resource mobilization was mentioned in all CCC FGDs and all officials and social worker interviews at both tabia and woreda levels. Officials at tabia and woreda levels all agreed that the CCCs' appropriate role in the community should be to strengthen these tasks.

In answer to the question, "What are the main tasks and responsibilities of the CCC in general, and in terms of the SCTPP?" respondents said:

Target SCTPP participants according to the criteria, follow up with participants' situation and cash utilization, make changes in case of death of single household participants, mobilise resources from the community and support needy households [CCC #3/AA].

To mobilize resources to help poor people. To make people help each other. To convince those who are engaged in prostitution to leave the job. Help students not to drop out of school. Follow the beneficiaries during the pay period. Replace those beneficiaries who are dead or migrated [TSW/AA].

Mobilize resources from their communities and distribute to the needy households within the communities. Improve communities' awareness in helping each other instead of waiting for external support. Targeting of participants in the SCTPP, following up of payments and beneficiaries. Examine complaints in the SCTPP and respond accordingly, replacing in case of death and migration of SCTPP participants [WO/MN].

Resource mobilization from community and support needy households. Make changes in case of death of single HH participants. Mobilize community to assist

old, sick and disable households in labor and oxen. Follow up of SCTPP participants. Ensure designators have properly receive their cash [CCC/S].

CCCs also reported that their work with the SCTPP strengthened social cooperation through institutionalized, transparent support mechanisms that prioritise the neediest and encourage household interaction.

Yes, the CCC has established a transparent process and help to strengthen social cooperation between households [CCC #2/AA].

Yes, because the CCC screens who is who and prioritizes the most needy households accordingly and as a result there is no major conflict among households [CCC #4/S].

We triangulated these responses with information from the community questionnaire. Respondents were asked to list the roles and functions of the CCCs. Table 4.2 shows their replies; these are consistent with the information provided by the qualitative fieldwork.

Table 4.2 Functions of Community Care Coalitions, by *tabia*

<i>Tabia</i>	Revenue mobilization	Awareness creation	Identification and prioritization of poor households to be supported by transfer programs	Advice or guidance on social matters	Assisting beneficiaries with collection of payments
Tsehafiti	Y	Y	Y	N	N
Sebebera	Y	Y	Y	N	Y
Gonka	Y	N	Y	Y	Y
Senale	Y	Y	Y	N	Y
May Nebri	Y	Y	Y	N	Y
Ara Alemsigeda	Y	Y	Y	N	N
Adi Keyih	Y	Y	Y	N	N
Bahr Tseba	Y	Y	Y	Y	N
Abi Adi, Kebele 1	Y	Y	Y	Y	N
Abi Adi, Kebele 2	Y	Y	Y	Y	N
Abi Adi, Kebele3	Y	Y	Y	N	Y

Source: Tabia quantitative survey.

In focus group and key informant discussions, respondents also provided examples of how CCCs provided complementary social services. These included support for children’s schooling, cooperation with health extension workers and child protection committees to ensure that these services are provided.

If a child does not go to school and the parent wants to beat that child for not going to school, we advise them about not beating the child and tell them the importance of going to school [CCC #5/Pilot].

We follow up children from SCTPP participants if they are attending school. For example, sometimes the CCC asks parents to bring an official letter from the school if their children are in school [CCC #7/S].

We advise households to use the existing health facility in the Tabia. In addition, we give free access to 65 households to treat themselves at Adigudem and Mekelle. So we choose poor households for this privilege [CCC #1/MN].

There is a child protection committee at Tabia level and we work together with the committee [CCC #1/BT].

As part of the household surveys in 2012 and 2014, respondents were asked if they were aware of the existence of CCC's. There is some variation in this over time and space but apart from the fact that SCTPP beneficiaries had greater awareness than non-beneficiaries, there are no obvious patterns in these data (Table 4.3).

Table 4.3 Knowledge of existence of CCC, by location and participation in the SCTPP

<i>Woreda</i>	<i>Tabia</i>	Baseline (May 2012)		
		SCTPP beneficiary	Eligible, not-selected	Non-eligible
			(percent)	
Abi Adi		53.8	42.0	40.2
Hintalo Wajirat		59.8	35.8	38.7
	Tsehafiti	71.8	55.1	37.1
	Sebebera	39.7	11.7	13.9
	Gonka	62.0	36.7	45.5
	Senale	47.6	31.3	50.0
	May Nebri	80.2	54.3	60.9
	Ara Alemsigeda	48.1	16.7	20.0
	Adi Keyih	65.9	47.3	46.5
	Bahr Tseba	19.9	14.9	12.5
			Endline (May 2014)	
			(percent)	
Abi Adi		45.7	42.2	34.1
Hintalo Wajirat		53.4	46.1	36.1
	Tsehafiti	53.1	42.4	48.6
	Sebebera	56.2	49.5	36.1
	Gonka	65.6	54.7	59.1
	Senale	59.4	52.2	32.4
	May Nebri	49.4	39.0	30.4
	Ara Alemsigeda	52.5	52.1	26.0
	Adi Keyih	48.9	36.0	34.9
	Bahr Tseba	58.9	55.3	45.8

Source: Household survey.

Notes: Data are weighted so that results for SCTPP beneficiaries are representative of program participants. Hintalo Wajirat averages excludes Bahr Tseba as the SCTPP only began operating after the baseline survey was complete.

Consistent with these data, members of SCTPP participant, control group and comparison focus groups had less detailed opinions of the CCCs' roles; they generally reported only that CCCs supported poor households in the community without specifically outlining the

nature of that support. One control group respondent also mentioned their role in replacing SCTPP participants. As with the baseline study, respondents reported knowing more about individual CCC members' work than the committees' work; this may explain some of the lower percentages reported in Table 4.3. Only three respondents reported not knowing the CCC committee at all.

We know about the CCC. The committee mobilizes resources from the community and redistributes to the poor and needy households [CnF/BT].

I don't know them as a committee but I know them as individuals. As individuals they mobilize resources to help poor people [CPF/AA].

If a beneficiary is dead then they replace another one [CnF #2/MN].

I do not know the CCC; I only know the Tabia Administration [CnM #1/AA].

SCTPP participants did report that the CCC generally fulfilled its obligations in regards to the SCTPP, although there was some indication that CCC members in Seneale no longer went to pay points for payments. Several participants also reported that the CCC provided complementary social services, mostly in the form of advice but also including educational support. Opinion on this additional assistance was mixed, however, and other participants reported not receiving any assistance beyond SCTPP support.

The CCC told us to queue during the pay period and advised us to spend the money wisely [PF # 1/AA].

They follow up with the participants, exchange information, make designations, change designations, and so on [PM #2/BT].

They coordinate and mediate payments in collaboration with DECSI [PF #1/S].

Their involvement is only in targeting of beneficiaries; otherwise they don't give any assistance. They don't even attend payments [PM #1/S].

They advised us not to drop our children out of school. In September 2013, they bought educational materials worth birr 100 for my children [PF #5/AA].

They advise us not to drop our children out of school and how to keep personal, family and community hygiene and sanitation [PM #6/MN].

4.3 Time Commitments for CCC Members

As part of the community questionnaire, a series of questions were asked about the amount of time taken up by CCC activities.

Table 4.4 Time spent on CCC activities, by tabia

<i>Tabia</i>	Does the CCC meet at least once every month? (Y/N)	How many meetings do you have each month?	How long do these meetings last? (hours)	How many days per month, apart from meetings, does a member spend working on CCC related activities?
Tsehafiti	Y	1	4	1
Sebebera	Y	1	3	2
Gonka	Y	1	5	3
Senale	Y	2	3	4
May Nebri	Y	1	3	10
Ara Alemsigeda	Y	1	3	1
Adi Keyih	Y	4	6	4
Bahr Tseba	Y	1	3	1
Abi Adi, Kebele 1	Y	1	3	20
Abi Adi, Kebele 2	Y	1	1	30
Abi Adi, Kebele3	Y	1	3	5

Source: Tabia quantitative survey.

Table 4.4 suggests considerable heterogeneity in the amount of time spent by CCC members. Focus group discussions suggested that the time commitment was more burdensome than these data might suggest. They noted that these reported times might be underestimates as they exclude time taken getting to and from pay points, which took them away from their own work. They reported little difference between men and women, except women’s higher level of involvement in resource mobilization and that their need to take care of work at home made CCC work time more difficult for them. However, many members, not just women, reported time scarcity and challenges in balancing their own work with CCC work.

CCC members work for the CCC one day per week and five hours per day [CCC #5/S].

Average time is 4 hours per week (2 days x 2 hours). There is no difference between men and women because we are working as a committee. Even if we spend two hours, it takes two hours each way to get to the centre. So it is a problem when I want to look after my livestock or irrigation for my vegetables [CCC #4/Pilot].

The amount of time spent is higher for women because they are more involved in resource mobilization than men members [CCC #2/MN].

The time is similar both to male and female CCC members but it more difficult for female members as they have home work and looking after children [CCC #4/S].

Out of the 21 members of CCC, only 3 are government employees and the remaining are engaged in different activities to support their family. So the CCC activity is contradicting with our daily activity [CCC #3/MN].

This limited time availability is not lessened through CCC cooperation with the woreda steering committee or social worker. CCC members and officials reported that cooperation between the CCC and the woreda steering committee was based on report writing, although some CCCs also reported that the woreda social workers provided support with the CCCs' efforts to assist poor households.

The cooperation with the woreda steering committee is report-based, but the cooperation with woreda social worker is strong. During the replacement, the social worker came to the Tabia and checked the status of the replaced household and he also follows the payment situation during the payment period [CCC #1/BT].

The relationship between the woreda steering committee and the CCC is mainly through reports, and BOLSA serves as a mediator for such cooperation. Sometimes steering committee members visit Tabia CCCs and follow up through their structures at Tabia levels like the agriculture, education and health sectors [WO/MN].

Additionally, tabia and woreda level officials noted that CCC members' time scarcity and their voluntary status caused inefficiencies in SCTPP-related work.

Most of the CCCs members are farmers who give more priority to their daily activities, and this affects the CCC's task. Especially, some complaints were not solved on time [TO/MN].

CCC members give more attention to their own livelihood activities and some of them are not committed as expected. Most CCC members have not the required capacity to properly accomplish their tasks and responsibilities. Other problems are high turnover of CCC members, and low participation from the community [WO/AA].

There is high turnover of CCC members like Development Agents, Health Extension Workers, School Principals, and elected chair persons. As most of the CCCs members are volunteers they give more priority to their daily activities and this affects the CCC's tasks. It would be good if the government assigned a paid full-time social worker at tabia level to follow up and coordinate the CCC's activities [WO/MN].

We attempted to address the issue of turnover in several ways. First, as part of the community quantitative survey, we asked about the duration of service of current members. In the urban localities (the three Abi Adi *kebeles*), or those proximate to good transport links (May Nebri, Bahr Tseba), turnover is low. It tends to be higher in other localities; further, these *tabia* tend to be the ones where membership has shrunk over time as Table 4.5 shows.

Table 4.5 Turnover of CCC membership, by tabia

<i>Tabia</i>	Has member-ship declined since Miaza EC04?	How many have been members since Miaza EC04?	How many have been members since Miaza EC05?	How many joined after Miaza EC05?	Percentage who have served since Miazia EC04	Percentage who have served since Miazia EC05	Percentage who jointed after Miazia EC05
Tsehafiti	N	7	5	3	47%	33%	20%
Sebebera	Y	5	2	0	63%	25%	0%
Gonka	Y	2	9	0	18%	82%	0%
Senale	Y	6	3	0	67%	33%	0%
May Nebri	N	21	0	0	100%	0%	0%
Ara Alemsigeda	Y	9	1	0	90%	10%	0%
Adi Keyih	N	12	9	0	57%	43%	0%
Bahr Tseba	Y	7	0	0	100%	0%	0%
Abi Adi, Kebele 1	N	24	0	0	100%	0%	0%
Abi Adi, Kebele 2	N	31	20	0	61%	39%	0%
Abi Adi, Kebele3	N	24	0	0	100%	0%	0%

Source: Tabia quantitative survey.

These high turnover rates were corroborated by the number of CCC members who were reportedly replaced since the start of the SCTPP.

Initially there were 21 members of the CCC but 5 members had difficulties to remain actively involved in the CCC activities; then the total members of CCC were reduced to 16. Out of the 16 members 2—the representatives of finance and education—were recently changed, as the previous members have left the Tabia [CCC #1/S].

Two members of our CCC—the community policing representative and the Tabia Manager—were changed after the previous representatives moved out of the tabia [CCC #4/AA].

As the baseline study pointed out (Berhane et al. 2012b), CCC members volunteer out of a sense of duty. They are not paid (though some reported a need for travel compensation), but they reported a commitment to continuing their work, even if and when the SCTPP ends. Officials at *tabia* and *woreda* levels also noted the CCCs’ duty to continue and even strengthen their work if the SCTPP stops, even though they recognized that the CCCs’ limited capacities—both personnel and financial—means that they could not replace the SCTPP.

We don’t receive any compensation for working for the CCC, and it is not our major challenge [CCC/AA].

We pay for our own transport and accommodation when we go to the pay point for payment. Especially during that period, we should be paid [CCC #3/Pilot].

If SCTPP ends we will try to support the poor by mobilizing resources from the community [CCC/BT].

[The CCC's role should be] to strengthen resource mobilization and focus on local support, rather than waiting for external support. But whatever effort is exerted obviously they cannot replace the SCTPP, as the capacity of the local communities is quite low [WO/MN].

4.4 CCC Resource Mobilization

Questions about resource mobilization were asked in both the quantitative and qualitative surveys. Officials, social workers and CCC members noted that CCCs mobilized cash or grain from community donations as well as from membership in associations and other informal social protection mechanisms. They also mentioned support through fund-raising and contacting community members who had migrated. Many respondents, but not all, reported that CCC members themselves contribute 2 birr per month (24 birr per year).

Yes, they mobilize resources in cash and in kind by increasing their memberships, organizing festivals, contacting Iddirs. The CCCs get funds from members, the community, business persons, Iddirs, Equub and so on, in cash and also clothes and food [WO/AA].

The CCC also approaches people from here but also those living elsewhere, even in Addis—one man sent 100 blankets to support his home community [TO/MN].

They mobilize resources from different sources. The CCCs try to increase their members and they contribute 2 birr each per month. They also mobilize communities, churches, and civil servants to contribute. They can also request support from donors [WO/MN].

[The CCC gets its funds] From the community in cash and grain, CCC members 2 birr each, church and people live in Mekelle and Addis but originally from the Tabia. For example, a woman from Addis donated 63 blankets to the CCC and distributed to the neediest households [TSW/BT].

The CCC gets its funds from CCC members—2 birr each every month—from Iddir members—1 birr every month—and Equub members, according to their capacity and interest—this amount is not fixed [CCC #4/AA].

The CCC gets its funds from the community and CCC members. But I do not contribute 2 birr as a CCC member, because I do not have a permanent income [TSW/MN].

These observations were confirmed in the quantitative data collection. Table 4.6 shows that in most communities, SCTPP beneficiaries contribute two birr to the CCC at each payment time.⁷

Table 4.6 Contributions by SCTPP beneficiaries to CCCs, by *tabia*

<i>Tabia</i>	Do beneficiaries use their payments to make regular contributions to any community funds? (Y/N)	How much do they contribute at payment time? [birr]	How much in TOTAL have beneficiaries contributed in the last 12 months?
Tsehafiti	Y	5	1500
Sebebera	Y	2	Not known
Gonka	Y	2	2040
Senale	Y	7	Not known
May Nebri	Y	3	Not known
Ara Alemsigeda	Y	2	Not known
Adi Keyih	Y	5	5100
Bahr Tseba	Y	2	Not known
Abi Adi, <i>Kebele</i> 1	Y	2	9072
Abi Adi, <i>Kebele</i> 2	Y	3	180
Abi Adi, <i>Kebele</i> 3	Y	2	3312

Source: Tabia quantitative survey.

Table 4.7 Contributions to CCC by non-SCTPP beneficiaries in the last 12 months, by *tabia*

<i>Tabia</i>	Households receiving PSNP payments		CCC members		Local religious, political or social leader		Other households living in this community		Former community members now living elsewhere		NGOs, others	
	Y/N	Amount	Y/N	Amount	Y/N	Amount	Y/N	Amount	Y/N	Amount	Y/N	Amount
Tsehafiti	Y	n/a	Y	n/a	Y	n/a	N		N		N	
Sebebera	Y	n/a	Y	n/a	Y	n/a	Y	n/a	N		N	
Gonka	Y	1,560	Y	264	Y	144	Y	1,992	Y	3,000	Y	9,500
Senale	N		Y	n/a	N		N		N		N	
May Nebri	Y	3,250	Y	432	N		Y	11,600	N		Y	26,000
Ara Alemsigeda	Y	n/a	Y	n/a	Y	n/a	Y	n/a	N		N	
Adi Keyih	N		Y	504	N		N		Y	3,080	N	
Bahr Tseba	Y	n/a	Y	n/a	Y	n/a	Y	n/a	Y	n/a	N	
Abi Adi, <i>Kebele</i> 1	N		Y	n/a	N		N		N		n/a	
Abi Adi, <i>Kebele</i> 2	N		Y	6,480	Y	541	Y	6,129	N		Y	5,700
Abi Adi, <i>Kebele</i> 3	N		N		N		N		N		N	

Source: Tabia quantitative survey.

⁷ These data were cross-checked against responses from the household survey which showed similar patterns.

These data are triangulated by information obtained during the qualitative fieldwork. In Abi Adi, SCTPP participant respondents all reported contributing 2 birr per month in cash; control group and comparison group respondents did not contribute except for one wealthier comparison group respondent. In Bahri Tseba, SCTPP participants reported contributions in cash: 25 birr in 2013 and 10 birr in 2014 (at the time of the interviews). Comparison group respondents reported contributing in cash and in kind, but control group respondents reported no contributions. All control group and comparison group respondents contributed in kind in May Nebri, as did most SCTPP participants, although a few SCTPP participants reported not contributing. Contributions in Seneale were mixed, but Seneale's SCTPP participant respondents reported the lowest contribution rate. Only the elderly representative in the male focus group discussion reported making CCC contributions, in kind. A few respondents across the tabias reported that they did not contribute because they had not been asked, but a few respondents mentioned refusing to support the CCC in the way requested.

As a beneficiary I am making a contribution of birr 2 to help the poor nonparticipants [CPF/AA].

We contribute 2 Shembers [2.5kg] of grain for those households not participating in the SCTPP [PM/MN].

I never made any contribution, because I am poor. I was asked by the CCC to support, but I refused as I have not the capacity to contribute [CCnM/S].

No, I do not support. Because the CCC knows that I am permanently supporting two households and they did not ask me for further support. In fact, they asked me that my support to the two households passes through the CCC but I refused to do so [CCmF/BT].

Community awareness of the CCCs' efforts to mobilise support in the community was mentioned as a challenge for CCCs by both CCC members and officials. This challenge was most often noted in Bahri Tseba.

There are challenges in the understanding of the community, especially during resource mobilization [TO/BT].

Some sections of the community said: 'We don't need the CCC to support the poor, we can support ourselves' [CCC #4/BT].

There is not full understanding about the CCC in the community, and we encounter problems during resource mobilization [CCC #2/MN].

The community quantitative survey included a series of questions on the criteria used by CCC's in allocating the resources they had raised. Results are shown in Table 4.8. Households considered to be extremely poor, those where a member was HIV positive, the elderly and orphans were the most frequently cited characteristics used when allocating resources raised by the CCC.

Table 4.8 Criteria used to allocate resources mobilized by CCCs, by *tabia*

<i>Tabia</i>	Most important criteria	Second most important criteria	Third most important criteria
Tsehafiti	No external support	Orphaned	Disabled
Sebebera	Elderly	Orphaned	HIV positive/AIDS
Gonka	Orphaned	Elderly	No external support
Senale	Disabled	Other	No external support
May Nebri	Extremely poor	Labor constrained	Disabled
Ara Alemsigeda	Extremely poor	Elderly	HIV positive/AIDS
Adi Keyih	Orphaned	Elderly	Extremely poor
Bahr Tseba	No external support	Extremely poor	HIV positive/AIDS
Abi Adi, <i>Kebele 1</i>	Orphaned	Extremely poor	HIV positive/AIDS
Abi Adi, <i>Kebele 2</i>	Orphaned	Extremely poor	HIV positive/AIDS
Abi Adi, <i>Kebele3</i>	Elderly	HIV positive/AIDS	Orphaned

Source: Tabia quantitative survey.

When asked about the selection process for providing this assistance during focus group discussions, CCCs reported a clear preference for supporting the most vulnerable in their communities, a preference which tended to mean more support for female-headed households. In May Nebri and Seneale, priority was also given to non-PSNP participants; this criteria was not used however in Bahri Tseba or Sebebera and was not relevant in Abi Adi as the PSNP does not operate there. Respondents noted that they had guidelines in place to determine how to prioritise their support for the most vulnerable populations.⁸

Yes, the CCC spends more time in supporting elderly people who have no support, HIV/AIDS victims, orphans, disabled people and labor constrained female-headed households [CCC #4/MN].

We provide more support to women because most of the female-headed households are poor in comparison to male-headed households and the number of female-headed households is higher in our Tabia [CCC #6/MN].

The support from CCC only focuses on households who are not participating in the SCTPP. It does not include SCTPP participants. There are criteria to select households to support and criteria include disabled people, the very poor who cannot work, sick and elderly with no support. If women and men fulfil these criteria, priority usually goes to women [CCC #5/S].

CCCs, officials and social workers readily provided clear, precise examples of how the CCC has supported community members beyond their work with SCTPP participants. They often reported numbers as well as specific instances in which the CCC provided support through use of mobilized community resources for nonparticipants in SCTPP. Not all of the support was monetary; respondents also reported occasional labor mobilization efforts and advocacy on

⁸ We encountered one CCC that provided interest-free loans. These went to households where there were able-bodied members present.

behalf of poorer households. Although the CCCs made support available to poor households in the community, they clearly did not provide the same level of support as SCTPP does; they reported providing for a more limited number of households and on an irregular basis.

In 2013 the CCC has supported 6 female-headed households 250 birr each to start small businesses like selling tella [local beer]. In Christmas 2013 they mobilized a businesswoman and she bought 3 oxen and distributed meat for poor households through the CCC. An HIV/AIDS infected man who was suffering from TB and referred to Mekelle - the CCC supported him with birr 500 but unfortunately the man passed away [CCC #5/AA].

Yes, the CCC supports poor households not participating in the SCTPP with various approaches, like giving cash to sick people for medication, distributing cash and meat on big holidays, and providing interest free loans to interested households [WO/AA].

In 2013 the CCC provided support to 8 students - 100 birr each - 5 households received cash - 300 birr each - and 4 households received 150 birr each. In 2014 more than 20 quintals of grain were collected from the community, and 50 kg each will be distributed to more than 40 households. Birr 750 is ready to be distributed within 2 days to 15 households, to help them buy meat for the Easter Holy day [CCC #1/S].

The CCC supports an old man with house maintenance. His house was demolished by heavy rain. The CCC also mobilized students from school to wash clothes of old and disabled people in the community [TSW/MN].

We have discussed with owners of houses and two are living now without paying a rent. We support birr 100 each for 21 people. For two women, we gave birr 700 each for further treatment outside Bahri Tseba. Birr 100 was given for one person for an artificial leg [CCC #1/BT].

SCTPP participant, control group and comparison group respondents were less clear about examples of the CCC enacting its role and how the mobilized support was utilized. Many reported knowledge of the CCC's work to support community members not participating in the SCTPP with grain and cash, but several also reported uncertainty about how these resources were used. Only two respondents reported receiving this support themselves; all others reported that they had not received CCC support. This vague understanding on the part of community members is consistent with a view that although the CCC mobilizes resources well and is able to account for their use of these resources, their work does not have the same reach as the SCTPP. That community members rarely recognized or had personal experience with the CCCs work indicates the limits of their reach.

4.5 Summary

In the introduction to this chapter, we noted that a novel feature of the SCTPP is the creation of Community Care Coalitions (CCCs). These are community-led groups that serve as a support mechanism for the vulnerable populations in the community. CCCs are hybrid organizations with representation from both government and civil society organizations. CCCs play a critical role in beneficiary identification and selection and assisting in payment processes. They are intended to play a prominent role in the provision of complementary social services and to raise additional resources.

Evidence presented here indicates that CCCs understand and execute the roles assigned to them. They are well regarded by SCTPP beneficiaries. They clearly exert considerable effort to raise additional funds and are able to identify and distribute these to households in need of assistance. But it is also clear that these are not a substitute for a formal social safety net. Reflecting the poverty of the localities in which these CCCs operate, the resources they raise benefit only a relatively small number of households. Especially in rural areas, it appears that many CCCs are operating at the limit of volunteerism; that is, that they are not able to take on any additional time commitments.

5. Targeting

5.1 Introduction

The targeting of the SCTPP was the focus of extensive review in the baseline report (Berhane et al. 2012b, chapter 7). This showed that the SCTPP targets households that are extremely poor and labor-constrained, as identified by CCC members and *tabia* officials and verified by local communities in public meetings. Almost all *woreda* and *tabia* officials, CCC members, and SCTPP participants interviewed for this study demonstrated sound knowledge of the eligibility criteria and confirmed that the targeting procedures had been correctly applied in all communities surveyed.

The baseline report showed that there was very little evidence of inclusion error; the qualitative and quantitative data concur that virtually all households selected for the SCTPP meet the eligibility criteria. However, there is substantial exclusion error, or undercoverage. Many households that do satisfy the eligibility criteria were excluded from the SCTPP because a budget constraint meant a quota had to be applied. Although there was broad acceptance of the eligibility criteria and the targeting decisions, these households that were initially selected, but later cut, were most likely to perceive the targeting process as unfair. The CCCs played an important role in explaining the eligibility criteria and increasing acceptance of the quota among nonselected households. Many SCTPP beneficiaries, especially in rural Hintalo Wajirat, were formerly PSNP participants, mainly on Direct Support rather than Public Works, since they lack labor capacity. To avoid double-dipping, most of these households were transferred to the SCTPP.

Given this strong targeting performance, this chapter has two functions. First, it provides a shortened version of the findings presented in the baseline report. We do this so that readers with only access to this document (and not the baseline report) have documentation showing how well the SCTPP was targeted. Second, we examine the extent to which re-targeting took place over the lifetime of the program. We discuss why this occurs and how it was implemented.

5.2 Targeting of the SCTPP: Process and Criteria

The operations manual for the SCTPP outlines a multistep process (Tigray 2011b). It begins with the CCC and *tabia* authorities listing potential beneficiaries who fulfill the following criteria:

- Are extremely poor. These are households suffering extreme levels of deprivation as measured by hunger (e.g., eating only one meal per day), having no assets, no means of supporting themselves, and receiving no regular assistance from relatives.
- and
- Are labor-constrained. A household is considered to be labor-constrained when it has no able-bodied members aged group 19 to 60 who can undertake work or where there is an able-bodied adult who is responsible for more than three dependents (members that

are under 19 years of age or over 60 or are unfit for work because they are chronically sick, or disabled, or handicapped, or are in school).

Each listed household is visited by two CCC members to assess their living conditions and the availability of able-bodied members. They then revisit the original list, dropping those households that do not meet these criteria and rank the remainder from most to least neediest. Next, a community meeting is held in each *tabia*. At this meeting, the SCTPP is described and information provided on the eligibility criteria. The list is reviewed for accuracy; new households can be added if there is a consensus that they should be included. CCC members visit these households to check whether they are, in fact, eligible for the program. This information is then passed onto the *woreda* SCTPP Secretariat. Social workers from the *woreda* then undertake a final verification visit.

The complex process described in the operations manual was, in fact, followed. A *woreda* official in Abi Adi described the process in this way:

The targeting came from BOLSA in the form of orientation. Woreda-level steering committee was established. Then training was given to the CCC. The CCC also oriented the ketena officials about the targeting. Based on the criteria each ketena selected eligible households for the program. The CCC compiled a list of households eligible in the kebele. Finally, a community meeting was held to endorse the selected households. The final list was sent to WOLSA. WOLSA cross-checked the nominated households by undertaking house-to-house assessments [Baseline/WO/AA].

Participants confirmed that this process was followed in all *tabias*.

We were selected at the kushet level based on the criteria given by the tabia. The list of households was sent to the tabia and then presented to the community meeting for endorsement. The approved list was sent to the woreda [Baseline/PF/S].

5.3 Targeting: CCC and Household Perspectives

Participants in the *tabia* surveys were asked, “When deciding who would receive the Social Cash Pilot, what were the three most important criteria that you used.” Responses are given in Table 5.1.

Given that the respondents for the *tabia* survey were also members of the CCCs, the results shown in Table 5.1 were slightly surprising. We would expect to see a larger number of *tabia* reporting the use of the extreme poor, labor constrained, and no access to external assistance criteria. Combining criteria yields somewhat better results. For example, 7 out of 11 *tabia* report either extreme poverty or absence to external assistance. If we expand the labor constrained category to also include households where someone is disabled or has elderly persons, 8 *tabia* reported using this broader criterion and all 11 *tabia* use at least one of these broader definitions of extreme poverty and labor constraints as targeting criteria.

Table 5.1 CCC perspectives on SCTPP targeting criteria

Criteria: Household...	Most important criterion	Second most important criterion	Third most important criterion
is extremely poor	3	1	2
is labor constrained	0	5	0
has no access to external assistance	2	4	1
has orphans	3	0	4
has person who is disabled	2	1	0
has person with HIV/AIDS	0	0	4
has elderly persons	1	0	0

Source: Table 7.1, Berhane et al. (2012b).

As part of the baseline *tabia* survey, we provided respondents with vignettes, descriptions of fictional households, and asked, based on what they had been told, whether the household should receive (1) the Social Cash Transfer Pilot Project payments; (2) Direct Support payments from the Productive Safety Net Programme (PSNP) (these payments do not have a work requirement or other conditionalities attached to them); (3) be paid for doing public works for the PSNP; or (4) receive nothing unless there was a need brought about by a severe drought or other emergency. Results are shown in Table 5.2.

The first vignette—the elderly widow—describes a household that clearly meets the SCTPP criteria for inclusion. Eight out of 11 respondents to the *tabia* survey indicated that they would include it with the remaining 3 stating that she should receive Direct Support payments from the PSNP. The second vignette describes a household that meets the labor-constrained criterion. But while it is clearly poor, it is ambiguous whether it is extremely poor. Nine indicated that this household should receive either SCTPP payments or receive Direct Support from the PSNP. The third and fourth vignettes are households that are not labor-constrained and thus should not be eligible for the SCTPP. Correctly, no *tabia* stated that these households should receive SCTPP payments; instead, most correctly indicated that the food-insecure household should be able to receive employment under the Public Works component of the PSNP while the food-secure household was only eligible for emergency assistance. These results give credence to the view that the criteria for targeting are well understood at the level at which they were to be implemented.

Households were asked to list up to three criteria that they believed were used to select beneficiaries for the SCTPP. More than half of all survey respondents gave as their first response that having elderly persons in the household was a targeting criterion and more than 70 percent listed this as a criterion. Being poor or among the poorest were most frequently listed as the second response. Across all responses, poverty was mentioned by 75 percent of respondents. A further 36 percent described targeting criteria in terms of beneficiaries being unable to work or having no way of supporting themselves, terms which explicitly appear as targeting criteria. Encouragingly, few respondents perceived that favoritism influenced who was selected, nor did they provide answers (such as randomly or quota-driven) suggesting that they thought that selection was essentially arbitrary. However, a surprising number of respondents indicated that they could not describe the criteria used to choose beneficiaries.

Table 5.2 Responses to targeting vignettes

		Vignette			
		1	2	3	4
		Household consists of:			
<i>Woreda</i>	<i>Tabia</i>	An elderly widow with no children to help her. She is not able to farm for herself	An elderly man, his wife and a granddaughter. They can farm one <i>timad</i> of land but do not grow enough food to feed themselves.	A man and woman and three school-age children. Both are able-bodied. However they only grow enough food to feed themselves for 10 months of the year.	A man and woman and three school-age children. They own an ox. Each year, they have a small surplus of food production that they sell in the market.
Hintalo-Wajirat	Tsehafti	SCTPP	PSNP-PW	PSNP-PW	Emergency aid only
	Adi Keyih	SCTPP	SCTPP	PSNP-DS	PSNP-PW
	May Nebri	PSNP-DS	PSNP-PW	Emergency aid only	Emergency aid only
	Gonka	SCTPP	SCTPP	PSNP-PW	Emergency aid only
	Sebebera	SCTPP	PSNP-DS	PSNP-PW	Emergency aid only
	Ara-Alem	PSNP-DS	SCTPP	PSNP-PW	Emergency aid only
	Bahr Tseba	SCTPP	PSNP-DS	PSNP-PW	Emergency aid only
	Senale	SCTPP	SCTPP	PSNP-DS	Emergency aid only
Abi Adi	Kebele 1	PSNP-DS	SCTPP	Emergency aid only	Emergency aid only
	Kebele 2	SCTPP	PSNP-DS	Emergency aid only	Emergency aid only
	Kebele 3	SCTPP	SCTPP	PSNP-PW	Emergency aid only
Number of <i>tabias</i> reporting	SCTPP	8	6	0	0
	PSNP-DS	3	3	2	0
	PSNP-PW	0	2	6	1
	Emergency aid	0	0	3	10

Source: Table 7.2, Berhane et al. (2012b).

We disaggregate these data on perceived criteria in two ways, by *woreda* and whether the respondent had attended the *tabia* meeting where selection into the SCTPP was discussed (Table 5.3). Among those who attended these meetings, understanding of targeting criteria was high: in both Hintalo Wajirat and Abi Adi, more than 90 percent of respondents indicated that being poor or among the poorest was a targeting criterion and between 40 and 45 percent reported that being unable to work or having no way of supporting themselves were also targeting criteria. These data suggest that these meetings were effective in communicating how beneficiaries were being selected.

The qualitative fieldwork revealed that most SCTPP participants, control group, and comparison group households participated in the targeting process, unless they could not attend the community meetings due to illness or disability.

Yes we were involved in the targeting process, finally in the public meeting, while the selected households were approved [Baseline/PM/S].

*Yes, we participated in the final targeting process in the public meeting. The *tabia* officials read the list of participants to the people in the meeting and we approved the selection one by one [Baseline/CnF/BT].*

Table 5.3 Criteria for selection into the SCTPP as reported at household level, disaggregated by *woredas* and attendance at selection meetings

Perceived criteria	Hintalo-Wajirat		Abi Adi	
	Attended meeting where selection was discussed		Attended meeting where selection was discussed	
	Yes	No	Yes	No
Measures of poverty				
People who are poor	62.0	43.3	54.3	49.3
People who are the poorest in this locality	28.8	21.0	36.8	31.9
People who have no way of supporting themselves	21.5	14.5	29.8	19.1
Households where all adults are unable to work	19.0	15.0	16.8	22.2
People who have been badly affected by drought	9.5	4.8	5.7	2.3
People with small or no landholdings	3.5	2.3	2.6	1.5
People with few or no cattle/oxen	2.8	2.6	0.9	0.6
Demographic characteristics				
Old people	85.0	62.0	80.4	68.8
Households with many children	10.5	5.4	5.4	5.0
Orphans	9.5	7.0	22.7	9.9
War veterans	3.0	0.9	10.2	6.7
Favoritism				
Certain religious groups receive preference	0.8	0.1	0.1	0.0
Payments given to family and friends of the CCC	0.5	0.9	0.1	0.4
Payments given to family and friends of village leadership	1.8	0.7	0.1	0.4
Allocations are arbitrary				
Randomly	3.0	2.0	0.7	1.0
Quota for each <i>kebele</i> , <i>tabia</i> , or <i>kushet</i>	5.3	4.8	6.7	3.1
Other reasons	3.5	2.5	7.6	3.8
Do not know	1.8	30.1	2.4	18.2

Source: Table 7.4, Berhane et al. (2012b).

5.4 Perceptions of Inclusion, Exclusion, and Fairness

Households were asked if they felt the targeting process was fair and transparent. Selected households generally believed it was.

Yes, it is fair, because the targeting has started at grassroots level, where everybody knows each other's problems and potentials [Baseline/PF/BT].

The majority of households in our community were not considered in the targeting because they are capable of helping themselves, and the targeting was focused on livelihood status [Baseline/PM/S].

Many nonparticipants agreed that the targeting process was fair and transparent.

Yes, because those included in the program are poorer than us [Baseline/CnF/S].

Some nonparticipants revealed how it was explained to them why they were excluded. Most accepted the reasons for their exclusion.

*I know that why I am not participating in the program is because the quota given to our *tabia* is not enough to cover all needy households [Baseline/CnF/BT].*

I know that I am poor; I only receive 70 birr pension every month, which is not enough to cover minor expenses, but the tabia officials told me that any pensioner is not eligible to participate in the program. The current participants are poor and they are not pensioned like me, so I feel that the targeting is fair [Baseline/CnFM/AA].

But some nonparticipants either did not understand why they were excluded or disagreed with their exclusion from the program.

No, I have no idea. I repeatedly asked the Tabia Administrators and no one has gave me a convincing answer. They are biased [Baseline/CCnF/MN].

At the beginning, the criteria were not clear. Because of my age, I was selected to the program but later when the criteria were clear, I was excluded and I didn't make any complaint [Baseline/CmFM/AA].

I believe that I'm eligible for the SCTPP because I'm poor and I have four orphan children [Baseline/CCnF/AA].

People who are better off are not considered, but due to the imposed quota, there are eligible people who didn't participate in the program [Baseline/CmM/BT].

It is not fair and transparent, because people who are wealthier than me are participating in the program [Baseline/CnF/MN].

Given this last set of quotes, Table 5.4 is instructive. It shows the percentage of respondents in the household survey who perceived that the selection process was fair, disaggregated by treatment status and location. We also disaggregate by whether the respondent knew about the existence of the CCC.

Table 5.4 Perceptions of fairness of the selection process, by location, beneficiary status, and contact with the CCC

	SCTPP beneficiary	On initial list but not selected for inclusion	Random sample (never on list)
	(percent)		
Abi Adi			
Perceived selection was fair	83.6	42.0	56.1
Knew about the CCC and perceived selection was fair	86.5	50.2	71.2
Hintalo Wajirat (including Bahr Tseba)			
Perceived selection was fair	74.8	35.0	44.9
Knew about the CCC and perceived selection was fair	83.9	50.5	67.9

Source: Table 7.9, Berhane et al. (2012b).

Consistent with the qualitative data, the selection process is widely regarded as fair. While those on the initial list but ultimately not selected, and those never on the list were less likely to see the targeting process as being fair, the subset of these households that knew about

the CCCs, and thus were more likely to be well-informed about the selection process, were much more likely to see selection as fair. This points to the important role played by the CCC in disseminating information during the roll out of the SCTPP.

5.5 Who Receives the SCTP? Results from the Household Survey

Finally, as part of our work on targeting, we assessed how closely household characteristics of those selected for the SCTPP matched the characteristics outlined in the operations manual, to what extent were there errors of inclusion and were there errors of exclusion. There were challenges in doing so. First, with the exception of Bahr Tseba, the targeting of households occurred approximately one year before the baseline survey took place. For some characteristics, the time lag between the targeting and the survey is relatively unimportant. More than 98 percent of individuals observed in our sample in 2012 were residing in the same household at the time the targeting took place and fewer than five percent made investments in their housing stock. But while these are relatively unchanged over time, we do not know about household income generation or support from other households that may have existed at the time targeting took place. Second, errors of inclusion and exclusion are usually calculated with reference to a single criterion for program participation. The SCTPP uses multiple criteria for inclusion. Consequently, we should interpret errors of inclusion and exclusion with caution. A household could appear to be erroneously excluded based on the characteristics we observe, but this is not necessarily an error if there is some other characteristic that we do not observe that affects selection.

Results from the household survey are presented in Table 5.5.⁹ Household demographic characteristics play a prominent role in selection criteria. We begin with labor constraints. Recall that a household is considered to be labor-constrained when it has no able-bodied members in the age-group 19 to 60 who can undertake work. Additionally, it is considered to be labor-constrained if the household has an able-bodied adult but also more than three dependents. The proportion of households with these characteristics is found in the first two rows of each table. In addition, we also report the proportion of households with any disabled persons, households consisting only of persons 60 or older and the mean number of persons 60 or older, and the number of able-bodied persons so as to capture demographic criteria mentioned by respondents in focus groups and in the household survey.

Extreme poverty was another criterion used to select beneficiaries. The operations manual described extremely poor households as those suffering extreme levels of deprivation as measured by hunger, having no assets, no means of supporting themselves, and receiving no regular assistance from relatives. Some of these characteristics—hunger and support from relatives at the time of the targeting exercise—are not observable. Labor constraints and the presence of disabled persons captures some aspect of not being able to support oneself. Table 5.5 focuses on assets beginning with two dimensions of housing stock: whether the dwelling is in a state of disrepair and whether the dwelling consists of only a single room (recall that this

⁹ In the baseline report, we gave the results found in Table 5.5 separately for Abi Adi, Hintalo Wajirat (excluding Bahr Tseba), and Bahr Tseba. There were not major differences across these locations in the use of these criteria.

was mentioned by focus group respondents in Abi Adi). In addition, we constructed a wealth index based on ownership of 25 different consumer durables. The wealth index was constructed using principal components analysis and an index is constructed separately for each *tabia*. The values of the index itself are not especially informative; what is helpful is that the index ranks households from those owning the fewest durables to those owning the most. We take the index and divide it by quintiles. Households in the poorest quintile are those with the fewest assets within their *tabia*.

Lastly, we consider three joint demographic and wealth characteristics. These are: households in the poorest quintile that are also labor-constrained; households in the poorest quintile with only elderly persons in their household; and households in the richest quintile that have able-bodied labor.

We compare these criteria across four groups: (1) the “initially eligible” are all households that appeared on the initial list prepared by the CCC; (2) “beneficiary” includes households that were selected for program inclusion after a home visit by the CCC and the public meeting; (3) “initial eligible, non-beneficiaries” are households that appeared on the initial list but were dropped either after the home visit or after the public meeting; and (4) the random sample are data taken from a random sample of households that were not placed on the initial list.

Column (1) tells us that 43 percent of households on the initial list were labor constrained in that they had no able-bodied members aged 19 to 60 who could work. By contrast, only 7 percent of households in the random sample (i.e., households that did not make the initial list) were labor-constrained. The t-test reported in the column (1) = (4) tells us that we can reject, at the 95 percent confidence interval, that these two percentages are equal. The fact that the percentage is relatively high for those households found on the initial list, and that there are few labor-constrained households not on the initial list provides, along with the qualitative data, strong evidence that this criterion was, in fact, used by CCCs. Among those households on the initial list, a greater percentage of those ultimately selected (52 percent) were labor-constrained compared to those on the list who were not selected (24 percent). This difference is also statistically significant. Finally, a comparison of columns (2) and (4) shows that on average, those selected were more likely to be labor-constrained than a random sample of households that were never considered for the SCTPP.

A second demographic criterion was the presence of an able-bodied person in a household with more than three dependents. Table 7.10 shows that for the full sample, it appears that this criterion was not used. In fact, households with more than three dependents were less likely to appear on the initial list than a random sample of households that were not listed. Among those selected, they were less likely to be retained.

Table 5.5 Household characteristics, by beneficiary status, full sample

		Initial eligible				T test on difference between		
		All initial eligibles (1)	Beneficiary (2)	Non- beneficiary (3)	Random sample (4)	All initial eligibles and random sample (1) = (4)	Beneficiary and eligible non- beneficiary (2) = (3)	Beneficiary and random sample (2) = (4)
Demographic characteristics								
Labor constrained	Proportion	0.43	0.52	0.24	0.07	15.88**	9.13**	17.91**
More than three dependents	Proportion	0.14	0.10	0.21	0.37	9.22**	6.07**	10.50**
Any disabled person	Proportion	0.33	0.37	0.25	0.10	11.30**	5.40**	13.53**
Only persons 60 or older	Proportion	0.22	0.29	0.09	0.03	11.69**	9.54**	12.78**
Number of persons 60 or older	Mean	0.61	0.68	0.47	0.22	11.32**	4.75**	12.08**
Number able-bodied persons	Mean	0.84	0.66	1.20	1.76	15.02**	9.66**	18.98**
Household size	Mean	2.79	2.42	3.55	4.73	12.61**	9.42**	15.52**
More than three members	Proportion	0.29	0.19	0.47	0.67	12.54**	11.83**	16.71**
Wealth								
Dwelling structure has cracks, leaks, is dilapidated or falling apart	Proportion	0.28	0.33	0.20	0.11	7.51**	5.54**	7.74**
Dwelling consists of a single room	Proportion	0.77	0.82	0.69	0.51	7.86**	4.69**	7.93**
In poorest quintile of wealth index in their <i>tabia</i>	Proportion	0.30	0.36	0.19	0.09	9.21**	5.69**	9.13**
In richest quintile of wealth index in their <i>tabia</i>	Proportion	0.15	0.12	0.21	0.41	6.61**	3.41**	6.55**
Joint demographic and wealth characteristics								
Poorest quintile AND labor constrained	Proportion	0.18	0.24	0.08	0.01	11.23**	7.18**	10.75**
Poorest quintile AND only old people	Proportion	0.11	0.15	0.03	0.002	9.47**	6.65**	8.81**
Richest quintile AND able-bodied person	Proportion	0.12	0.09	0.16	0.39	7.36**	3.25**	7.39**

Source: Table 7.10, Berhane et al. (2012b).

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level.

One clue as to why we observe this pattern is found in the remaining demographic characteristics. Households with a disabled person were more likely to be listed and more likely to be included in the SCTPP if listed, but the presence of a disabled person does not guarantee selection; this is consistent with the complaint recorded in the qualitative survey work that because inclusion criteria were household, not individual based, some households with disabled persons were excluded. Most striking is the proportion of households containing only persons who are elderly (60 years or older). Among those on the initial list, 22 percent have only elderly persons compared with only 3 percent of a random sample of non-beneficiaries. It appears that virtually all households with only old people were included in the initial listing. This is consistent with what households in the quantitative survey perceived to be an important selection criterion. Households that appeared on the initial list and households that were selected for the PSNP have fewer able-bodied persons. By contrast, households selected for the SCTPP are much smaller than households that are not included in the program; they have, on average, only half the number of members (2.42) compared to a household that was never listed (4.73).

The four wealth indicators all suggest a well-targeted intervention. Households listed and those selected have poorer housing stock as measured by the state of the dwelling and the number of rooms it contains. As measured by the wealth index, households in the poorest quintile within their *tabia* were more likely to be on the initial list of potential beneficiaries and within this list, were more likely to be selected for program inclusion. By contrast, relatively few households in the richest quintile appear on the initial listing and these were least likely to be included in the SCTPP.

It is important to remember that the targeting of the SCTPP was based on both demographic and poverty characteristics. With this in mind, consider the last set of results in Table 5.5. The first two rows combine households in the poorest wealth quintile with being labor-constrained and comprising of only elderly people. Strikingly, there are essentially no poor labor-constrained or elderly households in the random sample, meaning that all such households were at least considered for inclusion. Approximately 8 percent of households listed but not included were poor and labor constrained. Some of this may reflect budget constraints. By this criterion, this figure represents an upper limit of exclusion error; it is an upper limit given that—as we have seen with the qualitative data—there may have been other characteristics that rendered some of these households ineligible. The final row can be seen as a crude proxy for inclusion error—wealthy households with able-bodied members should be excluded. Approximately 9 percent of SCTPP beneficiaries are in this group. But this, too, should be considered an upper estimate, as there may be other factors that resulted in some of these households being included.

Box 5.1: The SCTPP and Direct Support under the PSNP

The targeting criteria and the Direct Support component of the PSNP share several similarities, most notably an emphasis on providing assistance to very poor households who were labor constrained. The PSNP was operating in Hintalo Wajirat prior to the introduction of the SCTPP. It is of interest to see whether there was “switching” of households from Direct Support to the SCTPP and whether there was a systematic component to this. The May 2012 survey contained questions on prior participation in other social protection interventions, including Direct Support, thus allowing us to address this question.

In Hintalo Wajirat, 30 percent of beneficiaries had been switched out of the Direct Support component of the PSNP and into the SCTPP. There was no switching in Abi Adi as the PSNP does not operate in urban areas. Switching was not even across *tabias*; percentages switched were: Adi Keyih, 43 percent; May Nebri, 38 percent; Senale, 35 percent; Ara Alemsigeda, 28 percent; Tsehafti, 28 percent; Gonka, 25 percent; and Sebebera, 25 percent. There was no association between the likelihood of being switched and household wealth or the age and education level of the household head. Households were seven percentage points more likely to be switched if there were headed by a woman and were less likely to be switched as household size rose; every additional member reduced the probability of being switched by 4.5 percentage points.

The 2012 qualitative fieldwork gives some insights into how this switching took place. Narratives obtained from both CCC’s and from beneficiary focus groups indicate that this was a conscious process. Households that were switched were consulted before this took place and their consent was sought. The *tabia* chair in Senale stated that, “I can assure you that the transfer was implemented based on their interest.” Direct Support payments increase more rapidly with household size than do SCTPP payments so larger households would lose funds if they were switched from Direct Support to the PSNP. To the extent that CCC’s sought to prevent participation in the SCTPP making beneficiaries worse off (relative to remaining in the PSNP), this would explain why switching falls as household size increases and thus that switches only took place when it was in the financial interest of the household.

5.6 Retargeting: Households Added and Dropped since 2012

In the endline quantitative and qualitative surveys, we explored the extent to which households were added and dropped after the initial targeting exercise. We begin with Table 5.6. This shows the number of households that were added and dropped in the 12 months preceding the endline survey. Households are dropped when the named beneficiary dies and this accounts for the vast majority of households who do not remain with the program. In Hintalo, there is only one case where a household is dropped because it no longer meets eligibility criteria. Retargeting for this reason, or because local authorities perceived that the household no longer needed benefits, is a little more common in Abi Adi. Everywhere, the number of households added is roughly equal to those lost through death or changes in circumstances.

Table 5.6 Number of households added and dropped from the SCTPP, by *tabia*

<i>Woreda</i>	<i>Tabia</i>	Number of households dropped from the SCTPP because of:						Number of households added
		Death of beneficiary	Out-migration	Beneficiary shifted to PSNP	Beneficiary no longer meets eligibility criteria	Beneficiary no longer needs transfers	Other reason	
Hintalo-Wajirat	Tsehafti	25	0	0	0	0	0	25
	Adi Keyih	16	2	0	0	0	0	18
	May Nebri	8	0	0	0	0	0	8
	Gonka	3	0	0	1	0	0	4
	Sebebera	4	10	0	0	0	0	14
	Ara-Alem	14	1	0	0	0	0	15
	Bahr Tseba	40	0	0	0	0	0	40
	Senale	25	0	0	0	0	0	25
Abi Adi	Kebele 1	6	4	0	16	0	0	26
	Kebele 2	10	5	0	7	1	3	27
	Kebele 3	9	0	0	0	5	0	14

Source: Endline community survey.

We used interviews with officials, CCC members and social workers to confirm these patterns. Although a re-targeting process is described in the SCTPP Manual of Operations, officials in all *tabias* noted that there was no official re-targeting process. Reported changes related to replacing participants, generally due to death or migration.

Participants need to be replaced due to death, migration and wrong targeting. This is a continuous process. There was no re-targeting process [BO].

Yes there were many changes because of death and migration [TSW/BT].

Yes there were changes if a participant with no family dies [CCC #4/S].

Consistent with Table 5.6, in Abi Adi, officials and social workers noted that several participants were also replaced when it was found that they did not meet the targeting criteria and were ineligible to receive SCTPP. While the baseline study did not find evidence of inclusion error, these replacements in Abi Adi indicate that when inclusion error was discovered, it was corrected.

Yes there were changes of participants because of death, migration and households being included by mistake. They changed 4 participants (2 male and 2 female) who were targeted by mistake but later it was identified that they are not eligible because of their wealth status. Some of them have remittances from relatives in the diaspora; some of them have income from house rent or a pension [TO/AA].

During the targeting, people with remittances and salaries from other sources were not known. When we got this information, it was necessary to remove

these people from the program because there are poor eligible people waiting to join to the program [TSW/AA].

In all other *tabias*, death and migration were the main reasons reported for replacing participants. Interestingly, in response to the question, “Why was it necessary to change some of the participants? Has anyone been removed from the list because they are no longer considered eligible?” the *woreda* social workers in May Nebri mentioned that five people who were no longer eligible were replaced. All others reported that no-one was replaced due to ineligibility or because livelihood improvement led to ineligibility. Note that these replacements were not due to targeting errors, but constitute an informal re-targeting process.

It was only due to migration and death. There is no case of participants who were excluded because of their livelihood improvement [TO/MN].

Those dead people can’t eat and should be replaced by living households [CCC #4/BT].

Yes it is necessary because if poor people are not replaced the money will not be used. Yes, 5 were removed because they are no longer eligible [WSW/MN].

We wondered whether the criteria used for the targeting of the SCTPP were also used for the inclusion of new households. Table 5.7 reports on these.

Table 5.7 Criteria used in re-targeting

Criteria: Household...	Most important criterion	Second most important criterion	Third most important criterion
is extremely poor	2	1	2
is labor constrained	0	1	0
has no access to external assistance	2	1	1
Landless	0	0	1
has orphans	4	3	0
has person who is disabled	1	0	3
has person with HIV/AIDS	0	2	4
has elderly persons	2	2	0

Source: Endline community survey.

Broadly speaking, these are similar to those listed in Table 5.1, though demographic characteristics (e.g., orphans) are reported a little more frequently and economic (e.g., extremely poor) a little less so. When asked about how many people were removed and added to the participant lists and about any gender differences, social workers were most consistently clear about which participants were replaced and why, although several officials and CCC members were also aware of these numbers. The reported numbers of replaced participants at *tabia* level revealed that the same number of participants who migrated or had died or were ineligible had been replaced with new participants, exactly meeting the allotted quota. Interestingly, and something that was not picked up on in the quantitative surveys was that these changes were made in such a way so as to not significantly change the gender ratio of SCTPP participants.

Removed: Death 11 (male 3 and female 8); ineligible 7 (male 3 and female 4), those are beneficiaries who had remittances or salary from the church but this was not known during the targeting process; migration 5 female; replaced: 23 female [TSW/AA].

There are 400 participants in total (288 women and 112 men). Out of these 32 participants were changed. 31 (15 women and 16 men) are dead, and 1 women participant migrated. All these were replaced by (19 women and 13 men) new participants [TSW/BT].

Out of the 312 (222 women and men) total beneficiaries within the May Nebri tabia there were 35 changes (34 female deaths and 1 migrant male), and all of them were replaced, by 29 female and 6 male new participants [TO/MN].

There are 465 total beneficiaries in the tabia and out of these 20 participants (7 male and 13 female) are dead. All of them were replaced by 9 male and 11 female new participants [CCC #1/S].

Sixteen households have been removed: 7 households (3 female, 4 male) have moved out of the tabia; 9 deaths (4 men, 5 female). We don't remember all exact changes. 16 households have been added. We don't know the gender ratio. There is no directive that states that female-headed households need to be replaced by female-headed households; it is based on neediness [CCC/Pilot].

Officials and CCC members were clear about the process for these replacements.¹⁰ Officials reported that households identified at the community level were discussed by CCCs and then approved at WoLSA level after social workers confirmed the household status. CCC members were clear about their role in the replacement process, but they placed heavier emphasis on community endorsement for replacements than did officials. One CCC member noted that this process took a long time which meant that new SCTPP households did not always get their payments right away.

The development group (group of 25–30 people) knows who has died and who has migrated, then the representatives report to the CCC. Then the CCC discusses as a committee who is to be replaced based on their status. After making a decision they write an official letter to WOLSA for replacement. Then the social workers visit the house of the newly selected household to check if the household meets the targeting criteria; if not the CCC will change for another one [WO/MN].

¹⁰ To understand the influence of PSNP Direct Support on replacement decisions, CCCs were asked, “Does participation in PSNP Direct Support influence the decision about changes in the participant list?” Although the baseline study found that ‘double-dipping’ with SCTPP and PSNP Direct Support was prevented by moving PSNP participants to SCTPP, only CCC members in Sebebera reported continuation of that process. CCC members in May Nebri reported that this switch used to occur but PSNP Direct Support had stopped. In Seneale, CCC members reported that ‘double-dipping’ did not occur, but they did not report how it was prevented. CCC members in Bahri Tseba reported that PSNP did not influence their decisions about SCTPP at all; PSNP is not available in Abi Adi.

After a death, the CCC and focal person will report to the woreda social worker. The community will select a new participant. A report will be sent to the woreda. The woreda social worker checks and then approves for the new participant to be included. There are always waiting lists for the new participants. The community discusses whether the newly proposed participant is eligible or not and validates the selection of the new participant. The household that replaces a participant, the new household, will receive the amount that was available for the replaced participant. The budget has already been allocated so it is not possible to make adjustments for changes in beneficiary numbers. The budget is fixed [BO].

A feature of the initial targeting of the SCTPP was the effort put into communicating how beneficiary selection took place. As part of the qualitative fieldwork, we explored whether SCTPP beneficiaries and non-beneficiaries understood these processes. Respondents generally understood the reasons for replacing participants. They noted death as both the main change to the participant lists and the main reason for needing to have a replacement process. One respondent in Abi Adi also noted that replacements occurred because of ineligibility, and a few respondents mentioned migration. A few reported not knowing about replacements, nor who was a replacement on the participant list.

Yes, there were changes in case of death of participants. The extended family of a single household participant can only receive cash for one month [PM #4/S].

Yes, there is a replacement for those who died and have no wife and children to receive the money [CCnF/MN].

Only because of death, I do not know other cases except death [PF #2/S].

If a person is dead someone who is not dead should have use of that money. The dead person can't use that money [PF #3/MN].

Two women were changed because they are no longer eligible [PF #6/AA].

Yes, if people are dead or change Tabia [PF #6/MN].

I know there are beneficiaries who are dead but I don't know who replaced them [EPF #2/MN].

I don't who was replaced because the replaced is not endorsed by the community [PM #1/AA].

For those participants who had been through the replacement process, most (but not all) reported first lodging a complaint for inclusion.

Before I become a participant in SCTPP, I used to participate in PSNP Public Works Programme. Since I am a victim of HIV/AIDS, I couldn't continue working properly in the PSNP Public Works. Then I brought a paper about my sickness and applied for the SCTPP. I have waited for about 6 months and replaced when a

participant was dead. The amount that the deceased has been receiving was birr 155, but I have 3 children and I am eligible to get birr 225. Now I getting birr 155 the amount received the dead person [PF #3/MN].

I was complaining from the beginning to the Tabia Administration. I didn't stop making a complaint. I have 2 children, the girl is in school and the boy is 30 years old. Finally, I start getting birr 190 from November 2013. I waited for about a year [EPM #5/S].

When asked if they agreed with the changes, participant respondents reported mixed views. Several reported that they did not know enough about the changes to have an opinion. However, those who did know about specific new participants reported that they agreed with the changes, since the new participants demonstrated high need.

We have no information about the changes [PF/BT].

Yes the changes are made among poor households; I met replaced households at the pay point and I realized that all of them are poor [PF #5/S].

Yes, I agree with the changes, because the replaced people are poor and aged [PM #6/MN].

The baseline study (Berhane et al. 2012b) found that both participant and nonparticipant households generally accepted the targeting criteria. SCTPP participant respondents in the follow-up study generally, but not always, perceived the process to be fair.

The nonparticipant poor households are registered in a waiting list and if a single participant is dead the CCC immediately selects from the list, which makes the process transparent [PM #4/BT].

It is fair and there was a meeting at kebele level to endorse these replacements [PF #6/AA].

Yes the process is fair because the decision is made at committee level, not by individuals [PM #5/BT].

Yes, it was a fair process, those replaced are poor and it was also endorsed by the woreda Labour and Social Affairs Office [PF #5/MN].

I am not involved in the replacement process. It is the mandate of the CCC and it is difficult for me to judge the process [PM #5/MN].

Yes, it was fair, those replaced were left out in the beginning due to quota problems [PF #3/MN].

Only a few nonparticipant respondents reported knowing how changes were made to the participant list. Most did not know and they reported no opinion on the transparency of the process, or did not believe it was transparent. This lack of knowledge may not be surprising

since few reported being involved in the public meetings for community endorsement mentioned by the CCC members; one of these three was a CCC member himself. The majority of respondents were either not involved in the process at all or only involved in that they submitted complaints regarding including specific people through the replacement process.

I was involved in a public meeting to endorse the replaced new participants [CnF #1/BT].

We were not involved because it was not presented to the community. The replacement was carried out by the Tabia administration [CmF/AA].

Yes I made complaints to the Tabia CCC to include me, but the CCC told me there is a quota for no further inclusion [CCnM/BT].

When nonparticipant respondents were asked, “Do you understand why you do not receive SCTPP cash? Do you think it is fair that you do not receive SCTPP cash”, all comparison group respondents reported believing that the process was fair because they were better off than SCTPP participants. Control group respondents had more mixed opinions. Some believed their exclusion was fair because they had more resources, but several others argued that they did not have more resources than SCTPP participants, or that their resources had changed since the initial targeting so their exclusion was unfair. Some also mentioned understanding the quota that was in place, but did not comment on whether or not they believed it to be fair.

Those people receiving SCTPP cash are poorer than me. When such households receive the cash, it is fair [CmM #1/BT].

We are better off than those SCTPP recipients and it is fair that we didn't receive SCTPP cash [CmF/AA].

I know that the participants are poorer than me. I have a pension of 150 birr/month [CnF #1/BT].

I am widowed and have 4 children. I should have been included in the program but they told me that I can work. Now I am sick and couldn't support my family. It is not fair that I didn't participate in the program [CnF #5/MN].

They told me that I am eligible to receive the money but due to the quota problem, I was not included [CnM #1/S].

5.7 Summary

Targeting processes in the SCTPP work well. *Woreda* and *tabia* officials, CCC members, and SCTPP participants demonstrated sound knowledge of the eligibility criteria and confirmed that the targeting procedures had been correctly applied in all communities surveyed. At baseline, there is very little evidence of inclusion error. However, there is substantial exclusion error, or undercoverage. Many households that do satisfy the eligibility criteria were excluded from the SCTPP because a budget constraint meant a quota had to be applied. Although there was broad

acceptance of the eligibility criteria and the targeting decisions, these households that were initially selected, but later cut, were most likely to perceive the targeting process as unfair. The CCCs played an important role in explaining the eligibility criteria and increasing acceptance of targeting processes among nonselected households.

Retargeting is limited. There were few instances where households were subsequently dropped from the SCTPP either because they had been erroneously included or because their living conditions had changed so much that assistance was no longer needed. Given a fixed budget, this meant that the number of new entrants was limited to the number of places on the program that opened up subsequent to the death of a beneficiary. Inclusion of new households drew heavily on existing targeting criteria. However, unlike the initial targeting process, there appears to have been less effort to communicating to non-beneficiaries how re-targeting was undertaken. Efforts were made to ensure that these inclusions maintained the existing gender balance of the program and that this process was communicated to the wider community.

6. Payment Processes

6.1 Introduction

Payment processes and payment delivery systems are important components of any cash transfer program. No matter how well designed and targeted, failure to pay beneficiaries in a timely and complete fashion will drastically limit the impact of any transfer program. For this reason, payment processes were a major focus of the baseline report on the SCTPP (Berhane et al. 2012b). This showed that across numerous aspects of program implementation, the SCTPP performed exceptionally well. Virtually all beneficiaries reported that they receive their payments on time, more than 90 percent reported being paid in full, and 82 percent reported that they were treated courteously by program staff. Few beneficiaries miss their payments and when this does occur, there were mechanisms in place to address this. There was, however, one significant cause for concern, distance to pay points in Hintalo Wajirat. The initial decision to have only three pay points reduced implementation costs, it meant that many beneficiaries had to travel long distances to obtain payments. Distance creates particular problems for women, who must leave pay points early in order to be back home in time for domestic responsibilities, and for the elderly and sick, who cannot travel long distances in one day, especially in difficult terrain. The use of designates was seen as a way of addressing this but program staff had observed that this created other problems. Where designates were unable or unwilling to collect the payment every month, the objective of ensuring that payments are received monthly was threatened. Some designates received money for collecting these payments and there are a nontrivial number of cases where the designate had essentially kept the payment.

SCTPP payments began in both Abi Adi and Hintalo Wajirat in August 2011, with the exception of one *tabia*, Bahri Tseba, where payments started in June 2012, just after the first household survey.¹¹ The payment process is outsourced to a private microfinance institution, Dedebit Microfinance Institution (DECSI). The SCTPP operates a “pull” delivery mechanism; program participants collect their payments from designated payment points that are operated by DECSI (mostly DECSI offices). Initially, there was one payment point in Abi Adi and three in Hintalo Wajirat. After the workshop discussing the baseline report in November 2012, a fourth pay point was added in Hintalo. Payments are made on the same day every month in the respective *woredas*, according to a fixed schedule. If this day is a Saturday or a Sunday, payments are made the following Monday. Payments are made in public. Although the payment process is outsourced to DECSI, *woreda*- and *tabia*-level program staff and CCC members are present at the pay points to supervise the process and solve potential problems. Payment size is determined by the number of household members and their characteristics. The basic household grant for one or two adults is 155 birr. The household receives 25 birr for each child under the age of 16 plus an additional 10 birr if the child is enrolled in school, for a maximum of four children. Additional payments are made if there is a disabled child younger

¹¹ Payments in Bahri Tseba were backdated to February 2012, so that participants received four months of payments in June 2012.

than 18 (40 birr), a disabled adult (50 birr), or an elderly dependent (60 birr).¹² Payment levels were not changed over the two year period covered by the household surveys in May 2012 and June 2014.

This chapter updates our 2012 assessment of SCTPP payment processes. We examine participants' experiences with payment processes, the use of designates, and receipt of payments.

6.2 Households' Experiences with Payment Processes

Beneficiaries were asked a series of questions regarding their experiences with the payment process. We begin with basic information on whether they understood how the program worked, whether payments were received in full and in a timely manner, and whether they were treated courteously by program staff. Results are shown in Tables 6.1–6.3 below.

Table 6.1 Proportion of beneficiaries reporting agreement with statement, "I generally receive my payments on time," by *woreda* and survey round

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Can't say
BASELINE (2012)						
(percent)						
Abi Adi	35.3	62.4	0.5	0.7	0.5	0.9
Hintalo Wajirat	27.3	66.6	1.7	1.9	1.4	1.1
Total	29.3	65.5	1.4	1.6	1.2	1.0
ENDLINE (2014)						
Abi Adi	65.9	33.6	0.3	0.2	0.0	0.0
Hintalo Wajirat	73.5	24.7	0.0	0.3	0.5	1.0
Total	71.6	27.0	0.2	0.2	0.3	0.7

Notes: Baseline sample sizes are 829 (Hintalo Wajirat) and 599 (Abi Adi). Bahr Tseba is excluded from calculations for Hintalo. Percentages may not sum to 100 due to rounding.

Table 6.2 Proportion of beneficiaries reporting agreement with statement, "I received my payments in full," by *woreda* and survey round

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Can't say
BASELINE						
(percent)						
Abi Adi	34.8	60.7	2.9	0.6	0.3	0.7
Hintalo Wajirat	27.6	64.1	3.6	3.1	1.1	0.6
Total	29.4	63.2	3.4	2.5	0.9	0.6
ENDLINE						
Abi Adi	60.0	38.9	0.6	0.4	0.0	0.1
Hintalo Wajirat	73.6	23.6	0.8	1.0	0.1	0.9
Total	70.2	27.5	0.7	0.8	0.0	0.7

Notes: Baseline sample sizes are 829 (Hintalo Wajirat) and 599 (Abi Adi). Bahr Tseba is excluded from calculations for Hintalo. Percentages may not sum to 100 due to rounding.

¹² These payment levels were determined prior to the start of payments, based on household composition at that time.

Table 6.3 Proportion of beneficiaries reporting agreement with statement, “I was treated courteously by staff,” by *woreda* and survey round

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Can't say
BASELINE						
(percent)						
Abi Adi	30.3	64.1	3.1	0.6	0.0	1.9
Hintalo Wajirat	19.1	59.5	7.5	11.8	1.0	1.1
Total	21.9	60.7	6.4	9.0	0.7	1.3
ENDLINE						
Abi Adi	60.0	36.6	1.7	0.6	0.2	1.0
Hintalo Wajirat	56.6	32.4	1.8	0.7	0.8	7.6
Total	57.5	33.5	1.8	0.7	0.7	5.9

Notes: Baseline sample sizes are 829 (Hintalo Wajirat) and 599 (Abi Adi). Bahr Tseba is excluded from calculations for Hintalo. Percentages may not sum to 100 due to rounding.

Across these aspects of program implementation, the SCTPP performs exceptionally well. At baseline, virtually all beneficiaries report that they receive their payments on time with more than 90 percent report being paid in full, and 82 percent reporting that they were treated courteously by program staff. This high level of program performance appears to have been maintained throughout the life of the programme. As part of the qualitative fieldwork, respondents were asked about their experiences with payments; this feedback was also quite positive. It is also worth noting again that the fact that payments are made in public does not appear to be a problem; no-one recommended that payments should be done privately or silently. It was felt that since it is a public program, payments should be made in public and that public payments make the process more transparent.

At baseline (May 2012), virtually all participants reported walking to the payment point. While this is largely true at endline (May 2014) with 94 percent of beneficiaries walking to the pay point, it is worth mentioning that in a few *tabias*—Tsehafti and Seberbera—between 25 and 35 percent of beneficiaries—report taking a bus, something only possible as a result of the improvements in the road network within Hintalo Wajirat. When public transportation is available, as reported in Sebebera, it requires a small but significant amount to pay for the service with respondents in the endline survey reporting spending 5-10 birr each way.¹³ One respondent commented.

The major difficulty in the transfer is the distance. It is 3 hours to walk each way, so we use public transport. It costs 10 birr each way [Endline/EPM/Pilot].

In 2012, distance did not appear to be an issue in Abi Adi or in *tabias* where most participants live close to the tarmac road and pay point (see Table 6.4 and Figure 6.1). These show that on average, beneficiaries in Abi Adi travelled for about 30 minutes to reach a pay point, with relatively few travelling for more than three hours. However, travel times in Hintalo Wajirat were longer, averaging about two hours and 20 minutes; three out of four beneficiaries in Hintalo reported travelling more than one hour to the place where they are paid and 20

¹³ We also asked whether beneficiaries had to stay overnight at the pay point. Less than five percent of households reported doing so and less than two percent reported incurring any accommodation costs.

percent travelled for more than three hours. Participants in more remote *tabias*, or in remote localities within that *tabia*, however, indicated the distance to be a real challenge in collecting payments. In Tsehafiti, virtually all beneficiaries travel for more than three hours and in Tsehafiti and Adi Keyih, 53 and 34 percent (respectively) of beneficiaries report travelling more than four hours or more to obtain their payments. The issue of travel times also arose in our baseline qualitative fieldwork with long distances being seen as especially problematic for the elderly.

From Senale to Bahri Tseba there is not any means of transport and it is three hours travel on foot.¹⁴ So, there is a distance problem for the elders [Baseline/CCC/S].

Table 6.4 Time needed to reach pay point, by *woreda*

<i>Woreda</i>	Mean time	Distribution of travel times (percent)			
	Hours	0–30 minutes	30 min–1 hour	1–3 hours	>3 hours
BASELINE					
Abi Adi	0.58	70.8%	24.7%	4.2%	0.3%
Hintalo Wajirat	2.36	8.0	15.9	55.3	20.8
ENDLINE					
Abi Adi	0.37	88.0%	10.0%	2.0%	0.0%
Hintalo Wajirat	1.56	27.0	21.6	43.2	8.1

Source: Household survey.

Note: Note that for comparability purposes, Bahr Tseba is excluded from both the 2012 and 2014 figures.

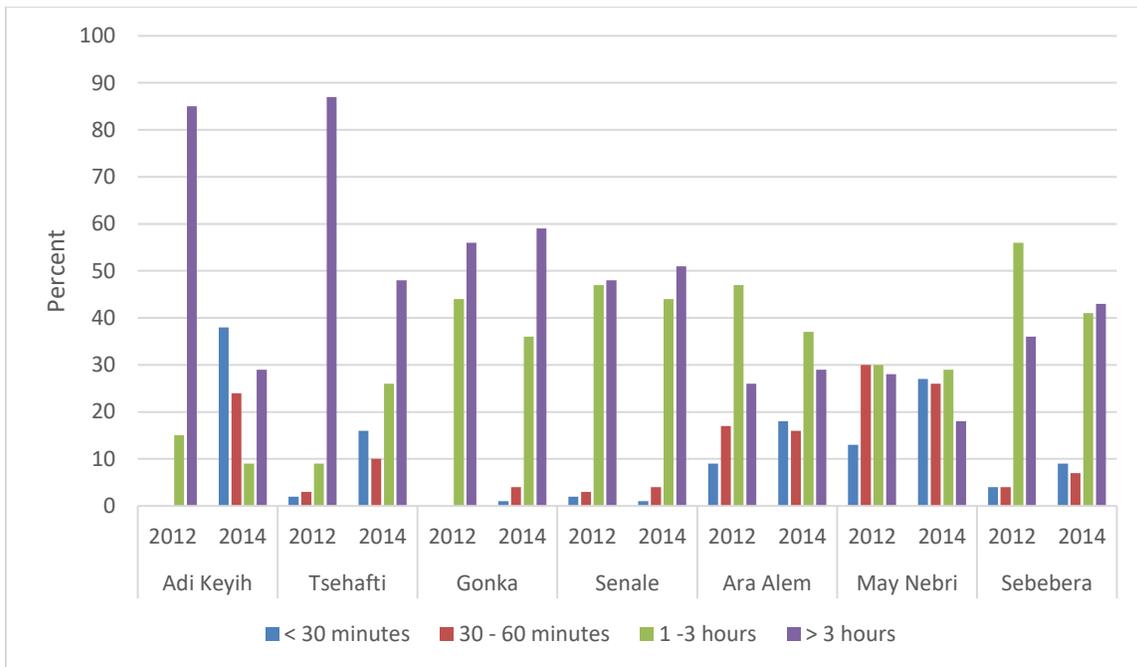
The addition of a fourth pay point and improved transport links within Hintalo resulted in reductions in travel times to pay points by 2014. Mean travel times in Hintalo declined by approximately 45 minutes from, 2.36 hours in 2012 to 1.56 hours in 2014. There was a major reduction in the proportion of Hintalo SCTPP beneficiaries who had to travel for more than three hours, from 20.8 percent in 2012 to 8.1 percent in 2014. Figure 6.1 shows that these reductions were especially marked in Adi Keyih and Tsehafti. However, some SCTPP participants in Sebebera expressed concern over long waiting times:

*[T]he queue is very long, and they have to wait for a long time. Sometimes people come at 9am and have to wait until 4pm. There are no differences between men and women. The difficulties would be solved if the payment was done in the *tabia* [Endline/CCC/Pilot].*

At endline, as at baseline, there were virtually no reports of beneficiaries being robbed or harassed as they travel to the pay points and back home.

¹⁴ In the household survey, 58 percent of respondents in this *tabia* indicated that they took three hours or more to reach the pay point, a figure consistent with that reported by the CCC.

Figure 6.1 Time needed to reach pay point, by *tabia*, 2012 and 2014



6.3 The Use of Designates

Regional and woreda staff involved in the design of the SCTPP were aware that long travel times over rugged terrain might pose significant problems for disabled or elderly beneficiaries. For this reason, program participants can designate someone else to collect payments on their behalf. As discussed in the baseline report (Berhane et al. 2012b), to collect the payment, the participant or designated person has to bring their SCTPP certificate and proof of identification. Designating someone else is done by adding a second person to the SCTPP certificate. Designation has to be officially approved and signed off by the *tabia* manager. The information on the certificate for both the program participant and designated person includes a photo and requires a stamp from the *tabia* manager (Figure below). The certificate also records each payment received.

Figure 6.2 Sample SCTPP certificate with designate



Beneficiaries were asked who collected their last payment and, if a designate was used, why they were used. Responses are given in Tables 6.5 and 6.6.

Table 6.5 Who collects payments, by *woreda*

Who collected payment	Abi Adi		Hintalo Wajirat		All respondents	
	2012	2014	2012	2014	2012	2014
	(percent)					
SCTPP beneficiary	77.5	78.2	42.5	49.8	51.4	56.6
A male household member	4.4	2.9	8.5	5.9	7.4	5.2
A female household member	9.3	11.1	13.2	16.6	12.2	15.3
A relative who is not a household member	6.2	4.6	34.6	26.6	27.4	21.4
A neighbor	2.4	2.0	0.8	0.6	1.2	0.9
A friend	0.0	0.2	0.1	0.0	0.1	0.0
A member of the CCC	0.2	0.4	0.1	0.0	0.1	0.0
A <i>tabia</i> official	0.0	0.6	0.0	0.0	0.0	0.1
Other	0.0	0.0	0.2	0.6	0.1	0.6

Source: Household survey.

In 2012, about three out of four SCTPP beneficiaries in Abi Adi collected the payment themselves. By contrast, in Hintalo Wajirat less than half of all beneficiaries did so. The improvements in access to pay points (the addition of a fourth pay point in Hintalo along with better road access) appears to have led to a reduction in the use of designates, particularly in Hintalo where the percentage of payments collected by a relative who is not a household member fell from 34.6 to 26.6 percent between 2012 and 2014. Consistent with this, there is a large reduction in the percentage of respondents who indicate that they do not pick up their payments because the pay point is too far away (Table 6.6). The use of designates was also explored in the endline qualitative fieldwork. Few SCTPP participants reported to have designated others to collect their payments. The choice to designate another person was often related to distance, with participants who live further away from a pay point and are less mobile being more likely to rely on a designated person. Participants who did not designate reported ease of accessibility as a main reason for not needing to designate someone to collect the payment.

Table 6.6 Why the beneficiary sends someone else to collect payments, by *woreda*

Why does someone else go?	Abi Adi		Hintalo Wajirat		All respondents	
	2012	2014	2012	2014	2012	2014
	(percent)					
Too far for SCTPP beneficiary to travel	11.2	2.6	55.2	9.9	50.3	9.3
SCTPP beneficiary is disabled	67.1	30.6	31.0	12.4	35.0	13.9
SCTPP beneficiary has to look after children	0.9	0.0	0.3	0.0	0.3	0.0
SCTPP beneficiary has to do household tasks	0.0	2.1	0.3	0.0	0.3	0.2
SCTPP beneficiary has to work on farm	0.0	0.0	0.5	0.5	0.4	0.3
SCTPP beneficiary was running own business	0.0	0.0	1.4	0.0	1.3	0.0
SCTPP beneficiary has to do wage work	0.0	0.0	0.0	0.0	0.0	0.0
SCTPP beneficiary is too old to travel	–	55.1	–	66.5	–	67.7
SCTPP beneficiary is a child				1.4		1.3
Other	20.8	9.6	11.3	7.7	12.3	7.3

Source: Household survey.

The baseline report indicated that many SCTPP participants reported designating someone else to collect payments for them. Designated persons were often rewarded in cash or in kind and sometimes conflicts arose as a result of this designation process. The 2012 data indicated that in 21 percent of cases (approximately 100 observations out of 484) when the beneficiary sent someone else to collect payment, that person was paid to do so. There were some instances where the amounts paid are considerable. The vast majority of these payments, 94 percent, were greater than 100 birr with two-thirds of these being 155 birr. Out of these 100 observations, 43 were instances where a nonhousehold member collected the payment on behalf of the designated beneficiary and was paid 155 birr for doing so.

By May 2014, both the quantitative (see Table 6.5 above) and qualitative data indicated that designated persons were increasingly likely to be household (and nearly always family) members. Focus group discussions indicated that, in contrast to the baseline findings, SCTPP participants reported that they usually did not pay for this assistance. The quantitative findings are consistent with this, with the proportion of designates who received a payment falling to 7.6 percent. Out of the 563 beneficiaries who reported using a designate, only 18 (3.5 percent) reported paying the designate more than 50 birr. Only two reported instances where the SCTPP payment was picked up using their beneficiary card but they did not receive the money. Problems with designating someone else appeared to be exceptions rather than rule. When problems were encountered, different arrangements for collection were made quickly, usually with the help of the CCCs.

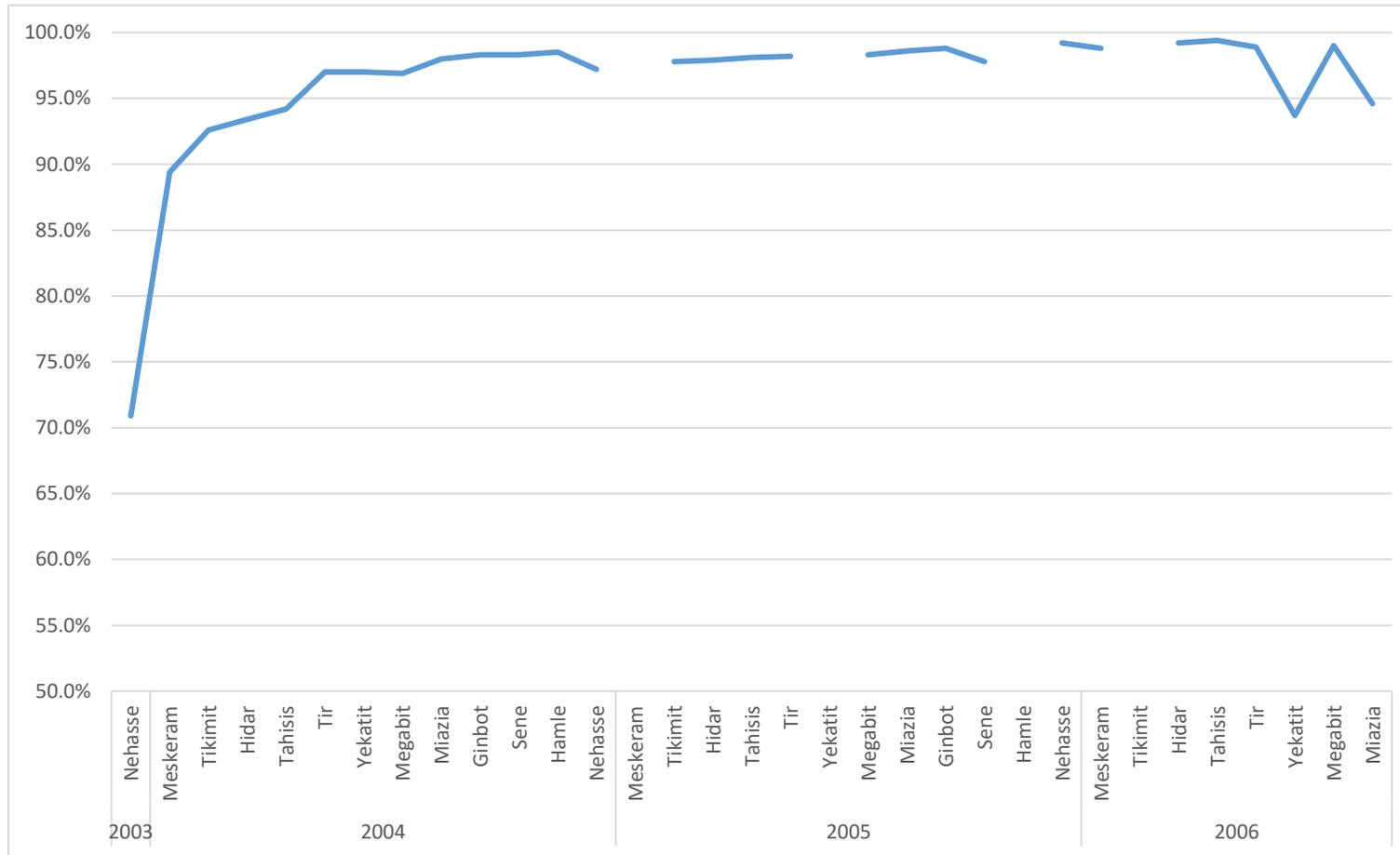
My son didn't pay me for two consecutive months, and I dropped my designation and started to collect by myself [Endline/PF/S].

There was a woman and the designated is her son. The designate didn't give the money to his mother, then we told him to give her the money, and we have changed the designated [Endline/CCC/BT].

6.4 Payment Receipt

As noted in the introduction, a failure to pay beneficiaries in a timely and complete fashion drastically limits the impact of any transfer program. The baseline and monitoring surveys showed that regular payments were being made under the SCTPP. Figure 6.3 updates these findings.

Figure 6.3 Percent SCTPP beneficiaries reporting payment, by month



SCTPP payments are remarkably regular. Once the program was fully operational, more than 95 percent of beneficiaries received their payments each month. Impressively, this high frequency of payments were maintained over the full duration of the SCTPP.¹⁵

Table 6.7 gives the reasons why people missed their payments by survey round. While being too ill to travel or having no one available to collect payment on behalf of the beneficiaries were the reasons given most often for why payments were missed. But it is important to recognize that these instances are few—between 10 and 60 cases depending on the survey round. Apart from the baseline survey and one monitoring survey, there were virtually no cases where respondents missed payments because they did not know that payments were being made. Other reasons, such as payments interfering with agricultural activities or lack of transport were even more rare.

Table 6.7 Why was payment not collected

	Baseline	MS1	MS2	MS3	MS4	MS5	Endline
Percent of respondents who missed payment	3.5%	1.5%	0.9%	3.1%	2.2%	4.0%	3.2%
Reasons why payment was not collected	(Number)						
Interfered with agricultural activities	5	1	1	1	1	1	1
Too far to travel	7	1	2	3	3	5	1
No transport available	3	1	–	–	11	1	1
Too sick to travel	32	11	6	6	10	22	31
No one available to obtain payment	7	6	4	8	3	37	15
Did not know payment was being made	40	–	2	26	9	–	2
Number of responses	94	20	15	44	37	66	51

Source: Household survey, all rounds.

Finally, we consider whether beneficiaries register complaints about payments or payment processes (Table 6.8).

Table 6.8 Number of complaints, by type and round

	MS1	MS2	MS3	MS4	MS5	Endline
Percent of respondents who made a complaint	3.0%	3.5%	4.1%	2.5%	2.6%	4.2%
Nature of complaint	(Number)					
Level of the transfer is not enough to cover our needs	34	43	43	28	30	37
Level of transfer is less than what we are entitled to receive	21	16	13	8	12	13
Level of transfer was changed	7	4	4	1	1	1
Payment was late	1	1	7	2	–	1
Payment not paid in full	3	4	3	5	4	1
Problem with designate	–	2	–	–	–	2
Payment problems due to a divorce or separation	1	4	2	2	–	3
Number of responses	67	74	72	46	47	58

Source: Household survey, all rounds.

Note: Recall period is since the last survey.

The recall period for Table 6.8 is since the last survey, a period of time somewhere between three and five months. The percent of respondents who make a formal complaint is

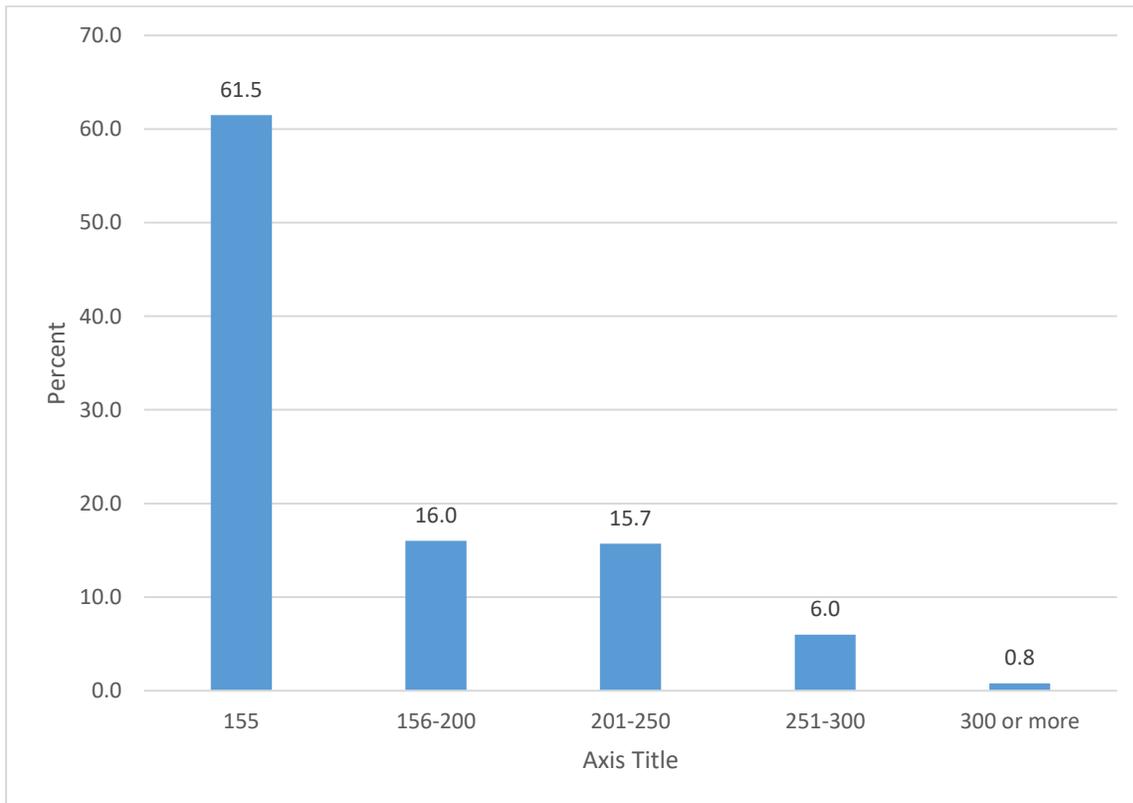
¹⁵ The “breaks” in Figure 6.3 occur because of the timing of certain survey rounds did not cleanly match payment dates leading to gaps in reporting.

between 2.5 and 4.2 percent; on a monthly basis this corresponds to a complaint rate of 1 percent. The vast majority of complaints reflect the desire of beneficiaries to be paid more than what is set out in the program documents. There are a few complaints about payments being less than entitlements or that payment levels were changed. There are occasional concerns about designates and problems arising from household dissolution.

6.5 Payment Levels

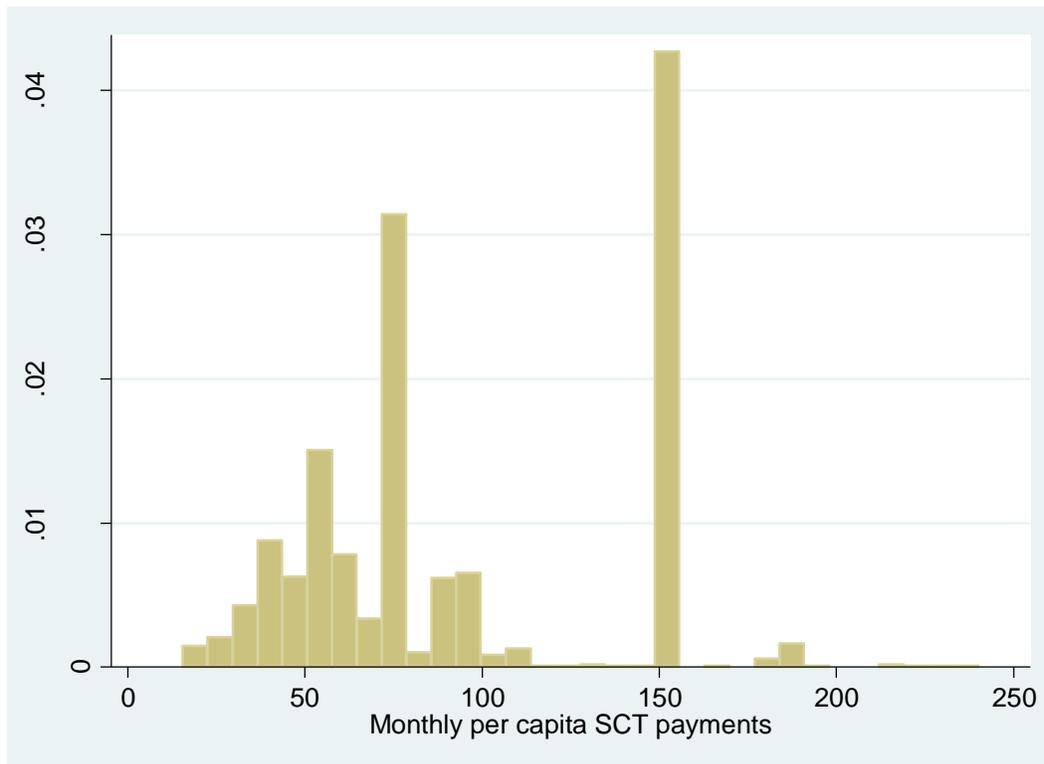
Payment levels were set in 2011. The basic grant is 155 birr per household. Additional payments are made where there are elders in the household, individuals who are disabled, children and children who attend school (though this does not appear to have been closely monitored). Payments were not adjusted to account for inflation. Mean payments were approximately 180 birr per month. However, this mean figure is somewhat misleading as Figures 6.4 and 6.5 show.

Figure 6.4 Distribution of payments, household



Source: Monitoring survey 3.

Figure 6.5 Distribution of payments, per capita



Source: Monitoring survey 3.

Figure 6.4 shows the distribution of payments measured at the household level. The vast majority of households receive the basic payment of 155 birr. Less than 25 percent receive more than 200 birr and fewer than seven percent receive more than 250 birr. Figure 6.4, however, does not account for household size and so in Figure 6.5 we show the distribution of per capita payments. While there are a number of single person households receiving 155 birr, median per capita payments are only 77 birr per person. This relatively small transfer level may well limit the impact of the intervention, a point we return to in subsequent chapters.

6.6 Summary

SCTPP payment processes consistently worked well across the two years of this study. At baseline, virtually all beneficiaries reported that they receive their payments on time with more than 90 percent report being paid in full, and 82 percent reporting that they were treated courteously by program staff. This high level of program performance was maintained throughout the life of the program. SCTPP payments are remarkably regular. Once the program was fully operational, more than 95 percent of beneficiaries received their payments each month. This high frequency of payments were maintained over the full duration of the SCTPP. There are few recorded complaints.

At baseline, there was some concern over distances that beneficiaries in Hintalo had to travel in order to reach pay points. While the use of designates provided some clear

advantages, in 2012 designated persons were often rewarded in cash or in kind and sometimes conflicts arose as a result of this designation process. The 2012 data indicated that in 21 percent of cases when the beneficiary sent someone else to collect payment, that person was paid to do so. Both issues had been largely resolved by endline. The additional pay point in Hintalo, along with improvements in the road network, has led to reduction in travel times. By May 2014, designated persons were increasingly likely to be household (and nearly always family) members and these individuals were much less likely to be paid for their assistance. The proportion of designates who received a payment fell to 7.6 percent and out of the 563 beneficiaries who reported using a designate, only 18 (3.5 percent) reported paying the designate more than 50 birr. Problems with designating someone else appeared to be exceptions rather than rule. When problems were encountered, different arrangements for collection were made quickly, usually with the help of the CCCs.

While payments are made reliably, the level of payment is low. The median per capita payment was 77 birr per month and this amount was not adjusted to account for inflation. This may limit the impact of the SCTPP; an issue we return to in subsequent chapters.

We end by noting that there was considerable interest in seeing how payment processes could be further improved through the use of M-BIRR mobile money technology. This was piloted by the SCTPP after our endline survey work was completed. For information, we include—as an annex to this chapter—notes prepared by BOLSA on the use of this technology.

6.7 Appendix: M-BIRR Mobile and Agent Banking Sustainability and Outreach¹⁶

Background

In the Tigray Region of Ethiopia, Bureau of Labor and Social Affairs (BoLSA), UNICEF and a number of donors including Irish Aid, initiated the Tigray social Cash Transfer Program (TSCTP). The program, started in 2011, aimed at reducing poverty and hunger in extremely poor and labor constrained households in the Tigray region. From 2011 to 2014, 3,367 households received a monthly cash payment of a least 155 birr (approx. 8 USD)¹⁷ made by Dedebit Microfinance Institution (DECSI) through 5 payment distribution points. To receive benefits, TSCTP beneficiaries were challenged by:

- Payment points that on average are 10-20 Km away from their houses ;
- Transportation costs of about 20 birr (approx. 1 USD) to reach the payment points;
- About 80 per cent of beneficiaries are elderly –and some of them are children, so they were forced to delegate someone for collecting the payment on their behalf;
- Long queues and waiting time (several hours) at some distribution points

¹⁶ Prepared by the Bureau of Labor and Social Affairs – Mekele, Ethiopia – January 2015.

¹⁷ The minimum monthly payment per beneficiary is 155 birr (approx. 8 USD). It can increase depending on the number of beneficiaries in the household and the special conditions of the beneficiaries (i.e., dependence grant within the household for out of school children, disabled members and elderly).

- Limited payment days (maximum of 4 days in a month).

Objectives and Benefits of the M-BIRR Pilot

To overcome the difficulties faced by beneficiaries, in early 2014, under the initiative of BoLSA, Irish Aid and UNICEF, the decision was made to Pilot the M-BIRR Mobile Money Service to deliver the cash transfer. In the Tigray region, DECSI is the provider of the M-BIRR Mobile and Agent Banking Service. Mobile & Agent Banking allows a financial institution to set-up a large number of Agents (e.g. shops) in areas where it has no branch, without any capital expenditure costs. The electronic payment is paid in to the M-BIRR household¹⁸ account on a monthly basis and withdrawals may be carried out by the beneficiaries at their convenience without any time or date constraint, or associated fees.

As such the potential benefits of the M-BIRR service are clear:

- **Proximity and cost reduction for households:** By setting up four DECSI M-BIRR branches and accrediting four proximity Agents within most communities;
- **Financial Inclusion:** In communities where no financial services were available before the TSCTP, all households now have a DECSI M-BIRR account in which family members working in the cities or even abroad could conveniently send money to;
- **Convenience:** The replacement of five payment points by a large number of branches and proximity Agents gives the beneficiary more flexibility to withdraw their cash whenever is convenient to them (any time after transfer from DECSI); removes the risk for beneficiaries of missing their monthly payment due to illness and any circumstances that may prevent them of their proxies to present themselves at the former payment points and removes the queues and long waiting periods;
- **Fast reporting process easier monitoring:** The system generates automatic reports;
- **Better auditability:** All electronic transactions are recorded and time stamped;
- **Scalability:** Easily replicable in other areas and/or regions;
- Very **secured** and free from theft;
- Uses **mobile network** and an **off line** version is currently under development.

Challenges

The first phase of the TSCTP M-BIRR Pilot were dedicated to grassroots awareness and feedback collection from households and social workers involved in the TSCTP. It transpired that households targeted by this program are so poor that none of them had a mobile phone. It also became clear that due to the remoteness of some rural areas and the age of the beneficiaries, having to remember a secret PIN for accessing their DECSI M-BIRR account through the Agent's phone would be extremely challenging for them. Based on these findings, the program

¹⁸ Even though the account is in the name of one household member; often the head of a household, payments may target more than one beneficiary in the household.

stakeholders then asked the M-BIRR Service technology provider (MOSS) to come-up with an alternative solution.

Innovation

The solution designed to overcome these challenges relied on Agents being equipped with an Android smartphone with an integrated NFC (Near Field Communication) reader and each Household receiving a NFC wrist band containing their secret PIN. The PIN can only be read by the agent's smartphone and is not visible on the NFC bracelet. The combination of photo ID card, account number and secret PIN allowed every household to securely withdraw money from their DECSI M-BIRR account from their nearest Agent.



Scalability

The M-BIRR Mobile Money Service is now delivered nationwide in Ethiopia by the 5 largest Microfinance Institutions through the sole existing mobile network delivered by Ethio-Telecom.¹⁹ The M-BIRR service is delivered to users throughout Ethiopia through USSD, a GSM legacy technology available on all phones new and old. After the successful pilot experience in the TSCTP, the M-BIRR Mobile Money Service is now expanded to the Oromia region by the Productive Safety Net Program (PSNP), one of the largest African social protection program, starting in January 2015.



¹⁹ Additional information on the M-BIRR service; including its fee structure, could be found on: www.mbirr.com.

7. The Impact of SCTPP on Food Security, Diets, and Expenditures

7.1 Introduction

One of the key aims of the SCTPP is to improve the quality of lives of disadvantaged community members such as orphans and vulnerable children (OVCs), elderly and persons with disabilities through providing access to financial resources and social welfare services (Tigray 2011a). The program intervention woredas were selected based on degrees of vulnerability and food insecurity—that is, these are *woredas* with among the highest number of people living under difficult circumstances (OVC, female headed households, persons with disabilities, elderly people etc). It is thus crucial to assess how the program has improved the food security situation and consumption patterns of beneficiary households against the benchmark of comparable non-beneficiary households in the same area. To address these questions and changes in related food security situations raised in this chapter, we use data collected through the SCTPP quantitative household survey fielded, mainly at baseline (2012) and endline (2014) and, in a more limited way, the monitoring surveys and the qualitative fieldwork.

We begin this chapter with a descriptive analysis. How do households spend their transfers; what were the principal sources of food for the household in each month? For how many months has the household been unable to satisfy its food needs? To what extent was food availability seasonal? In which specific month of the year did households experience the most acute food shortage? And what were the key coping mechanisms adopted to overcome the difficulty and what possible implications would such strategies involve looking forward? With this background in place, we assess the impact of the SCTPP on measures of household food security, diets and expenditures.

7.2 How Do Households Use Their Transfers?

As part of the endline survey, households were asked about how they spent their last transfer. Results are reported in Table 7.1. Note that because of the timing of the survey—May and June 2014—we expect agriculture related spending to be low.

Mean payments from the last transfer were 187 birr per beneficiary household. At the time of the survey, respondents indicated that they had spent 105 Birr on food, slightly more in Abi Adi (110 birr) and slightly less in Hintalo Wajirat (101 birr). Expenditures on housing are the next largest item with this also higher in Abi Adi (26 birr) than in Hintalo Wajirat (15 birr). If we exclude the transfers not yet spent, 82 percent of the last transfer in Abi Adi was spent either on food or on housing. The comparable figure for Hintalo Wajirat is 72 percent. Small amounts are given to other household members and little is shared with other households.

Table 7.1 Self-reports on use of last transfer

	All beneficiaries	By location	
		Abi Adi	Hintalo Wajirat
Mean payment (birr)	187	187	188
Mean expenditures by item (birr)			
Food	105	110	101
Rent, house repairs	19	26	15
Nonfood goods that directly benefit children (school expenses, clothes, books, toys, etc.)	6	5	7
Nonfood goods that directly benefit adult males in the household (clothing, alcohol, tobacco, etc.)	3	2	4
Nonfood goods that directly benefit adult females in the household (clothing, cosmetics, etc.)	12	5	16
Goods related to crop production	1	1	1
Given to other household members for their own private consumption	15	12	16
Not yet spent	24	22	26
Shared with other households	2	2	2

Source: Calculated from endline survey data.

Table 7.1 has important implications, not only for this chapter but also for the remainder of the report. Given what we see in Table 7.1 together with the power calculations described in chapter two, it is reasonable to expect some evidence of impact on food related outcomes. But it will be much harder to detect outcomes in other domains, given these self-reported patterns of expenditure.

7.3 Household Food Security

A common definition for food security is “access by all people at all times to sufficient food for an active, and healthy life” (World Bank 1986, 1). Implicit in this definition are three important dimensions of food security; namely (i) availability of sufficient quantity and appropriate quality of food supplied through own production or otherwise; (ii) access by all households and individuals to adequate resources to acquire such food; and (iii) utilization of these food through adequate diet, water, sanitation and health care (Timmer 2012). In subsistence economies, household food security is largely linked to availability of food from households’ home-grown or own production. Gifts and transfers from friends and relatives also play important roles. Food purchases are also common but limited due to lack of liquidity. An important aspect of food security (from either of these sources) in poor rural areas is thus the seasonality of food availability. That is, for example in the case of Ethiopia, food is relatively widely available immediate after the production season, but quickly dwindles as the lean season approaches. It is thus interesting to assess the role of the cash transfer intervention in terms of food availability through purchases, particularly in the context of the project areas where access to credit for consumption is limited.

Households were asked to report their primary source of food in each month of last year. Figure 1.01 shows the primary sources of food by month for beneficiary and non-

beneficiary households measured at baseline and endline. A key message from these figures is that in Hintalo, which is predominantly rural, food availability from own production follows seasonality in production - food availability from own production is low during the lean season from June to September and peaks up in October when the harvest season begins. Food deficits during the lean season and beyond are bridged mainly through purchases. Generally, the percentage of households that reported using own produce and purchase as primary source of food has noticeably increased going from the baseline to the endline. In other words, the importance of other food sources, such as PSNP and gifts and transfers, as primary source of food has declined over time. This is particularly so for PSNP transfers to the beneficiary households, mainly in Hintalo and Bahr Tseba), as they are required to abandon their PSNP beneficiary status to join the SCTPP. However, a closer look at Figure 7.1 (a) and (b) indicates that, beneficiary household purchases have increased substantially between baseline and endline for the months February through September; while the role of own production for the same months during the same period has slightly declined. The reverse is true for the months October through January, which is immediate after production. The increased importance of purchases as primary sources of food in the lean season, which looks to substitute other transfers (both public and private), may be associated with the introduction of the SCTPP. We will come back to this issue in the impact evaluation section.

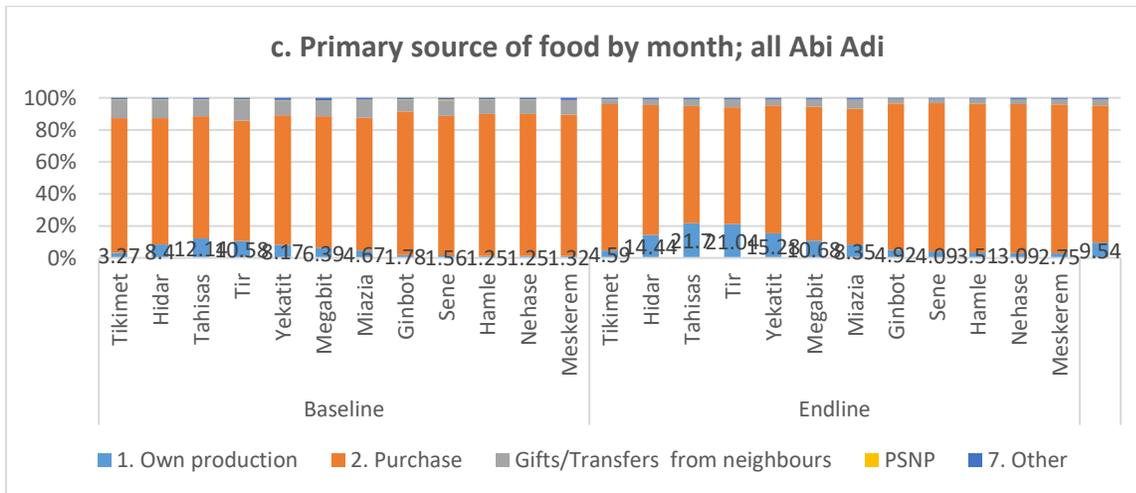
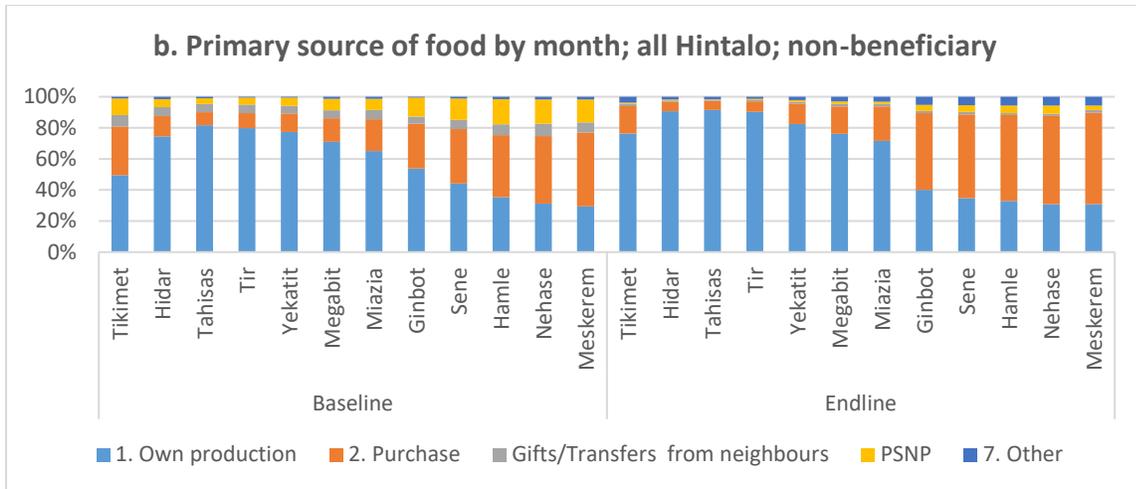
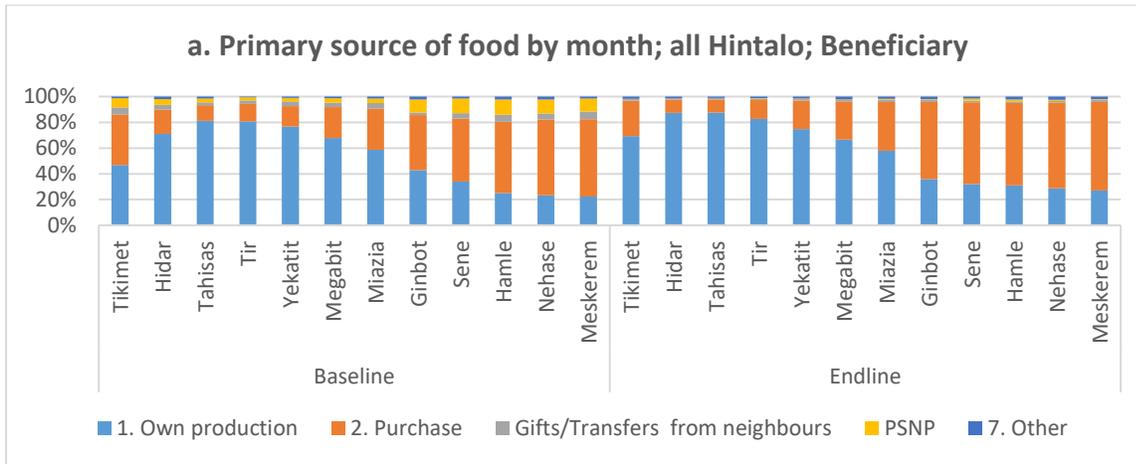
Qualitative fieldwork suggested another explanation. According to both SCTPP participants and woreda and tabia officials, SCTPP participants shifted away from selling their crops as a coping mechanism for meeting household needs. Keeping their crops rather than selling them allowed participants to achieve better food security.

Before the SCTPP we used to sell our crop produce to buy pepper, coffee, and others. Now we are not selling our crops to buy these things, instead we use the cash to buy soap, coffee, school materials, and pepper. When we used to sell our crops we used to go hungry, but now we don't need to go hungry anymore [EPM #3/Pilot].

Most of the participants have land but rented it out to the better off as the participants are women or sick or old. Their crop production is therefore very low because of the sharecropping and they used to sell part of their produce to cover other social and household requirements, which aggravates their food gap within a year. But now the cash covers their all expenses and they stopped the selling of grain from their harvests that prolong their food supply within the household [TO/S].

The discussion on food availability depicts that majority of households in Hintalo rely on purchased food during the lean season of May to September. And, not surprisingly, only a marginal proportion of households from the urban sample, Abi Adi, rely on own production. Given cash constraints in these poor environments, this raises the question whether or not households have access to sufficient food to satisfy their needs throughout the year and, most importantly, whether this has changed with the introduction of the SCTPP.

Figure 7.1 Percent changes of households reporting primary source of food in each month



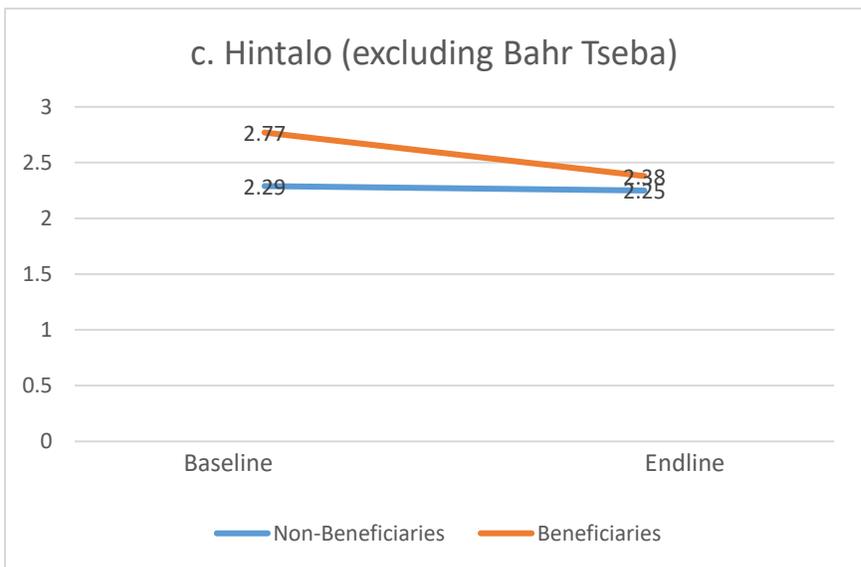
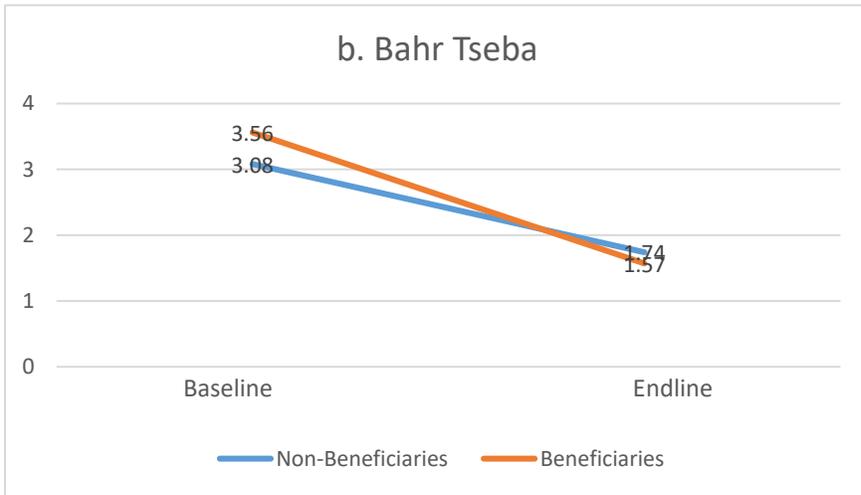
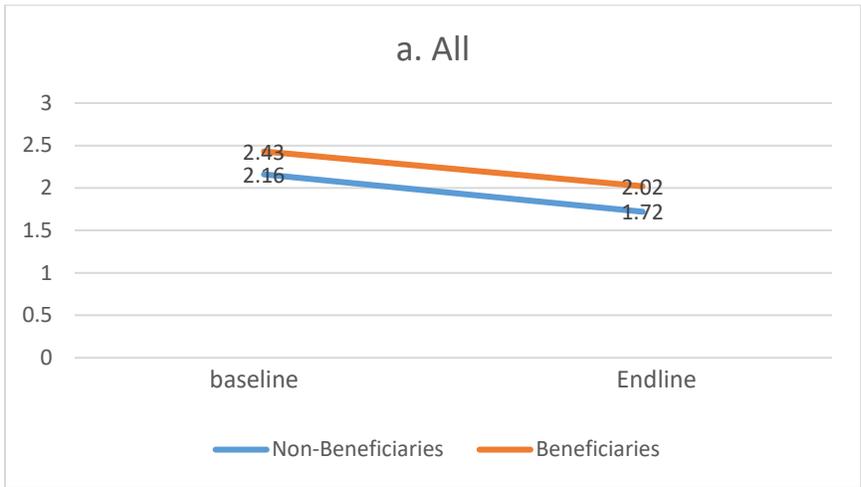
One way to measure this is to directly ask households to report the number of months households were unable to satisfy their food needs the year preceding the survey. Figure 7.2 (a)

– (d) present the number of food shortage months reported by households at baseline and endline, disaggregated by location and treatment status. Three stylized facts can be noted from these figures. First, comparison of unconditional means indicates that the food gap was higher for beneficiary than control households in May 2012, but this should not be interpreted—for the reasons explained in chapter three—as evidence of impact. Second, the aggregate food gap has declined between 2012 (the baseline) and 2014 (the endline) for all households regardless of treatment status: it declined from 2.43 months to 2.02 for the beneficiary households and from 2.16 months to 2.17 months for the control households. Third, in general, households from Bahr Tseba appear to have enjoyed the largest decline in food gap between the two periods (a decline by about two months for beneficiary and by about 1.3 months for control households). Moreover, compared to the controls, beneficiary households in Bahr Tseba have seen the largest decline (of about 0.65 months more than their control counterparts) in food gap. Third, beneficiary households from the urban, Abi Adi, sample (although started off better than the rural, Hintalo plus Bahr Tseba, sample) have had the lowest change in food gap (about 0.2 months) compared to controls in the same area and, compared to their respective controls, the fall in food gap is higher among the rural (i.e., Hintalo and Bahr Tseba) beneficiary households than among the urban (i.e., Abi Adi) households.

Social workers and woreda officials share the impression that the SCTPP has improved food consumption and reduced the food gap in beneficiary households. (*“Participants have escaped extreme hunger—their food consumption has increased” [TSW/Pilot]; “The SCTPP improves nutrition of participants as most of them filled the food gap and it enabled them to use sauces” [WO/AA].*) However, while these facts point to an overall improvement in food gap between the two years, the extent to which this decline is attributable to the SCTPP is not easy to discern from these figures. We will come back to this issue in the impact evaluation section, which rigorously disentangles the SCTPP effects.

Figure 7.2 (a) shows that the average household was unable to satisfy its food needs from all food sources for about 2.3 months (over the 12 months) at baseline and for about 1.87 months (over the 12 months) at endline. Given seasonality of food production in these areas, it is important to assess in which part of the year these critical food shortage months fall and to what extent do these months overlap for majority of households. Households were asked ‘Which month in the last 12 months was the shortage of food most acute for your household?’ Figure 7.3 shows the percentage of households that reported ‘most acute food shortage month’ over the 12 month period by beneficiary status. A key message from this figure is that the hunger season for all households (regardless of beneficiary status) overlaps with the main rainy season (i.e., May to September) in these areas but that the most critical month for the majority (about 25 percent) of households is September, which is the end of the rainy season. It can be noted that only about 5 percent of households report the critical month falls somewhere between May to June and some 10 percent report August is the most critical month.

Figure 7.2 Change in number of “food gap” months experienced (2012–2014)



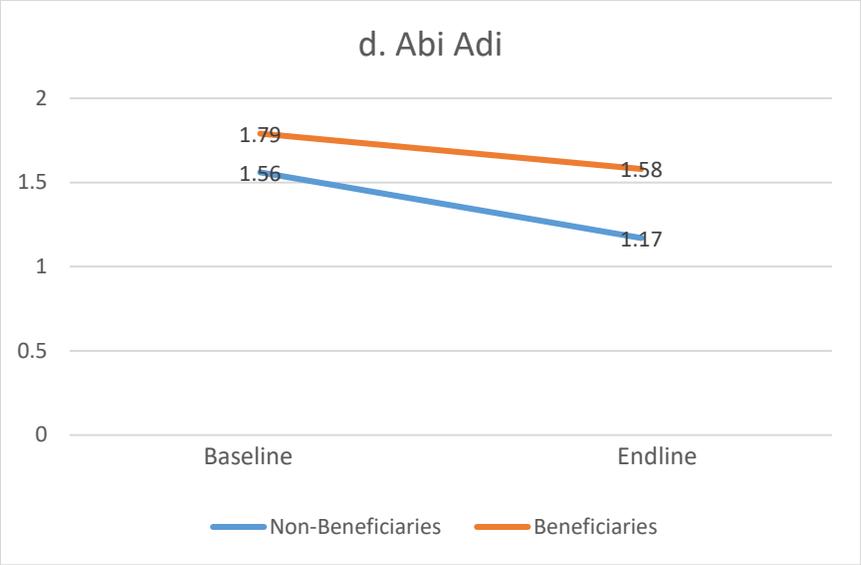
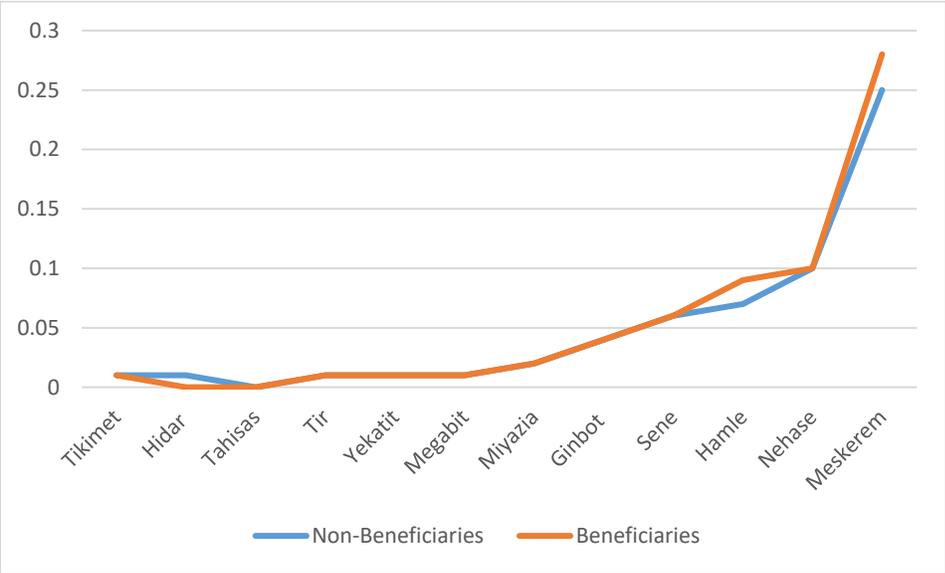


Figure 7.3 Percentage of households reporting most acute food shortage month, by beneficiary status



Measuring coping strategies is often considered as a good way to assess the severity of household level food security (Maxwell, et al.1999). Households adopt several coping strategies against shortfalls in their food requirements. Some of these strategies are negative in the sense that such actions simply compromise long-term household welfare. Such strategies include, but are not limited to, changes in the dietary diversity such as eating less preferred but less expensive food (e.g., eating poor quality wild food); consume household seed stock; or reduce the number of meals household members consume per day, or are simply forced to skip meals altogether. In the quantitative household survey, we asked households to report on a number of these issues, including whether or not the household was forced to eat less preferred food, or has depleted its own seed stock, or simply reduced or skipped the number of meals adult

and child members of their household eat per day on a normal day. The results are summarized in the following sub-sections.

Figure 7.4 presents the percentage of households in each location that reported they have eaten less preferred food, or eaten wild food, or consumed their seed stock to cope with acute food shortages both at baseline and endline. The general picture depicted by these figures is that, going from the baseline to the endline, there has been some positive change in the proportion of households that adopted 'eating less preferred food' a coping strategy.

As indicated by the downward slope of the line joining the baseline to the endline (see Figure 7.4(d)), this picture appears to be more pronounced in the rural (Hintalo and Bahr Tseba) than in the urban sample (Abi Adi). The proportion of households that used "wild food and seed stock" as coping strategy remain fairly the same over the two periods, except in Hintalo were, compared to the control households, the proportion of beneficiary households that depleted their seed stock to cope with food shortages has relatively declined.

Reductions in consumption reductions are a common way of coping with shortfalls in food from own or external sources. With less food available to feed each household member means that some members are forced to miss meals or else adjustments are made on the proportions that every member of household gets from the common pie. As such, self-assessment of household consumption on whether or not each household member received the ideal number of meals per day that they eat in a normal day is one indicator to assess the food security situation of the household. Households are thus asked to report the number of meals adult and child members of the households have eaten in the past month. The descriptive results for adult members are summarized in Figure 7.5 (a) – (d) and for children in Figure 7.6 (a) - (d). The results for adult household members indicate that there is a general improvement in the number of meals consumed per day taken all households in all locations together: for beneficiary households this is an average increase from 2.33 meals per day in 2012 to 2.57 meals per day in 2014, while for the non-beneficiary households it is an increase from 2.43 meals per day in 2012 to 2.64 meals per day in 2014. Taken separately, beneficiary households from Hintalo (excluding Bahr Tseba) appear to enjoy relatively higher increases in the number of meals consumed as compared to their non-beneficiary counterparts, which is slightly the opposite for beneficiary households in Bahr Tseba. The trend for households in Abi Adi is much like the general picture mentioned earlier - there does not exist a noticeable difference between the beneficiaries and non-beneficiaries in terms of changes in the number of meals per day consumed by adult households.

Figure 7.4 Percent households that adopted diet-related coping strategies (2012–2014)

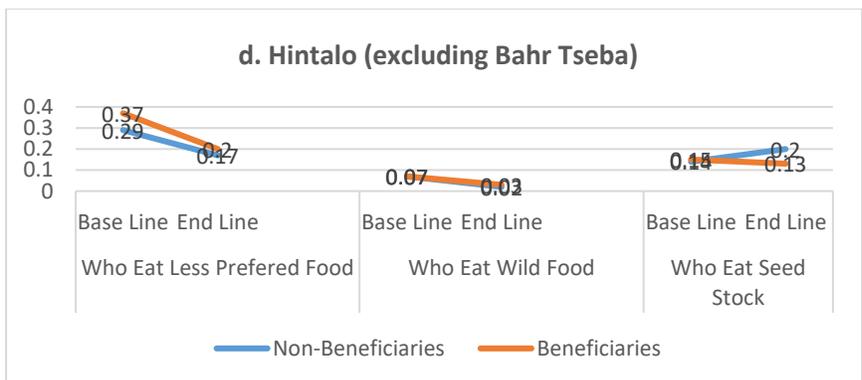
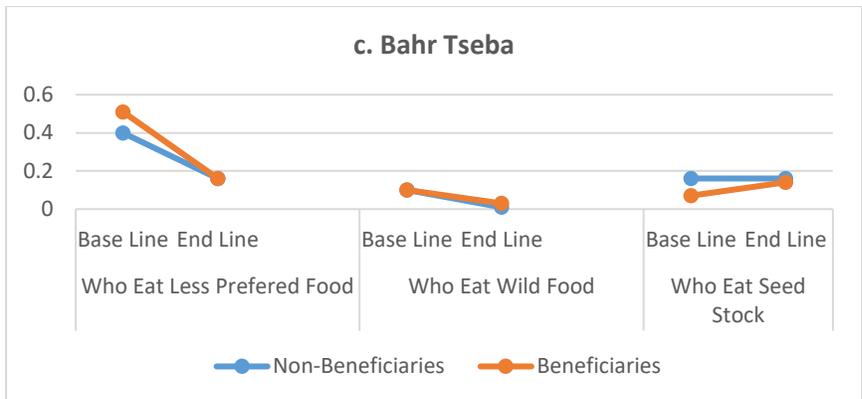
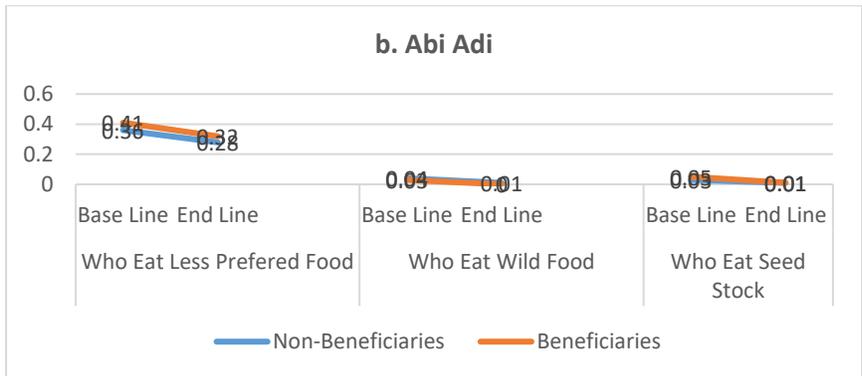
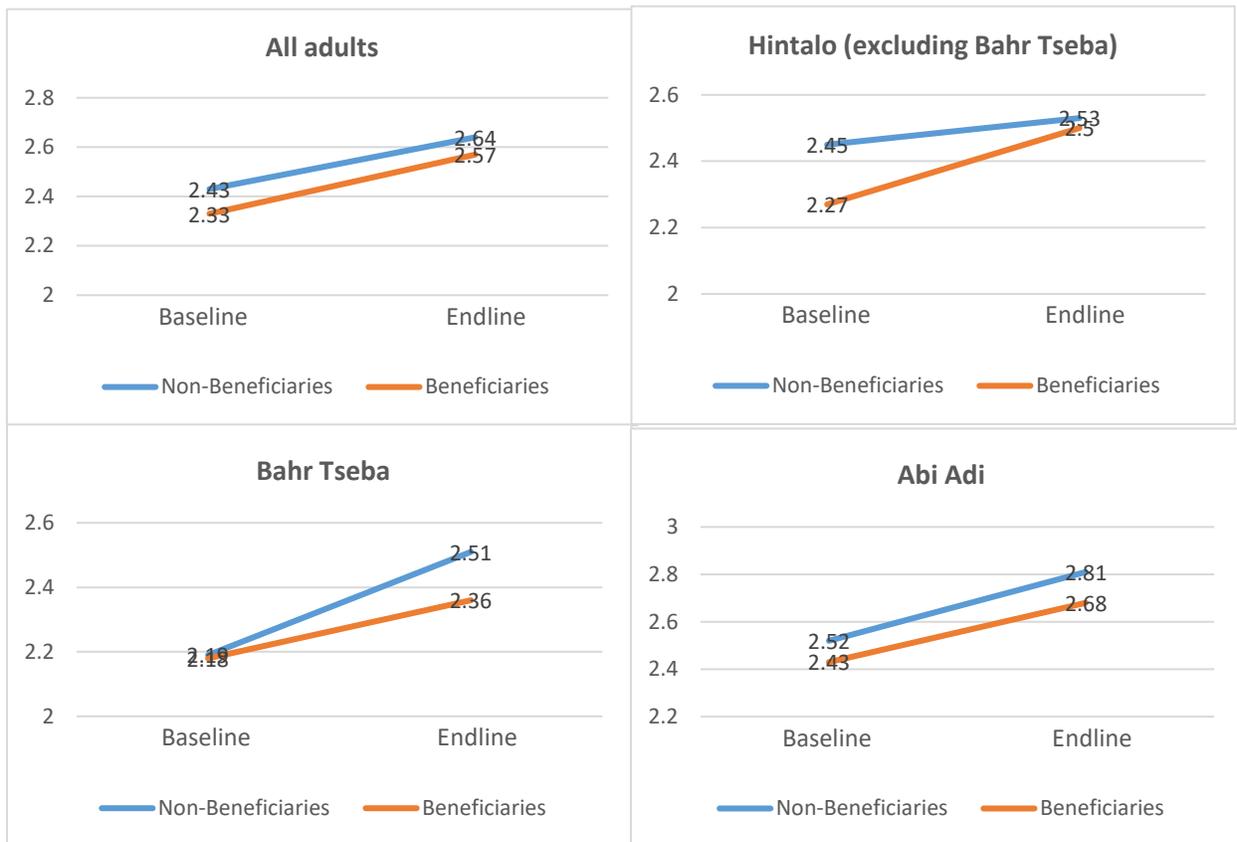


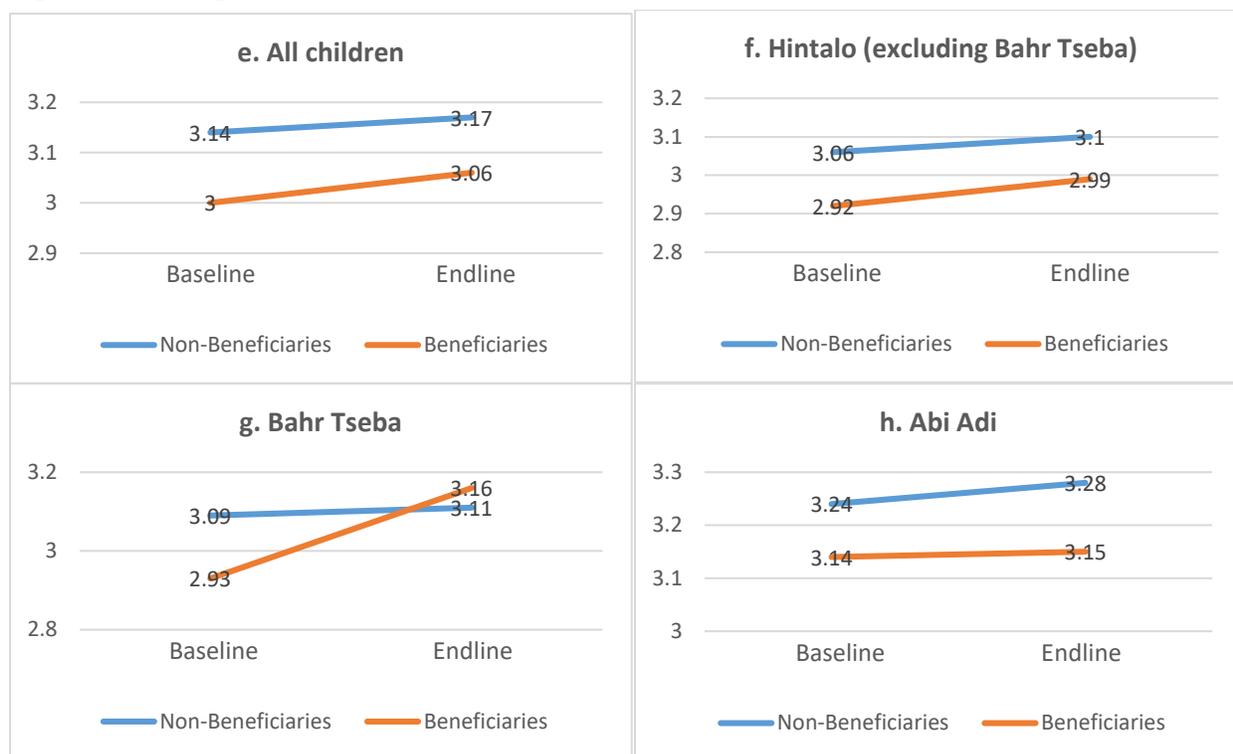
Figure 7.5 Changes in number of meals consumed (2012–2014)—Adults



The figure showing the average number of meals consumed by children points to slightly lower increase as compared to that of adults. However, children start with a relatively higher initial average meals (average of 3.07) than adults (average of 2.38). There are some noticeable differences across locations: children from beneficiary households in Bahr Tseba improved by more than the increase for their non-beneficiary households.

We now consider to what extent these patterns we observe in these data can be attributed to the SCTPP. Before doing so, it is helpful to reference the discussion of methods in chapter three. Specifically, recall that we can estimate single difference models—looking at the impact of the SCTPP at a specific point in time—or we can estimate double difference models—seeing whether improvements in outcomes (here food security) occur faster in beneficiary households compared to matched comparison households. As discussed in chapter three, we begin with the double difference estimates (Table 7.2) and complement these, for selected outcomes, with single difference estimates (Table 7.3).

Figure 7.6 Changes in number of meals consumed (2012–2014)—Children



We begin with Table 7.2. Using double difference, it assesses whether the SCTPP resulted in faster changes in measures of food security compared to matched non-beneficiaries. Across all measures considered, we see no evidence of impact on changes between May 2012 and May 2014 across a wide set of food security outcomes. This is not entirely surprising given the changes described in Figures 7.2 to 7.6 above. To be clear, however, Table 7.2 does not say that the food security of SCTPP beneficiaries was unchanged between 2012 and 2014. The descriptive figures show that in fact, across a range of outcomes, food security of SCTPP beneficiaries did improve. However, it did not improve faster than that observed in non-beneficiaries.

Table 7.3 compares food security—the food gap—at two points in time, May 2012 and May 2014. It shows that in May 2012, the SCTPP improved food security by 0.25 months relative to comparable non-beneficiaries. It reduced the likelihood that the household had any food gap by four percentage points. These impacts are statistically significant at the 10 percent level. However, they do not appear to persist; there are no statistically significant impacts in May 2014. In preliminary work, we also estimated single difference models for other food security measures but found no evidence of impact.

Table 7.2 Double difference estimates of the impact of SCTPP on food security indicators

	Impact estimate	Sample size
Abi Adi		
Number of months of food insecurity in the last 12 months	0.233 (0.186)	897
Number of food shortage months during rainy season	0.031 (0.036)	897
Number of meals per day: Children	-0.005 (0.078)	469
Number of meals per day: Adult	-0.111 (0.24)	898
Number of households that experienced no food shortage in the last 12 months	0.012 (0.038)	898
Hintalo		
Number of months of food insecurity in the last 12 months	0.055 (0.156)	1,349
Number of food shortage months during rainy season	-0.032 (0.03)	1,343
Number of meals per day: Children	0.03 (0.059)	644
Number of meals per day: Adult	0.007 (0.184)	1,338
Number of households that experienced no food shortage in the last 12 months	0.026 (0.029)	1,349

Table 7.3 Single difference estimates of impact of the SCTPP on household food security, by round and location

Sample	Food gap, May 2012	Mean (comparison household)	Any food gap, May 2012	Mean (comparison household)	Sample size
	All households	-0.244* (0.12)	2.64	-0.040* (0.22)	
Abi Adi	-0.158 (0.22)	1.91	-0.008 (0.03)	0.41	938
Hintalo Wajirat	-0.198 (0.15)	3.02	-0.035 (0.03)	0.70	1,472
	Food gap, May 2014		Any food gap, May 2014		
All households	0.079 (0.125)	1.92	-0.002 (0.023)	0.46	2,410
Abi Adi	0.175 (0.19)	1.36	0.026 (0.04)	0.32	938
Hintalo Wajirat	0.055 (0.16)	2.25	-0.016 (0.03)	0.54	1,472

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

7.4 Diets: Food Quantity and Quality

There are two weaknesses in the food security measures described above: i) they are highly subjective (there are can be wide variations in interpretations of the phrase “Have difficulties satisfying food needs”); and ii) some, such as number of meals, have limited variability. Recognizing this, we included several other measures in our survey instruments.

First, both the May 2012 and May 2014 survey rounds contained detailed questions on the quantity of foods consumed over the previous seven days. We take these quantities and convert them into calories available for consumption in the household over the previous seven days expressed in terms of adult equivalents. Table 7.4 shows the results of single difference estimates of impact for May 2012 and May 2014. Table 7.5 shows the results of double difference estimates of the impact of the SCTPP on changes in caloric availability between 2012 and 2014.

Table 7.4 Single difference estimates of impact of the SCTPP on caloric availability (adult equivalent), by round and location

Sample	May 2012			May 2014		
	Adult equivalent calories	Sample size	Mean (comparison household)	Adult equivalent calories	Sample size	Mean (comparison household)
All households	93.5* (52.7)	1,378	2,655	157.9*** (46.7)	1,598	2,621
Abi Adi	46.8 (79.5)	590	2,624	145.6** (72.1)	666	2,482
Hintalo Wajirat	126.3* (73.1)	788	2,677	128.5** (63.5)	932	2,759

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Table 7.5 Double difference estimates of impact of the SCTPP on caloric availability (adult equivalent), by location

Sample	Change in adult equivalent calories, 2012 to 2014	Sample size	Baseline mean (comparison household)
All households	150.5*** (47.0)	1,598	2,628
Abi Adi	124.5* (76.7)	666	2,504
Hintalo Wajirat	128.6** (63.5)	932	2,759

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Tables 7.4 and 7.5 show unambiguous evidence that the SCTPP improved diets in quantity terms; the number of calories available for consumption at the household level. The SCTPP increased caloric availability by 150 kcal per adult equivalent, a meaningful increase. The impact is seen in both Abi Adi and Hintalo Wajirat and is equivalent to a 6 percent increase over the baseline level of caloric availability observed in comparison households.

But calories are only one component of diet. We also want to assess whether the SCTPP improved the quality of diets. We do so in two ways.

The simplest is the Diet Diversity Index (DDI) (for details about DDI, see Hidrobo et al. 2014). The household survey questionnaire administered both at baseline and endline has asked about 42 food items that are assumed to exist in the study areas. The DDI is calculated by counting how many food items, from a total of 42, a household has consumed over a period of seven days. Table 7.6 summarizes unconditional measures of diet diversity by location and beneficiary status.

Table 7.6 Diet Diversity Index, by beneficiary status and location

	Beneficiary			Control			Random		
	Baseline	Endline	Change	Baseline	Endline	Change	Baseline	Endline	Change
All households	6.4	9.1	2.7	7.3	10.0	2.7	8.6	10.7	2.2
Hintalo ^a	5.5	8.2	2.7	6.0	8.9	2.9	6.5	9.1	2.6
Bahr Tseba	4.9	8.5	3.5	6.3	9.1	2.9	7.4	9.4	2.0
Abi Adi	8.3	10.5	2.2	9.6	11.9	2.4	13.1	14.5	1.4

Source: Household Survey 2012, 2014.

^a Hintalo excluding Bahr Tseba.

Table 7.6 and Figure 7.7 show that diet quality, as measured by the number of different foods consumed, has increased substantially for SCTPP beneficiaries. But given that we also observe changes in diet diversity among non-beneficiaries in both Abi Adi and Hintalo Wajirat, how much of this change can be attributed to the SCTPP? Tables 7.7 and 7.8 provide the single difference and double difference estimates. Across both localities, both sets of estimates show that the SCTPP increased dietary diversity with the increase accelerating slightly over time. The point estimates show that, relative to the comparison group, there is a 12 percent increase in dietary diversity. The increase is larger and more precisely measured in Hintalo Wajirat.

There is some qualitative support for these positive impacts on diet diversity. Many participant respondents mentioned the ability to buy a greater quantity and diversity of food stuffs (in particular items like coffee, sugar, oil and sauce) as a major benefit of the program. For example, one participant stated:

I started to buy additional food items like coffee, sugar and started to eat Enjera with sauce because of the cash [PM #6/S].

Figure 7.7 Diet Diversity Index

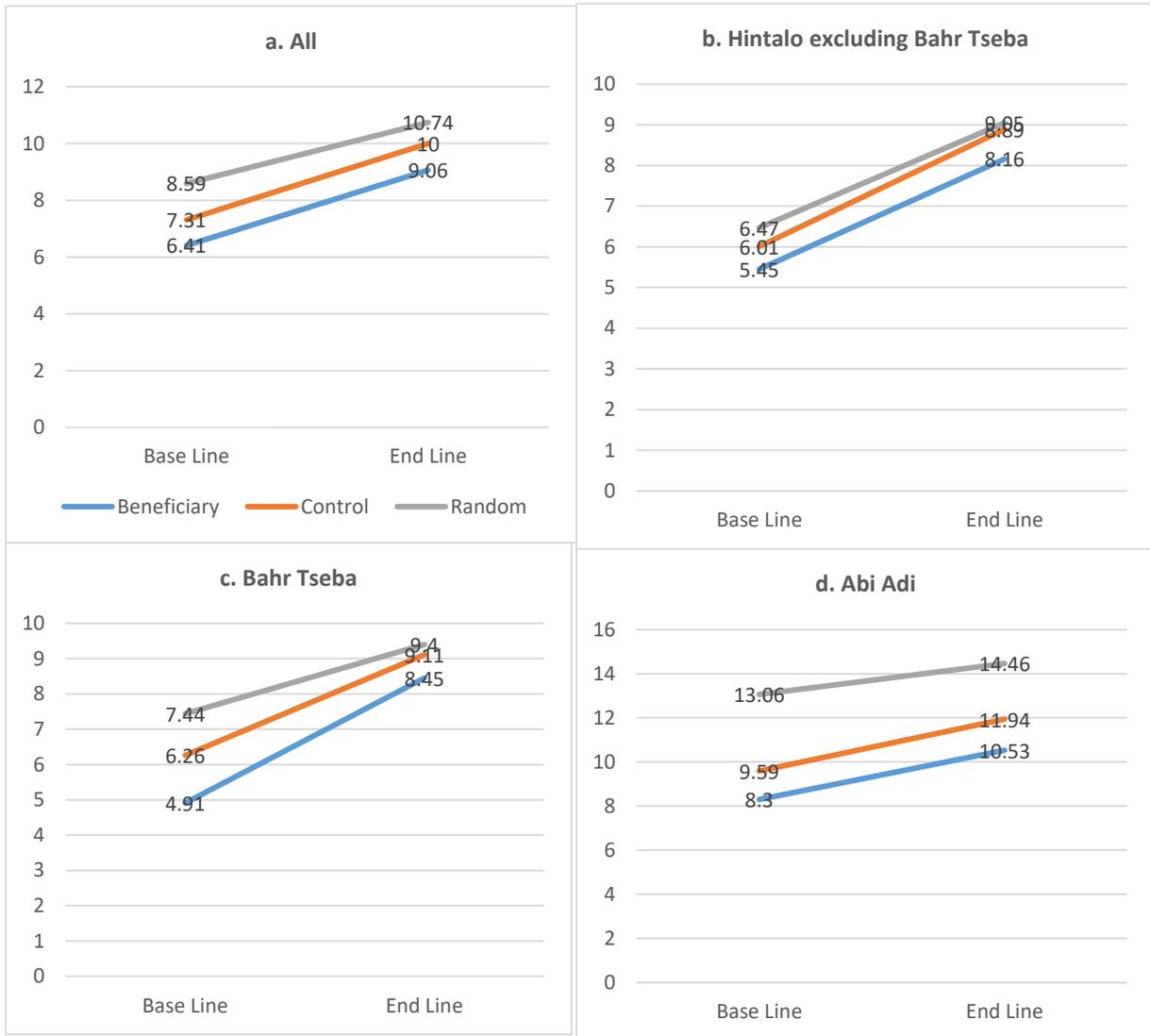


Table 7.7 Impact of the SCTPP on dimensions of household food security, by round and location

Sample	May 2012			May 2014		
	Dietary Diversity	Sample size	Mean (comparison household)	Dietary Diversity	Sample size	Mean (comparison household)
All households	0.865*** (0.158)	2,410	6.41	1.062*** (0.200)	2,410	9.05
Abi Adi	0.473* (0.268)	938	8.67	0.227 (0.337)	938	11.37
Hintalo Wajirat	0.919*** (0.168)	1,472	5.14	1.306*** (0.230)	1,472	7.84

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Table 7.8 Double difference estimates of impact of the SCTPP on diet diversity (adult equivalent), by location

Sample	Change in diet diversity, 2012 to 2014	Sample size	Baseline mean (comparison household)
All households	0.362** (0.16)	2,410	9.8
Abi Adi	-0.093 (0.28)	938	11.7
Hintalo Wajirat	0.560*** (0.20)	1,472	8.6

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

We have a second way of measuring changes in diets. In all surveys, we asked questions about the frequency with which children 12 years of age and younger consumed the following types of foods: injera; other foods made with grain; roots and tubers; orange coloured vegetables; leafy dark green vegetables; other vegetables; fruit; meat; eggs; fresh, canned or dried fish or other seafood; legumes; dairy products; fats and oils; sugar, honey, sweets; and coffee, tea, soft drinks. We use these data to construct a food security measure called a food consumption score (FCS). The FCS is calculated by summing the number of days that the household or child consumed the corresponding food group (staples, pulses, vegetables, fruit, meat and fish, milk and dairy, sugar and honey, oils and fats), multiplying the number of days by the food group's weighted frequencies, and summing across categories to obtain a single proxy indicator. It ranges in value from zero to 117. The FCS has been found to correlate well with caloric availability at the household level (Wiesmann et al. 2009) and thus reflects the quality of the diet in terms of energy and diversity. The simplicity of the FCS makes it well suited to inclusion in both the full-length surveys that bracketed the SCTPP study along with the monitoring surveys. The single and double difference estimators produce similar findings and so we only present the double difference estimates here.

Table 7.9 shows that during periods when food availability is lowest, as evidenced by the mean values for children in the comparison households (shown in square brackets), the SCTPP

improved children’s diets in Hintalo Wajirat, where seasonality is most pronounced but not Abi Adi—see the results for March 2013 and March 2014. The magnitude of the effect is relatively large, about a 10 percent increase in the FCS relative to comparison households. There are positive impacts for Hintalo in other survey rounds but these are somewhat imprecisely measured with statistical significance typically at the 12-15 percent level. It is possible that the absence of statistical significance reflects relatively lowered statistical power as we are working with relatively small sample sizes (~500 observations) for these outcomes.

Table 7.9 Double difference estimates of impact of the SCTPP on children’s Food Consumption Score, by location

Survey round	All households	Abi Adi	Hintalo Wajirat
October 2012	-0.44 (0.87) [25.8]	-1.09 (1.12) [30.6]	0.27 (1.13) [22.4]
March 2013	0.71 (0.76) [28.8]	-0.28 (1.17) [34.4]	2.29** (0.98) [24.1]
July/August 2013	0.03 (0.87) [30.1]	-1.28 (1.27) [34.5]	1.12 (1.30) [26.8]
November 2013	0.98 (0.86) [32.9]	0.18 (1.22) [36.7]	1.44 (1.31) [30.5]
March 2014	0.66 (0.75) [33.9]	-0.20 (1.07) [38.2]	2.51** (1.07) [29.8]
May/July 2014	0.44 (0.90) [37.6]	-0.58 (1.06) [40.1]	1.98 (1.47) [35.2]

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level. Sample sizes for single difference estimates are ~960 for the full sample, ~420 for Abi Adi, and ~495 for Hintalo Wajirat. Figures in square brackets are mean for children in comparison households.

7.5 Consumption Expenditures

Lastly, we assess whether the SCTPP affected the level of expenditures on food and on nonfood items, both in terms of levels and also as a share of household consumption. Consumption expenditure data used in this chapter was collected at two points in time - at baseline (May-June, 2012) and at endline (May-June, 2014). The fact that the data is collected during similar period in the year allows direct comparison of household consumption across the two data points, which would otherwise be difficult given the apparent seasonality of consumption observed in the rural areas.

The survey instrument administered had a broader module on consumption expenditure that asked amount consumed in a given period at each round. The consumption

module contained three important parts: durable consumption items (e.g., cloth, reported on annual basis); frequently consumed nonfood items (e.g., kerosene, reported on monthly basis); and food expenditure items (reported on weekly basis). All these expenditure types are rescaled into monthly basis to simplify aggregation and comparisons. Food expenditure items are reported in terms of quantity consumed. We have converted these quantities to monetary expenditure using the end-line price²⁰ of commodities. Using the price of one of the periods tantamount to deflating prices so as to make them comparable. Thus, the endline price is used to value both the baseline and endline quantities.

We begin with Table 7.10. This shows per capita food consumption expenditure by location and beneficiary status in May 2012. In looking at these data, it is helpful to note that mean household sizes in Abi Adi were 3.6 and 2.6 (comparison and beneficiary households respectively) and were 3.9 and 2.8 (comparison and beneficiary households respectively) in Hintalo Wajirat. In both localities, SCTPP beneficiaries reported that they had spent approximately 105 birr from their transfers on food, or using the data on household size, around 38 birr per person. The mean differences between comparison and beneficiary households are roughly consistent with this. We also report the distribution of per capita food consumption expenditures. Per capita median differences are also consistent with these self-reports.

Table 7.10 Per capita food consumption expenditure, 2012, by location and beneficiary status

Beneficiary status	Percentile						Standard deviation
	Mean	10th	25th	Median	75th	90th	
Abi Adi							
Comparison household	264	91	138	217	335	484	182
Beneficiary	294	104	161	244	378	572	192
All households	278	98	149	227	353	520	187
Hintalo Wajirat							
Comparison household	232	76	117	183	290	444	172
Beneficiary	267	90	146	222	333	504	183
All households	245	80	126	197	304	475	177
All households							
Comparison household	242	80	124	195	305	459	176
Beneficiary	278	95	153	229	350	523	187
All households	257	85	133	209	324	494	181

Source: Household Survey 2012.

Table 7.10 also shows that the distribution of per capita food consumption expenditure is wide—with the 90th percentile reporting expenditures five times greater than those reported by the 10th percentile. This large variability, together with the fact that the study was not statistically powered to detect an impact on expenditures, poses difficulties when we apply our

²⁰ The SCTPP data has community level information about price of commodities, quantity conversion units, and access to infrastructure facilities.

impact estimator.²¹ We find positive impacts on food expenditures as of May 2012 but these effects are not statistically significant. Given the results found in Tables 7.1 and 7.9, we treat these impact results cautiously. Specifically, we perceive that there may well have been an impact on food consumption expenditure in May 2012 but that we may lack the statistical power necessary to detect it.

Table 7.11 repeats this exercise for the food consumption expenditure data collected in May 2014. The difference between comparison and beneficiary households shrinks but this may partly reflect the fact that household size in beneficiary households rises, to 2.9 in Abi Adi and 3.5 in Hintalo Wajirat. As with the May 2012 data, we attempted to estimate impact but could not find statistically significant differences between treatment and comparison households.

Table 7.11 Per capita food consumption expenditure, 2014, by location and beneficiary status

Beneficiary status	Percentile						Standard deviation
	Mean	10th	25th	Median	75th	90th	
Abi Adi							
Comparison household	247	80	115	181	317	489	196
Beneficiary	268	84	130	209	345	536	200
All households	258	83	123	199	326	510	198
Hintalo Wajirat							
Comparison household	275	113	163	235	333	496	169
Beneficiary	295	122	175	254	364	534	186
All households	284	115	169	241	344	514	177
All households							
Comparison household	266	97	148	221	326	495	178
Beneficiary	284	97	157	238	358	535	192
All households	274	97	152	228	340	513	185

Source: Household Survey 2014.

Lastly, we examined patterns in per capita nonfood consumption. These are reported below in Tables 7.12 and 7.13. There are several salient patterns. In 2012, expenditure levels on nonfood goods are low with median per capital expenditures across the full sample being only 60 birr per person. These mean values are higher in Abi Adi than in Hintalo Wajirat and they pulled up by a few households who have relatively high nonfood expenditures with the result that median nonfood expenditures are significantly below the mean. Mean nonfood expenditures of comparison households are slightly higher than SCTPP beneficiaries in Abi Adi but are slightly lower in Hintalo Wajirat.

²¹ As outlined in the inception report (Berhane et al. 2012a) and in Chapter 2, sample sizes were based on minimum detectable effect sizes ranging from 10 to 15 percent for five outcomes: months of food security; livestock holdings; net transfers received; use of fertilizer; and access to credit. The magnitude of monthly SCTPP transfers in May 2012 was equivalent to approximately 10 percent of total monthly household consumption expenditure of comparison households. But the variance of consumption expenditures, relative to the mean, is much higher than the variance (relative to their means) of the outcomes over which we calculated sample sizes for this study.

Table 7.12 Per capita nonfood consumption expenditure, 2012, by location and beneficiary status

Beneficiary status	Mean	Percentile					Standard deviation
		10th	25th	Median	75th	90th	
Abi Adi							
Comparison household	81	23	36	62	103	156	73
Beneficiary	73	20	34	61	91	135	60
All households	77	21	35	61	97	149	67
Hintalo Wajirat							
Comparison household	48	10	20	33	56	95	55
Beneficiary	56	10	19	37	62	107	88
All households	51	10	19	35	59	100	70
All households							
Comparison household	59	12	23	41	72	117	64
Beneficiary	63	13	24	44	76	118	78
All households	60	12	23	42	74	118	70

Source: Household Survey 2012.

Table 7.13 Per capita nonfood consumption expenditure, 2014, by location and beneficiary status

Beneficiary status	Mean	Percentile					Standard deviation
		10th	25th	Median	75th	90th	
Abi Adi							
Comparison household	124	34	55	94	156	241	113
Beneficiary	101	30	50	82	124	184	88
All households	114	32	52	89	139	215	103
Hintalo Wajirat							
Comparison household	86	25	42	67	102	156	77
Beneficiary	84	24	41	68	108	163	64
All households	85	25	41	68	104	158	72
All households							
Comparison household	98	28	45	73	119	195	92
Beneficiary	91	26	44	73	114	170	75
All households	95	28	45	73	116	181	86

Source: Household Survey 2014.

Nonfood expenditures are higher in 2014 than in 2012 in both locations and for both SCTPP beneficiaries and comparison households. But the patterns observed in 2012 regarding geographic differences and differences by beneficiary status remain the same. When we apply our matching methods to these nonfood expenditures, we find no evidence of impact of the SCTPP. We also extensively explored impact on specific nonfood expenditure categories (including expenditures on children’s clothing and medical expenses) but again could find no evidence of impact. But this is not especially surprising given that we lack sufficient statistical power to detect such impacts.

7.6 Summary

This long chapter has examined multiple indicators of household food security as well as food and nonfood expenditures and how these have been affected by the SCTPP. Here we focus on the broader messages that emerge.

Across a wide range of measures, household food security of SCTPP beneficiaries has improved. The food gap has been reduced by approximately 0.50 months in both Abi Adi and Hintalo Wajirat. Adults and children eat more meals. Both diet quantity (as measured by caloric availability) and diet quality (as measured by the Dietary Diversity Index and the Food Consumption Score) also improved. The SCTPP had a causal impact on many of these outcomes. It reduced the food gap by 0.24 months in May 2012 (Table 7.2). It increased the availability of calories at the household level, increasing this by 94 kcal per adult equivalent in May 2012 and 158 kcal per adult equivalent in May 2014. Relative to comparison households, this represents an increase of 3.6 and 6.0 percent respectively (Table 7.3). It improved diet quality, as measured by the Dietary Diversity Index, in May 2012 and May 2014 by 13.4 and 11.7 percent respectively (Table 7.6). And in Hintalo Wajirat, it reduced seasonal fluctuations in children's food consumption.

7.7 Statistical Appendix

All impact estimates are calculated using inverse probability weighted regression adjustment (IPWRA). Variables included in the treatment model of the IPWRA include: number of household members, number of household members under 3 years of age, number of household members under 6 years of age, number of household members under 11 years of age, number of household members under 19 years of age, number of household members over 60 years of age, number of household members working, number of unemployed household members, number of able bodied household members, an indicator for a female head of household, an indicator for a child head of household, the age of the household head, an indicator that the household head has 0 years of formal education, a principal component based livestock index, an indicator that the house has 1 room, and an indicator that the house is in poor condition as assessed visually by the survey enumerator. These variables balance across all blocks in Abi Adi; in Hintalo Wajirat, one variable (number of working household members) does not balance in one block. Plots of the distributions of predicted treatment status by beneficiary status and location are shown in Figures 7.8 and 7.9.

Figure 7.8 Common support: Abi Adi

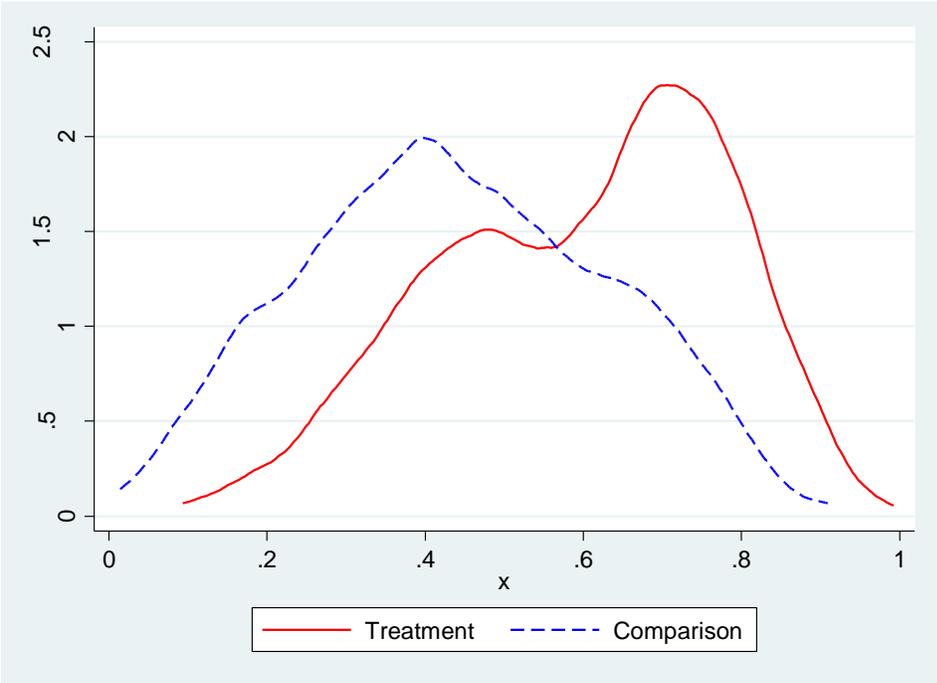
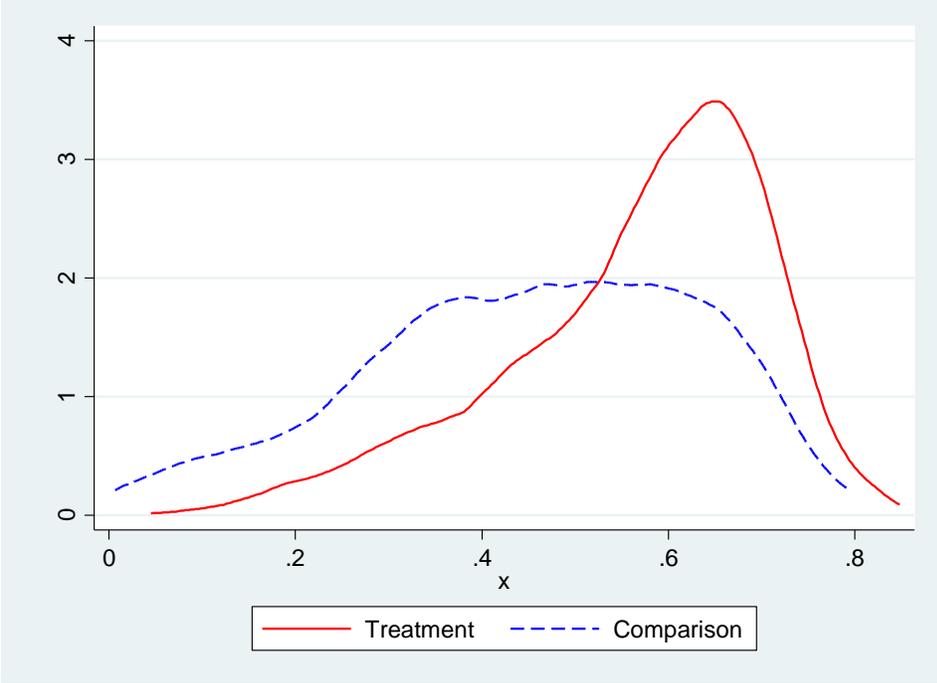


Figure 7.9 Common support: Hintalo Wajirat



8. The Impact of the SCTPP on Children’s Nutritional Status

8.1 Introduction

The SCTPP aims to improve the quality of life of children living in Abi Adi and Hintalo Wajirat. An important component of wellbeing is nutritional status. In this chapter, we assess the extent to which the SCTPP improved nutrition in pre-school children. We begin with descriptive statistics on how these outcomes are measured and how they have evolved over the period 2012-14. We then assess the extent to which the SCTPP has contributed to these changes.

8.2 Descriptive Statistics

In the baseline and endline surveys as well as each monitoring survey, we measured the heights and weights of all children 60 months and younger. This allowed us to construct four anthropometric measures: height-for-age z scores (HAZ); stunting; weight-for-height Z-scores (WHZ); and wasting. The Z-score measures are calculated using the WHO child growth standards (WHO 2006). For HAZ, a value of -1 indicates that given sex and age, a child’s height is one standard deviation below the median child in that age/sex group. A child with a HAZ below -2 is considered stunted. Stunting is a measure of chronic undernutrition. It can be thought of as a summary indicator of all factors that influence growth and development during the first 1000 days of life from conception to 2 years of age. This “1000 days” period is widely seen as the time when both interventions and adverse shocks have the greatest potential to influence child height (Black et al. 2013). Stunting is causally linked to a whole host of adverse consequences over the lifecourse including lowered final height, less schooling, poorer cognitive skills in adulthood and an increased likelihood of being poor in adulthood (Hoddinott et al. 2013). WHZ assesses a child’s weight given their height relative to a well-nourished population. For WHZ, a value of -1 indicates that given sex and height, a child’s weight is one standard deviation below the median child in that age/sex group. A child with a WHZ below -2 is considered wasted. Wasting is an indicator of acute undernutrition, reflecting recent illness, inadequate nutrient or both. Globally, wasting accounts for approximately 12.6 percent of child deaths annually (Black et al. 2013).

Tables 8.1 and 8.2 give the numbers of children measured by *woreda*, survey round and child age for households residing in either treatment households (i.e., households receiving the SCTPP) or comparison households (i.e., households not receiving the SCTPP but eligible for it; see chapter two). There are several features which are important to note. First, there are relatively few children 0-60 months in Abi Adi. This is a direct consequence of the targeting of the SCTPP. As discussed in chapter five, many of the SCTPP beneficiary households are households with no able bodied adults aged 19-60. But with few women of child bearing age, and few skip generation households (i.e., households with grandparents and grandchildren but missing the middle generation), there are relatively few children aged 0-60 and this is especially marked in Abi Adi. Second, as we have a panel of households, the children in our sample age and—with relatively few mothers in the sample—few new children entering the sample. This means that over the course of the study, the number of children in the age groups 0-6 months

and 6-24 months (already small at baseline) drops precipitously. This is problematic because anthropometric measures such as HAZ and stunting are most amenable to change during the 0-24 month period.²²

Table 8.1 Number of children in treatment and comparison households measured by survey round and child age, Abi Adi

Survey round	All group			
	0-6 months	6-24 months	24-59 months	All
Household Survey 1 (Baseline): May 2012	18	79	164	261
Monitoring Survey 1: October 2012	5	49	125	179
Monitoring Survey 2: March 2013	1	51	153	205
Monitoring Survey 3: July 2013	1	52	163	216
Monitoring Survey 4: November 2013	1	44	163	208
Monitoring Survey 5: March 2014	0	35	165	200
Household Survey 2 (Endline): May 2014	0	31	190	221

Source: Household and monitoring surveys, 2012, 2013, 2014.

Table 8.2 Number of children in treatment and comparison households measured by survey round and child age, Hintalo Wajirat

Survey round	All group			
	0-6 months	6-24 months	24-59 months	All
Household Survey 1 (Baseline): May 2012	25	76	231	332
Monitoring Survey 1: October 2012	15	74	175	264
Monitoring Survey 2: March 2013	0	88	219	307
Monitoring Survey 3: July 2013	0	86	210	296
Monitoring Survey 4: November 2013	0	74	223	297
Monitoring Survey 5: March 2014	0	60	273	333
Household Survey 2 (Endline): May 2014	0	61	330	391

Source: Household and monitoring surveys, 2012, 2013, 2014.

Mean values for these four anthropometric outcomes are given separately by *woreda* in Tables 8.3 (Abi Adi) and 8.4 (Hintalo Wajirat). In both localities, children had poor nutritional status relative to the WHO standards for a well-nourished population. At the time of the baseline survey, 45.6 and 55 percent of children 60 months and younger were stunted in Abi Adi and Hintalo Wajirat respectively. The 2014 “mini” DHS (Ethiopia-CSA 2014) showed the prevalence of stunting across Tigray to be 44 percent and the mean HAZ to be -1.80. These higher prevalences and lower mean HAZ are consistent with these study localities being relatively poorer when compared to the rest of Tigray. Generally, HAZ falls and stunting rises as we move from the baseline through the monitoring and to the endline surveys. This is a consequence, at least in part, of the fact that our sample of children is aging. This was seen in Tables 8.1 and 8.2. In Tables 8.3 and 8.4, it becomes even more apparent. Mean child age rises from around 31 months at the baseline survey to 37 or 38 months by endline. In Ethiopia, as in

²² This, along with pregnancy, is sometimes referred to as the “1000 day window of opportunity”.

much of the developing world, HAZ falls and stunting increases over the first 24 months of life²³ as children are exposed to infections and consume sub-optimal diets during a period when they should be growing rapidly. Mean WHZ varies relatively little over time in Abi Adi while it declines in Hintalo Wajirat. The prevalence of wasting is slightly lower than that for all Tigray (13.6 percent) as reported in Ethiopia-CSA (2014).

Table 8.3 Mean anthropometric outcomes, by survey round, Abi Adi

Survey round	Mean height-for-age Z-score	Percent stunted	Mean weight-for-height Z-score	Percent wasted	Mean age	Percent girls
Household Survey 1 (Baseline): May 2012	-1.50	45.6%	-0.52	14.1%	30.7	50.5%
Monitoring Survey 1: October 2012	-1.63	44.0	-0.59	13.9	33.3	50.0
Monitoring Survey 2: March 2013	-1.67	44.4	-0.56	8.4	35.5	52.7
Monitoring Survey 3: July 2013	-1.69	40.0	-0.60	8.1	37.6	53.7
Monitoring Survey 4: November 2013	-1.92	45.6	-0.66	13.2	37.4	49.8
Monitoring Survey 5: March 2014	-2.07	53.8	-0.56	9.1	38.3	51.4
Household Survey 2 (Endline): May 2014	-2.29	50.7	-0.59	7.0	38.0	51.1

Source: Household and monitoring surveys, 2012, 2013, 2014.

Table 8.4 Mean anthropometric outcomes, by survey round, Hintalo Wajirat

Survey round	Mean height-for-age Z-score	Percent stunted	Mean weight-for-height Z-score	Percent wasted	Mean age	Percent girls
Household Survey 1 (Baseline): May 2012	-1.98	55.4%	0.12	7.6%	31.9	48.2%
Monitoring Survey 1: October 2012	-2.05	55.4	0.22	8.1	33.2	52.9
Monitoring Survey 2: March 2013	-1.87	49.4	-0.32	11.1	35.7	49.7
Monitoring Survey 3: July 2013	-2.02	56.1	-0.21	6.0	36.5	51.1
Monitoring Survey 4: November 2013	-2.21	56.3	-0.22	9.3	37.2	53.3
Monitoring Survey 5: March 2014	-2.24	55.8	-0.44	10.3	37.9	53.1
Household Survey 2 (Endline): May 2014	-2.28	53.1	-0.56	10.8	37.4	51.1

Source: Household and monitoring surveys, 2012, 2013, 2014.

8.3 Impact Estimates: Hintalo Wajirat

Tables 8.5 and 8.6 report the results of estimating single difference impact estimates of participation in the SCTPP on weight-for-height Z-scores and wasting of children 6-60 months living in Hintalo Wajirat.²⁴ Fundamentally, there is no evidence of impact on either nutrition outcome. But there is an intriguing result that is worth commenting on. Monitoring Survey 3 was fielded in July 2013. This was timed to capture the start of the agricultural season and, as such, it is also a point in the year when households are both vulnerable to seasonal shortages in food and where adults are heavily engaged in agricultural production. Table 8.5 shows a positive effect of the SCTPP on weight-for-height Z-cores with an increase of 0.31SD. So it is

²³ See for example, Table 7.1 in Ethiopia-CSA (2014) for evidence of this from nationally representative Ethiopian data.

²⁴ In preliminary work, we also estimated double difference impact estimates for all rounds except the baseline, differencing between current and baseline WHZ. These produced comparable point estimates but with larger standard errors.

possible that the SCTPP may have had some effect on reducing the seasonal dimension of poor weight-for-height Z-scores but that our sample is not large enough to detect these.

Table 8.5 Impact of the SCTPP on weight-for-height Z-scores, by survey round

Round	Impact on WHZ	Mean WHZ, comparison group	Sample size
Household Survey 1 (Baseline): May 2012	-0.502 (0.60)	0.76	92
Monitoring Survey 1: October 2012	-0.07 (0.35)	0.13	88
Monitoring Survey 2: March 2013	-0.26 (0.59)	0.005	139
Monitoring Survey 3: July 2013	0.31 (0.23)	-0.34	154
Monitoring Survey 4: November 2013	-0.05 (0.24)	-0.31	176
Monitoring Survey 5: March 2014	-0.10 (0.23)	-0.23	208
Household Survey 2 (Endline): May 2014	0.06 (0.29)	-0.73	296

Notes: Standard errors in parentheses. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Table 8.6 Impact of the SCTPP on wasting, by survey round

Round	Impact on WHZ	Mean WHZ, comparison group	Sample size
Household Survey 1 (Baseline): May 2012	0.007 (0.04)	0.040	92
Monitoring Survey 1: October 2012	0.06 (0.06)	0.040	88
Monitoring Survey 2: March 2013	-0.031 (0.075)	0.132	139
Monitoring Survey 3: July 2013	-0.036 (0.040)	0.089	154
Monitoring Survey 4: November 2013	-0.046 (0.067)	0.172	176
Monitoring Survey 5: March 2014		Estimator does not converge	
Household Survey 2 (Endline): May 2014	-0.134 (0.096)	0.244	296

Notes: Standard errors in parentheses. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Assessing the impact of the SCTPP on HAZ and on stunting is complicated by: the timing of the SCTPP and the survey rounds; the age of the child when the SCTPP began; and the intersection of these two factors. To see the nature of the problem, consider five children aged 24, 18, 12, 6 and 0 (i.e., newborn) when the SCTPP begins in August 2011. These children are

listed in the columns of Table 8.7 below. Next, recall from the discussion in section 8.2 that there is only a limited period of time, from conception to age 24 months (the “1000 days”) where interventions can influence child height. The number of months over which the SCTPP can affect height is thus a function of the child’s age when the intervention began. These months are given in the individual cells in Table 8.7.

Table 8.7 Duration of exposure to the SCTPP, by child age at baseline and date

Year	Month	Child age when intervention begins				
		23 months	18 months	12 months	6 months	0 months
2011	September	1	1	1	1	1
	October	1	2	2	2	2
	November	1	3	3	3	3
	December	1	4	4	4	4
2012	January	1	5	5	5	5
	February	1	6	6	6	6
	March	1	6	7	7	7
	April	1	6	8	8	8
	May	1	6	9	9	9
	June	1	6	10	10	10
Age at baseline						
		34 months	29 months	23 months	17 months	11 months
	July	1	6	11	11	11
	August	1	6	12	12	12
	September	1	6	12	13	13
	October	1	6	12	14	14
	November	1	6	12	15	15
	December	1	6	12	16	16
2013	January	1	6	12	17	17
	February	1	6	12	18	18
	March	1	6	12	18	19
	April	1	6	12	18	20
	May	1	6	12	18	21
	June	1	6	12	18	22
	July	1	6	12	18	23
Age at MS3						
		47 months	42 months	36 months	30 months	24 months
	August	1	6	12	18	24
	September	1	6	12	18	24
	October	1	6	12	18	24
	November	1	6	12	18	24
2014	December	1	6	12	18	24
	January	1	6	12	18	24
	February	1	6	12	18	24
	March	1	6	12	18	24
	April	1	6	12	18	24
	May	1	6	12	18	24
	June	1	6	12	18	24
Age at endline						
		58 months	53 months	47 months	41 months	35 months

Consider first a child who was aged 23 months when the intervention began. Because she is close to the upper age limit, she has limited exposure to the SCTPP during the “1000 days”, just the month of September 2011. Hence, in each cell, she is listed as having one month’s exposure. Next consider a child who was 18 months when the SCTPP began. If her household received its first SCTPP payment in August 2011, in September 2011 she would have had one month’s exposure to the SCTPP, in October 2011 she would have had two month’s exposure to the SCTPP and so on. But because she was already 18 months when the SCTPP started, she could only have a maximum of six months exposure before aging out of the 1000 days.

Next, note that Table 8.7 lists these children’s ages on the dates when selected surveys were fielded. Suppose we attempted to look at the impact of the SCTPP at the time the baseline survey was fielded in May/June 2012. To do so, we should only include children aged 34 months or younger because only these children have any exposure to the SCTPP. But to do so will underestimate the potential impacts of the SCTPP because there are children (such as those aged 12, six and zero months) who could benefit from additional exposure to the SCTPP after the May/June 2012 survey. In fact, the maximum of exposure for all these children does not occur until approximately Monitoring Survey 3 fielded in July 2013. With this in mind, we estimate the impact of the SCTPP on HAZ and stunting for children younger than 48 months (i.e., children with at least one month’s exposure to the SCTPP). Results are reported in Table 8.8.

Table 8.8 Impact of the SCTPP on height-for-age Z-scores and stunting, Monitoring Survey 3

Round	Impact on HAZ	Mean HAZ, comparison group	Sample size
Monitoring Survey 3: July 2013	0.04 (0.35)	-2.45	106
	Impact on stunting	Mean stunting, comparison group	Sample size
Monitoring Survey 3: July 2013	0.01 (0.11)	0.67	106

Notes: Standard errors in parentheses. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

There are two main results in Table 8.8. First, the SCTPP has no impact and second, the sample size is relatively small, just over 100 children. But note that the results in Table 8.8 include children with considerable exposure to the SCTPP (e.g., those born just before the SCTPP was implemented) and those who had little exposure (e.g., those who were 23 months when the SCTPP began). Suppose we dropped those children with little exposure to the SCTPP. We might find stronger effects, but we are also reducing our sample size which makes it more difficult to find a statistically significant impact.

Table 8.9 contains the suggestion of a possible dose-response relationship. As we reduce the age of inclusion, we observe a large impact point estimate. But with our declining sample size, the estimated standard errors increase and none of the estimates are statistically significant. We re-estimated the results shown in Tables 8.8 and 8.9 using other survey rounds and with different age cut-offs. However, we find on evidence of impact on height-for-age z

scores or stunting. In preliminary work, we attempted to estimate impacts disaggregated by sex but the sample is too small to support this analysis.

Table 8.9 Impact of the SCTPP on height-for-age Z-scores, Monitoring Survey 3, with age restrictions

Round	Impact on HAZ	Mean HAZ, comparison group	Sample size
Children < 48 months (Table 8.8)	0.04 (0.35)	-2.45	106
Children < 45 months	0.16 (0.37)	-2.52	99
Children < 42 months	0.20 (0.39)	-2.60	89
Children < 39 months	0.37 (0.44)	-2.81	80

Notes: Standard errors in parentheses. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

8.4 Impact Estimates: Abi Adi

The issues raised in the discussion of the impact of the SCTPP on anthropometry in Hintalo Wajirat, together with the number of observations reported in Table 8.1 foreshadows the results for Abi Adi. We simply do not have the sample size necessary to plausibly estimate impact. We did re-estimate the results reported in Tables 8.5, 8.6 and 8.8 but found no evidence of impact on WHZ, wasting, HAZ or stunting in Abi Adi.

8.5 Summary

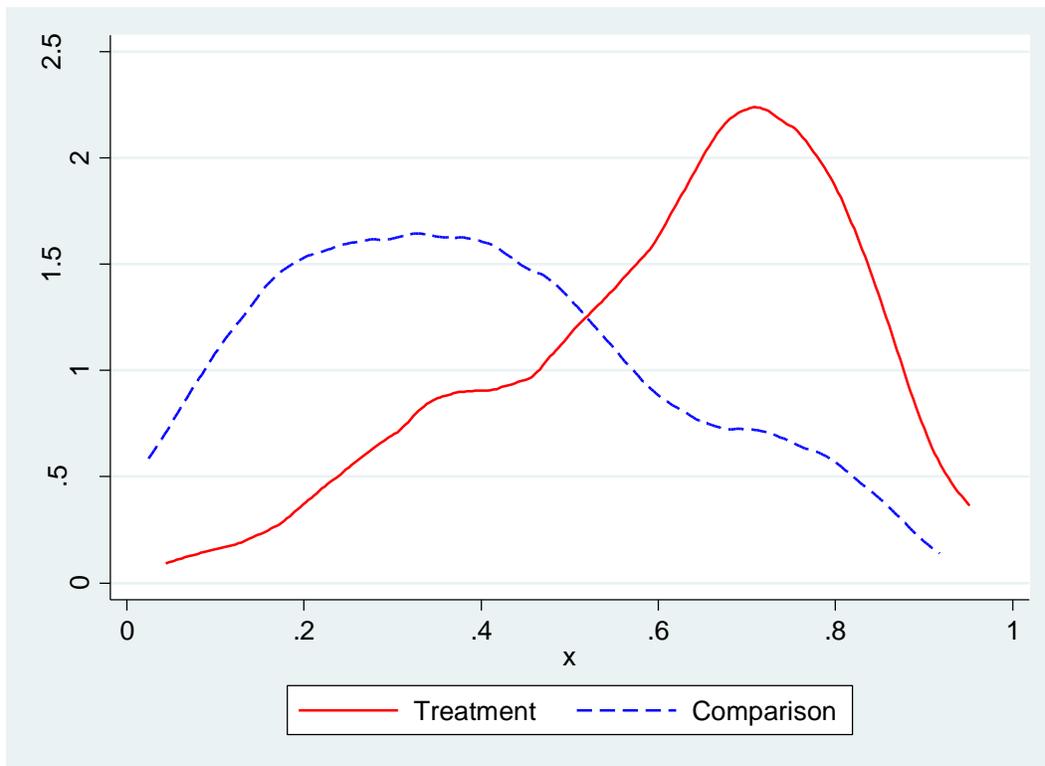
Improving the anthropometric status of children in Abi Adi, Hintalo Wajirat and other parts of Tigray is of value given the importance of early life nutrition for later life outcomes. Undernutrition in these localities is high, with the prevalence of stunting in excess of 45 percent at baseline. We find no evidence of impact of the SCTPP on stunting, HAZ, wasting or WHZ in either Abi Adi or Hintalo Wajirat. However, we are especially cautious about putting too much weight on this finding. The targeting of the SCTPP was such that our samples included relatively few children in the age range where the SCTPP might be expected to have an impact and even fewer children were exposed to the SCTPP for a reasonably lengthy period of time. There is suggestive evidence of a dose-response relationship with respect to HAZ but the small sample precludes drawing strong conclusions from this.

8.6 Statistical Appendix

All impact estimates are calculated using inverse probability weighted regression adjustment (IPWRA). Variables included in the treatment model of the IPRWA include: number of household members, number of household members under 3 years of age, number of household members under 6 years of age, number of household members under 11 years of age, number of household members under 19 years of age, number of household members

over 60 years of age, number of household members working, number of unemployed household members, number of able bodied household members, an indicator for a female head of household, an indicator for a child head of household, the age of the household head, an indicator that the household head has 0 years of formal education, a principal component based livestock index, an indicator that the house has 1 room, and an indicator that the house is in poor condition as assessed visually by the survey enumerator. In addition, we include child age and sex so that we are matching children of comparable age and sex to each other. These variables balance across all blocks. An example of the plots of the distributions of predicted treatment status by beneficiary status (taken from the matching estimator used to generate Table 8.8) for Hintalo Wajirat are shown in Figure 8.1.

Figure 8.1 Common support: Hintalo Wajirat



9. The Impact of the SCTPP on Children’s Schooling and Child Labor

9.1 Introduction

This social cash transfer program (SCTPP) initiated by Tigray regional state and UNICEF aims to improve the quality of lives of orphans and other vulnerable children (OVC), elderly and persons with disabilities (PWD) as well as to enhance their access to essential social welfare services such as health care and education via access to schools in two selected woredas (Tigray 2011, 7).

Improving schooling outcomes is a core objective of the SCTPP. With this in mind, data were collected on schooling (enrolment, attendance) and grade attainment were collected for all children 6 to 18 in all survey rounds. In this chapter, we assess the extent to which this objective has been met. We begin with contextual information on schooling in Ethiopia in general and in Abi Adi and Hintalo in particular. We provide descriptive statistics on how these outcomes have changed over the period 2012-14. Finally, we assess the extent to which the SCTPP has contributed to these changes. We then move on to consider whether the SCTPP has affected the prevalence or quantity of child labor. As with our work on schooling, we begin with descriptive statistics before moving onto the impact analysis.

9.2 Contexts

In Ethiopia, schooling is compulsory for children aged seven to 14. Children are expected to commence school at age seven, completing the first cycle of primary school (grades 1-4, basic education) by age 10 and the second cycle (grade 5-8, general primary education) by age 14. General secondary education consists of two grades, nine and ten. After that, adolescents may continue with two additional years of secondary school—obtaining a secondary school leaving certificate and, if they choose taking the higher education entrance examination—or enter teacher training or enroll in technical or vocational courses. The school year begins with the Ethiopian New Year, in September and continues through to the following June.

Table 9.1, taken from Berhane et al. (2012b) provides some basic information on school attendance as of May 2012. In the 12 months prior to the survey, 83 percent of children were attending school. Attendance was higher in Abi Adi than in the rural areas. There is a gender gap but this gap favors girls in both rural and urban areas.

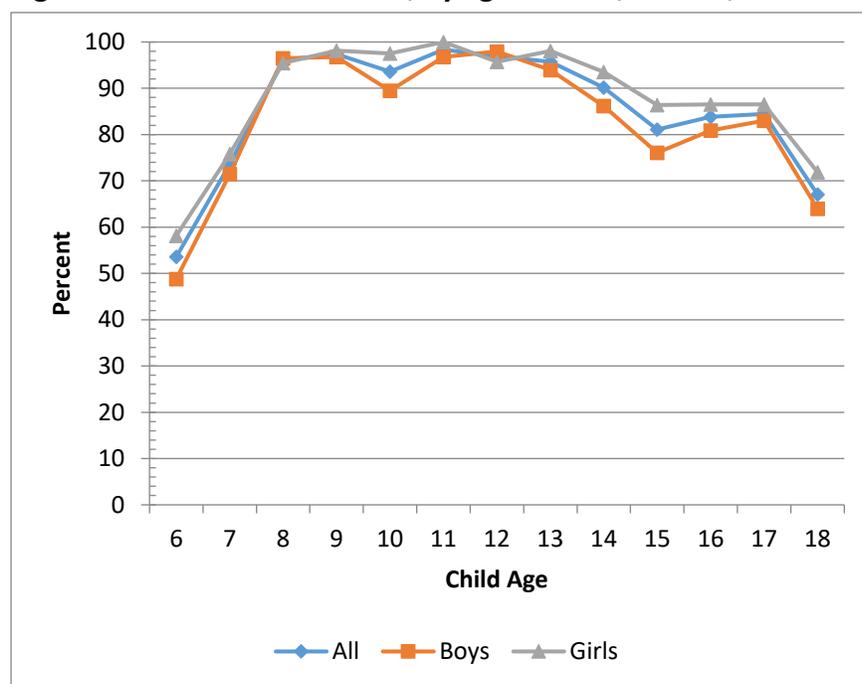
As Table 9.1 suggests, there are recurrent differences in schooling attainments by location, by sex and also—though not shown in Table 9.1—by age. To see this, consider Figures 9.1a and 9.1b. Figure 9.1a shows the percentage of children attending school as of May 2012. Attendance at early ages in Abi Adi is considerably higher than in Hintalo; the gap in attendance rates between these localities at age 7 is nearly 30 percentage points. Peak attendance occurs at an earlier age in Abi Adi than in Hintalo and does so at a higher level. For example, attendance at age 11 is 98 percent in Abi Adi but only 87 percent in Hintalo. Between age six and 15, the gender gap in attendance is much more pronounced in Hintalo.

Table 9.1 School attendance, by sex and location (ages 7 to 18), all children

	Abi Adi	Hintalo (ex Bahr Tseba)	Bahr Tseba	All
Percent of children regularly attending school	88	80	83	83
Percent of boys regularly attending school	87	76	81	80
Percent of girls regularly attending school	90	84	85	86
Number of children	1,392	2,247	445	4,084
Number of boys	714	1,108	223	2,045
Number of girls	678	1,139	222	2,039

Source: Berhane et al. (2012b).

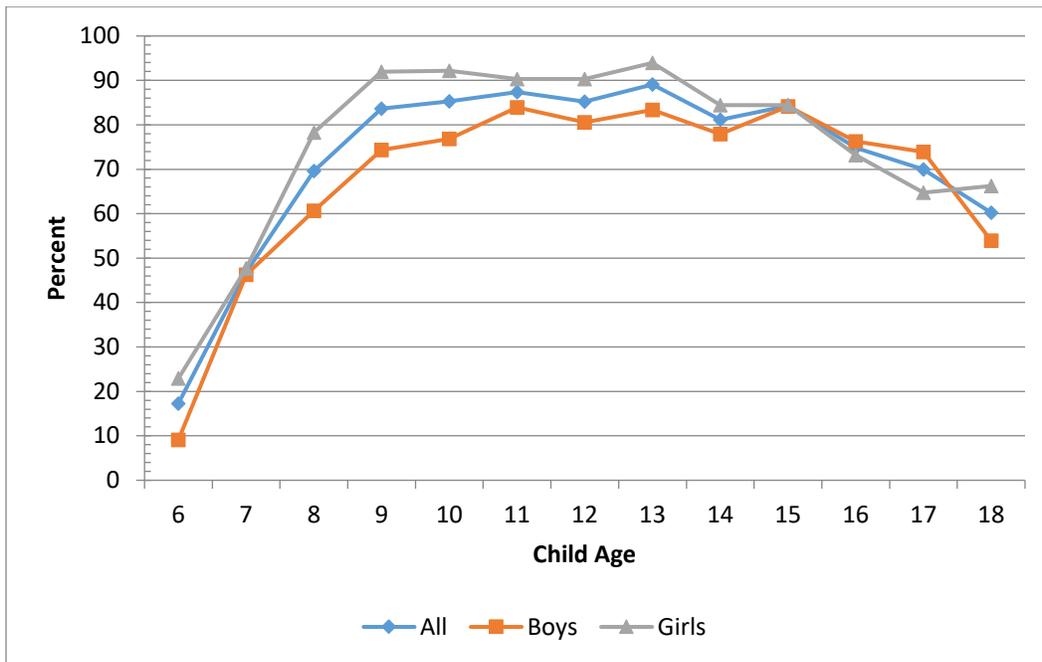
Figure 9.1a School attendance, by age and sex, Abi Adi, all children



Source: Berhane et al. (2012b).

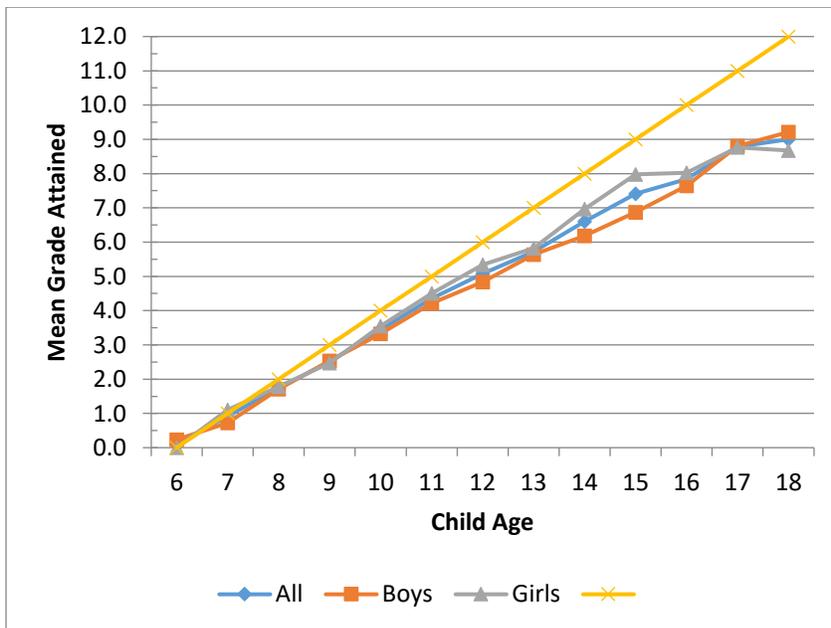
While Figure 9.1 tells us whether children are in school, it tells us nothing about the extent to which children are progressing. Figures 9.2a and 9.2b provide information on progression, showing mean grade attainment by age, sex, and location. Both include a straight line that starts at zero at age 6 and increases by one grade to age 18. This can be thought of as a benchmark for grade attainment. If all children in a particular locality were advancing one grade per year, the lines graphing grade attainment for these children would map onto this line. The size of the gap between this benchmark, or potential grade attainment, line and actual mean grade attainments shows the extent to which the average child falls behind this benchmark. The gap arises for three reasons: delays in the child starting school; grade repetition and current enrollment status.

Figure 9.1b School attendance, by age and sex, Hintalo Wajirat (excluding Bahr Tseba), all children



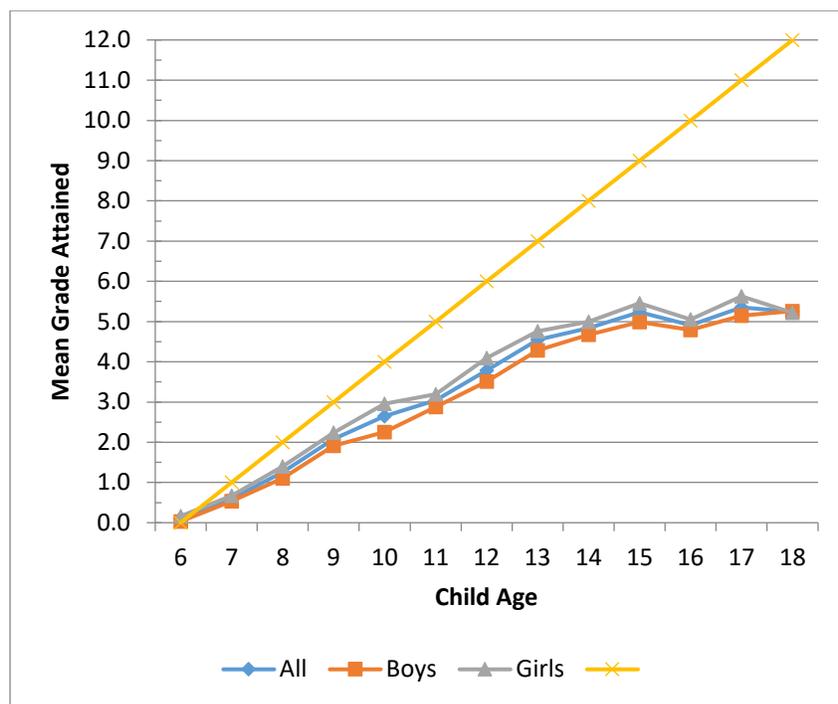
Source: Berhane et al. (2012b).

Figure 9.2a Mean grade attainment, by age and sex, Abi Adi, all children



Source: Berhane et al. (2012b).

Figure 9.2b Mean grade attainment, by age and sex, Hintalo Wajirat (excluding Bahr Tseba), all children



Source: Berhane et al. (2012b).

Across the full sample, the average child advances by about 0.8 grades between age 6 and 13 before slowing to 0.5 grades per year. Children ages 16 to 18 average between six and seven completed grades of schooling; that is, the average child in this sample has by late adolescence not completed a full eight grades of primary school. However, these aggregated results mask large differences between Abi Adi and Hintalo Wajirat as a comparison of Figures 9.2a and 9.2b shows. At age 8, the average child has completed 1.7 grades in Abi Adi compared to 1.3 grades in Hintalo. At age 14, attainment is 6.6 and 4.8 grades, respectively, for Abi Adi and Hintalo. The gap continues to widen after that, with 18-year-olds in Abi Adi having completed 9.0 grades compared to 5.2 in Hintalo.

Berhane et al. (2012b) summarized the reasons parents gave for children not attending school. Across all children, being considered “too young” is the main reason given why children 6-18 years do not attend. Between 23 and 35 percent of children are not in school because their labor is needed either for farm activities or to assist with household tasks. The cost of keeping children in school is the reason given why 15.7 percent of children in beneficiary households are not in school; this figure is 6.4 and 8.7 percent, respectively, for children in control households and in the random sample. Expense is a relatively more important factor in Abi Adi, while the need for labor was given more often in Hintalo.

Another way of looking at these schooling data relates to the availability of schools in both Abi Adi and Hintalo Wajirat. The endline community survey contained a detailed module

on the availability of schools, and some basic measures of school quality. These data are summarized in Tables 9.2 and 9.3.

Table 9.2 School availability, by *woreda* and *tabia*

<i>Woreda, Tabia</i>	How many primary schools in this <i>tabia</i>	Do primary schools offer grades 1 through 8 (all, some, none)	Do primary schools charge a fee for materials or activities (all, some, none)	Is there a secondary school in this <i>tabia</i> ?	If yes, what grades does it offer?	Do secondary schools charge a fee for materials or activities (all, some, none)
<i>Abi Adi</i>						
<i>Abi Adi, Kebele 1</i>	1	All	None	Yes	9 - 10	All
<i>Abi Adi, Kebele 2</i>	2	None	Some	No		
<i>Abi Adi, Kebele3</i>	2	Some	None	Yes	11 - 12	All
<i>Hintalo Wajirat</i>						
<i>Adi Keyih</i>	4	Some	All	No		
<i>Ara Alemsigeda</i>	6	Some	All	No		
<i>Bahr Tseba</i>	5	Some	All	Yes	9 - 12	All
<i>May Nebri</i>	5	Some	All	No		
<i>Gonka</i>	3	Some	None	No		
<i>Sebebera</i>	3	Some	Some	No		
<i>Senale</i>	3	Some	All	No		
<i>Tsehafiti</i>	5	Some	All	No		

Source: Community survey, May 2014.

Several important school features emerge from Tables 9.2 and 9.3. First, secondary schools are accessible in Abi Adi. There are two secondary schools, one of which provides all four grades of secondary school. By contrast, there is only one secondary school in Hintalo Wajirat, a *woreda* much larger in population and physical size. Second, primary schools in Abi Adi are have better student-teacher ratios and better physical stock. The median primary school in Abi Adi has a 31 students per teacher and only one has more than 40 students per teacher. In Hintalo, the median primary school has 37 students per teacher and 12 of the 25 primary schools have student-teacher ratios that exceed 40. All primary schools in Abi Adi have electricity, running water and separate latrines for boys and girls. In Hintalo, a few schools have running water, a few have electricity but only three out of 25 have both. No schools provide a breakfast while a few in Hintalo do provide a mid-morning snack. Given all this, it is possible—and this is something we consider later in the chapter - that the impact of the SCTPP in Hintalo may be muted by poorer access to schools, especially at the secondary level.

Table 9.3 School characteristics, by *woreda* and *tabia*

<i>Tabia</i>	School	Grades offered	Number of students	Number of teachers	Student-Teacher ratio	Does the school have, or provide				
						Breakfast	Mid-morning snack	Electricity	Running water	Separate latrines for boys and girls
Abi Adi										
Abi Adi, <i>Kebele 1</i>	Alula	1-8	876	36	24:1	N	N	Y	Y	Y
Abi Adi, <i>Kebele3</i>	Adigdi Jianer	1-8	1,263	44	29:1	N	N	Y	Y	Y
Abi Adi, <i>Kebele3</i>	Lisano Primary	1-6	315	10	31:1	N	N	Y	Y	Y
Abi Adi, <i>Kebele 2</i>	Yekatit Aserte	0-5	313	9	35:1	N	N	Y	Y	Y
Abi Adi, <i>Kebele 2</i>	Academi Mailomin	1-4	180	4	45:1	N	N	Y	Y	Y
Hintao Wajirat										
Tsehafiti	Waren	1-4	306	7	28:1	N	N	N	N	Y
Adi Keyih	Gira-gerebo	1-4	200	7	28:1	N	Y	Y	Y	Y
Tsehafiti	Agew	1-4	230	4	32:1	N	N	N	N	Y
Sebebera	Daerefa	1-8	671	18	32:1	N	Y	N	N	Y
Adi Keyih	Zegadele	1-4	162	5	32:1	N	Y	N	N	Y
Bahr Tseba	Bahr Tseba	1-6	506	16	32:1	N	N	Y	N	Y
May Nebri	Fineto Berhan	1-4	136	4	34:1	N	N	N	Y	Y
Senale	Hadale	1-8	540	16	34:1	N	N	N	N	Y
Sebebera	Zegaw	1-4	176	5	35:1	N	N	N	N	Y
Gonka	Gonka	1-8	600	17	35:1	N	N	N	N	N
Adi Keyih	Mamet	1-4	219	6	36:1	N	Y	N	Y	Y
Tsehafiti	Tsehafiti	1-8	859	22	36:1	N	Y	N	N	Y
Sebebera	Sebebera	1-8	696	19	37:1	N	Y	N	N	Y
May Nebri	May Nebri	1-8	615	15	41:1	N	N	Y	Y	Y
Bahr Tseba	Gemeasa	1-3	127	3	42:1	N	N	N	N	Y
Gonka	Gra Tserhi	1-3	130	3	43:1	N	N	N	N	N
Bahr Tseba	Debub	1-8	1,000	23	43:1	N	N	Y	N	Y
Senale	Senale	1-8	992	23	43:1	Y	N	Y	N	Y
May Nebri	Adi Baekel	1-6	312	7	44:1	N	N	Y	N	Y
Senale	Hadawidi	1-4	175	4	44:1	N	N	N	Y	Y
Adi Keyih	Adi Keyih	1-8	1,398	30	47:1	N	Y	Y	Y	Y
Tsehafiti	Atsemba	1-8	469	11	47:1	N	N	N	N	Y
Bahr Tseba	S/Abede	1-7	375	8	47:1	N	N	N	N	Y
May Nebri	Seffo	1-4	212	4	53:1	N	N	N	N	N
Gonka	Gramberom	1-4	260	4	65:1	N	N	N	N	Y
Ara Alemsigeda	M/Hayidi	1-8	n/a	n/a	n/a	N	N	N	Y	Y
Ara Alemsigeda	Hidamo	1-4	n/a	n/a	n/a	N	N	N	N	Y
Ara Alemsigeda	Adihana	1-5	n/a	n/a	n/a	N	N	N	N	Y
Ara Alemsigeda	Asegeda	1-5	n/a	n/a	n/a	N	N	N	N	Y

Source: Community survey, May 2014.

9.3 Changes in School Outcomes: 2012-14

We now look at how schooling outcomes change over the period 2012-14. We begin with enrollments. Because questions on schooling were asked in every survey, the first outcome we consider is whether a child was enrolled in school at any point in the school year 2011-12 (data for this comes from the household survey in May 2012), at any point in the school year 2012-13 (data comes from the monitoring surveys in October 2012, March 2013 and July 2013), and at any point in the school year 2013-14 (data comes from the monitoring surveys in November 2013, March 2014 and the endline survey in July 2013). Given the descriptives above, particularly on school availability, we disaggregate by woreda and child age (Table 9.4).

Table 9.4 Enrollment, by school year, location, and child age, all children

Gregorian calendar Ethiopian calendar	Abi Adi			Hintalo Wajirat		
	2011-2012	2012-13	2013-14	2011-2012	2012-13	2013-14
	2004	2005	2006	2004	2005	2006
6	59.3%	78.0%	64.4%	15.1%	31.7%	37.4%
7	73.5	93.8	90.1	45.3	74.4	57.8
8	96.9	99.1	93.8	68.8	80.3	72.1
9	98.2	97.9	99.1	84.5	87.6	83.9
10	95.9	99.1	99.0	89.4	91.7	89.8
11	100.0	98.6	98.2	89.1	94.7	92.3
12	97.8	99.2	97.3	87.5	95.1	91.5
13	99.1	100.0	99.2	91.2	90.9	88.6
14	94.9	98.3	96.7	81.2	95.1	87.0
15	84.6	94.9	97.4	87.3	89.2	92.2
16	88.8	87.9	89.7	77.6	82.7	78.0
All	90.6	95.4	93.5	77.2	84.2	80.9

Source: Household surveys, 2012, 2013, 2014.

In both Abi Adi and Hintalo Wajirat, there is a small increase in school enrollment from 2011-12 to 2013-14; approximately three percentage points in both woredas. While this is a small change, it is important to note that as of May 2012 (i.e., the first household survey), enrollment in Abi Adi is already very high—between 94 and 100 percent for children aged eight to 14. So there is little scope for improvement in Abi Adi in these age ranges. Although enrollments in Hintalo run about ten percentage points below those for Abi Adi for children eight to 14, recall from Table 9.2 that less than half of all elementary schools offer all eight grades of primary school and relatively poorer school access may be affecting enrollments. But also note that there are significant improvements in enrollments at early ages. For example, between 2012 and 2014, enrollment at age seven rises from 73 to 90 percent in Abi Adi and from 45 to 57 percent in Hintalo.

The qualitative fieldwork confirms that several beneficiaries considered the SCTPP to be particularly helpful in covering the costs of education and rent associated with sending and retaining children in school or university.

I have 3 children who are learning in Bahri Tseba and I am paying birr 60 for house rent and the remaining is for the educational expenses [EPM #6/S].

I [am] enabled to send my son to Bahri-Tseba and pay 50 birr house rent per month, also school materials, because of the cash [PM #1/S].

After the transfer started my grand-daughter who is an orphan came to live with me and now she is going to school. She is 14 and in grade 6. We are using the money to pay for school materials [EMP #4/Pilot].

I have a daughter in Mekelle University and I send every month to her birr 100. The educational expense is the money that I send to my daughter [CPF/AA].

I received birr 260. My child is a university student and I send him birr 100 per month. In addition I have paid birr 60 for house rent [PF #5/BT].

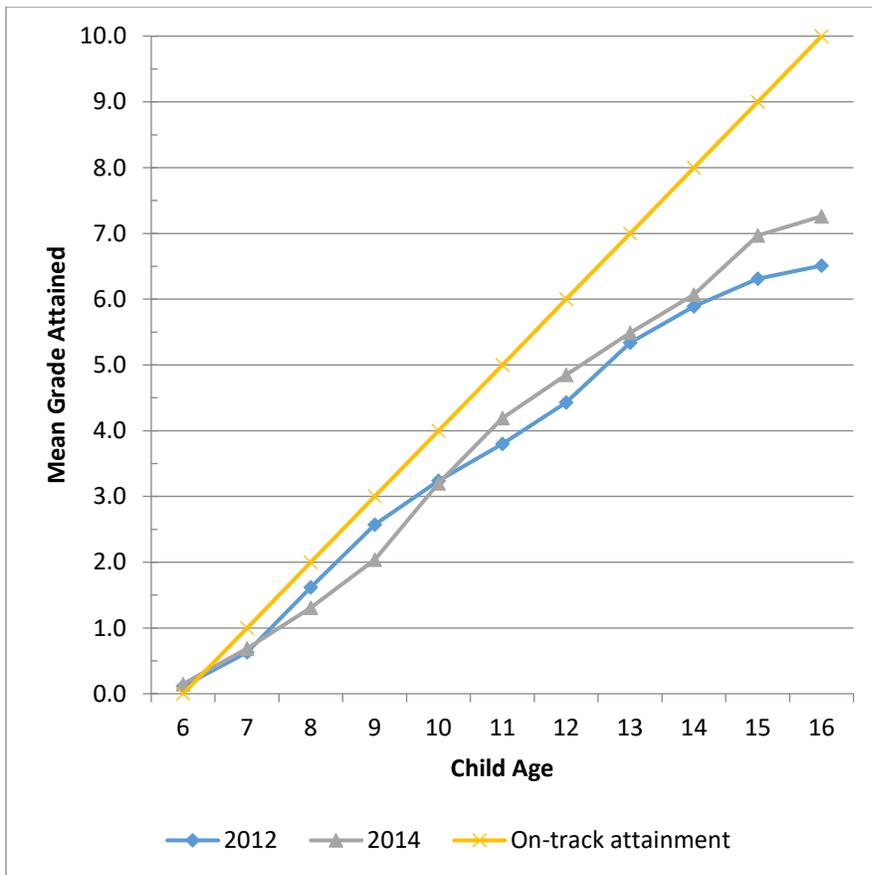
Next, we consider grade attainment. In May 2012, mean grade attainment of children 6-16 years of age was 3.91 grades. In May 2013, this had risen to 4.01 grades and to 4.16 grades by May 2014. So across all children and all locations, grade attainment rose by 0.25 grades. However, these averages mask differences by child age and location as Figures 9.3 and 9.4 show.

Figure 9.3 shows how this has changed between 2012 and 2014 by child age; Figures 9.4a and 9.4b disaggregate these results by woreda. Figure 9.3 shows a slight dip in grade attainment in children age eight and nine years. Above this age, grade attainments increase in 2014 relative to 2012. For children 15 and 16, i.e., children of age where they should be attending lower secondary school, the increase is especially large. Children aged 15 in 2014 completed an average of seven grades of schooling, compared to 6.3 grades by children of comparable age in 2012.

We observe the same age patterns, a slight decline in grade attainment for children eight and nine and increases in grade attainment for older children, in both Abi Adi (Figure 9.4a) and Hintalo Wajirat (Figure 9.4b). However, in Abi Adi grade attainment was higher than that observed in Hintalo at all ages in 2012 and so the scope for further improvement in this outcome was more limited in Abi Adi. Across all children in Abi Adi, grade attainment relative to what they should attain given their age, is quite high by 2014. For example, a 13 year old child is expected to have attained seven grades of schooling; the average 13 year old in Abi Adi has attained 6.5 grades. By contrast, in 2012, grade attainment of the average 13 year old in Hintalo was only 4.8 grades. Grade attainments rise by large amounts in Hintalo, by 0.7 grades for children 15 and 16 years of age.

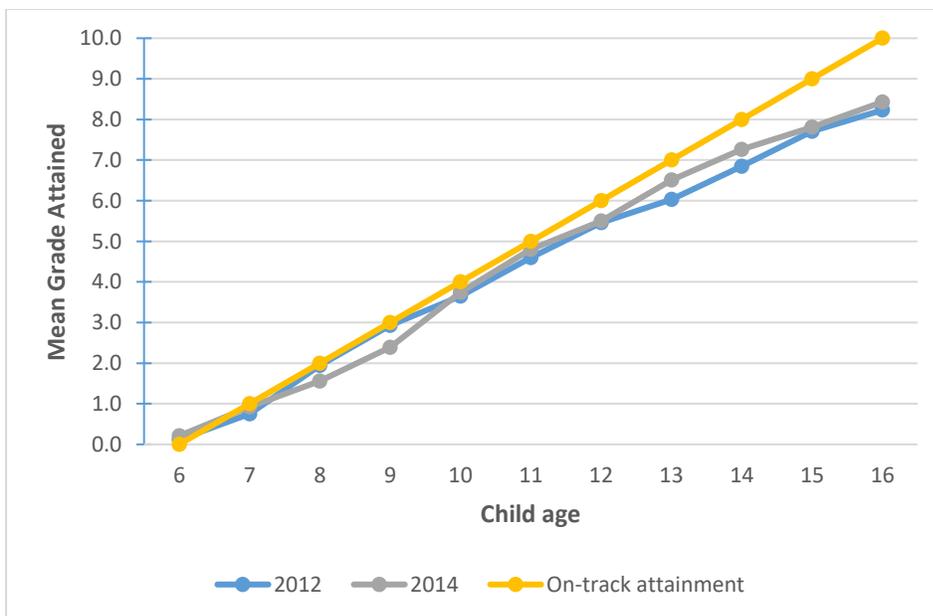
Grade attainments could increase for two reasons: Either a greater percentage of children enroll in school; and/or Conditional in enrolling, a smaller percentage of children drop out. We do not have data on drop outs prior to the first survey but we can look at drop out rates in the EC 2005 and EC 2006 (2012-13 and 2013-14) school years using data obtained from the monitoring surveys.

Figure 9.3 Mean grade attainment, by age and year, all children



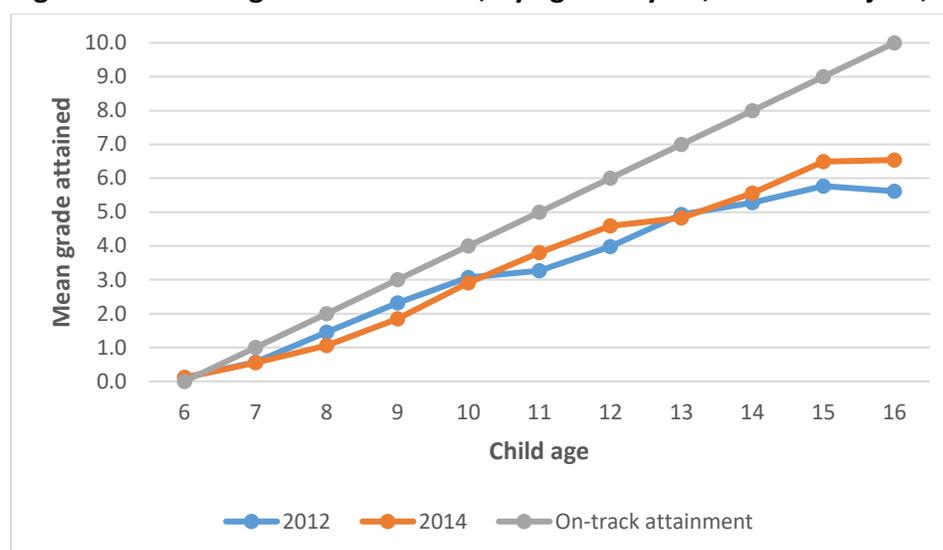
Source: Household surveys, May 2012, 2014.

Figure 9.4a Mean grade attainment, by age and year, Abi Adi, all children



Source: Household surveys, May 2012, 2014.

Figure 9.4b Mean grade attainment, by age and year, Hintalo Wajirat, all children



Source: Household surveys, May 2012, 2014.

Table 9.5 shows drop out rates by age and school year. There are two salient findings. First, conditional on starting the school year, drop out rates are highest for young children, those aged seven and eight. If—and this is something we cannot know from our data—drop out rates increased after 2012 for this age group—this would explain the dip in grade attainments for younger children. Second, drop out rates fall between school years EC 2005 and EC2006. Consistent with these findings, only 64 percent of seven year old children advanced a grade between school years EC2004 and EC2005 and only 65 percent of seven year old children advanced a grade between school years EC2005 and EC2006.

Table 9.5 Drop out, by age and school year, all children

Child age	Of children attending school in Meskerem EC 2005 / October 2012				
	7, 8	9, 10	11, 12	13, 14	15, 16
Attended for full school year	75.4%	86.1%	86.1%	83.9%	77.9%
Dropped out by Megabit / March	15.4	10.1	10.3	11.8	12.9
Dropped out after Megabit / March but before school year ended	9.2	3.8	3.6	4.3	9.2
Number of observations	338	467	496	516	511
Child age	Of children attending school in Meskerem EC 2006 / October 2013				
	7, 8	9, 10	11, 12	13, 14	15, 16
Attended for full school year	79.7%	88.9%	91.4%	92.0%	84.7%
Dropped out by Megabit / March	12.0	6.3	5.2	4.2	8.7
Dropped out after Megabit / March but before school year ended	8.4	4.7	3.4	3.8	6.6
Number of observations	251	506	466	477	469

Source: Household survey, 2012, 2013, 2014.

Lastly, in Berhane et al. (2012b), we noted that in both Abi Adi and Hintalo, girls' schooling attainments were slightly higher than boys (also see Figure 9.2a and 9.2b). Table 9.6 shows how these have changed over time in both woredas. Schooling attainments rise for both boys and girls with the largest absolute change being found for girls in Hintalo and the smallest

change found for girls in Abi Adi. In both woreda, girls' grade attainments are higher than boys in nearly all ages in 2014.

Table 9.6 Grade attainment, by age, sex, and school year and location, all children

Child age	Girls		Boys	
	School year		School year	
	May 2012 / Ginbot 2004	May 2014 / Ginbot 2006	May 2012 / Ginbot 2004	May 2014 / Ginbot 2006
Abi Adi				
6	0.10	0.19	0.14	0.22
7	0.87	1.07	0.63	0.69
8	2.02	1.52	1.87	1.59
9	2.94	2.46	2.91	2.32
10	3.84	3.81	3.44	3.69
11	4.76	4.80	4.45	4.79
12	5.61	5.76	5.30	5.21
13	6.13	6.71	5.94	6.32
14	7.23	7.41	6.41	7.11
15	8.15	7.95	7.23	7.69
16	8.30	8.77	8.15	8.03
All	4.73	4.88	4.29	4.62
Hintalo Wajirat				
6	0.17	0.03	0.03	0.18
7	0.65	0.66	0.52	0.46
8	1.73	1.14	1.21	0.94
9	2.48	2.01	2.13	1.74
10	3.29	3.28	2.78	2.57
11	3.51	4.06	2.99	3.50
12	4.25	4.88	3.72	4.24
13	4.95	5.05	4.92	4.58
14	5.59	5.87	4.95	5.25
15	5.90	6.61	5.61	6.34
16	5.71	6.96	5.55	6.12
All	3.79	4.15	3.34	3.48

Source: Household surveys, 2012, 2014.

9.4 The Impact of the SCTPP on Children's Schooling

We now apply the methods described in chapter three to assess the impact of the SCTPP on children's schooling. As is apparent from the descriptive tables above, we have a number of outcomes we can consider (enrollment, attendance and drop-out, grade attainment) and we can disaggregate our data by school year, location, age and sex. While this gives many options, it can easily result in an overwhelming number of tables and figures. However, our descriptive statistics suggest that certain outcomes and certain disaggregations may be of especial interest. These include the following:

- Enrollments. Did the SCTPP have an immediate effect on enrollment? That is, did it lead to increases in enrollments at the time of the first household survey in May 2012 when participants had already received eight months of transfers? Do these effects persist?

Do parents continue to enroll their children in school or did any initial impacts fade away? We use data from the May 2014 survey round to assess this latter question.

- **Schooling efficiency.** Data from the May 2012 survey indicated that between 14 and 25 percent of children dropped out during the school year. Does the SCTPP improve schooling efficiency? With our longitudinal data, we can assess this by examining whether over a two year period (2012 to 2014), school-age children advanced two grades of schooling.
- **Grade attainment.** Do increases in enrollment and improved schooling efficiency result in the SCTPP improving grade attainment at endline (May 2014)?
- **Disaggregations by region.** We report impacts for all children and separately for Abi Adi and Hintalo Wajirat. However, because schooling outcomes in Abi Adi were already high at baseline (May 2012), there is simply relatively little scope for further improvements in these. If there are impacts, they are most likely to be found in Hintalo Wajirat.
- **Disaggregations by age.** Schooling outcomes are affected by both “demand” side factors such as household income as well as the availability or “supply” of schools. For children aged 7-11, there is ample school availability in all localities. As Table 9.2 shows, there are numerous schools providing grades 1-4 in both Abi Adi and Hintalo Wajirat. However, in Hintalo, there are fewer schools providing grades 5-8 (only one per tabia) and there is only one secondary school in the seven tabias that receive SCTPP transfers. Reductions in school availability imply that we should expect to see any impacts of the SCTPP diminish as child age increases.
- **Disaggregations by sex.** Girls have higher baseline outcomes (Tables 9.1, 9.5; Figures 9.1a, 9.1b) suggested less scope for further improvements in schooling outcomes. However, evidence from other studies in Ethiopia indicates that girls’ schooling is more responsive to income changes than boys’ schooling (Mani, Hoddinott and Strauss 2013). Other studies show evidence of hysteresis-type or path-dependence effects in schooling. Specifically, short term positive income shocks induce higher enrollments in the short term; but once in school, children are more to continue. Other studies from Ethiopia show that these longer term effects are larger for girls than for boys (Mani, Hoddinott and Strauss 2013).

Table 9.7 reports our first set of results, the impact of the SCTPP on school enrollments as measured in May 2012. We obtain these impacts from the inverse-probability-weighted regression-adjustment (IPWRA) estimators described in chapter three. Note that in addition to the covariates described in chapter three, we also condition on child characteristics: age and sex. This approach gives the average treatment effects among treated subjects. Note too that we follow children over time but because our sample is ageing, we have more observations in 2012 than in 2014 as older children age out and are replaced by fewer numbers of new children.

Table 9.7 Impact of the SCTPP on school enrollment, May 2012, by location, age, and sex

Sample	Impact on enrollment	Sample size
All children, 6-16	0.003 (0.016)	1,878
Boys	-0.020 (0.025)	952
Girls	0.026 (0.022)	926
Abi Adi	-0.014 (0.019)	603
Hintalo Wajirat	0.030 (0.024)	845
Children aged 6 – 8	0.047 (0.050)	430
Children aged 9-11	0.037* (0.019)	483
Children aged 12-16	-0.027 (0.019)	965
Girls, Hintalo, 6-11	0.159*** (0.059)	242
Boys, Hintalo, 6-11	0.053 (0.067)	261

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Across all children age 6-16 years, after approximately nine months of operation, the SCTPP had no impact on enrollment. There is no impact when we disaggregate by child sex or by location. Given the discussion above, some of these results – for example, the absence of impact in Abi Adi and among boys—is not especially surprising. When we look at other diaggregations we seem glimmers of impact. The impact estimates for girls and for Hintalo Wajirat are positive – as we expect—but not statistically significant. Mindful of this, in the next rows reported in Table 9.7, we further disaggregate by age and then by sex, age and location. The age-disaggregated results show some evidence of impact; the SCTPP increases school enrollments of children aged 9-11 by 3.7 percentage points and this effect is statistically significant. When we further disaggregate by location and sex, we see that the SCTPP had a large impact on school enrollment of girl’s aged 6-11 in Hintalo Wajirat, increasing this by 15.9 percentage points. This is a large effect and is statistically significant. There is a smaller, and much more imprecisely measured impact on boys 6-11 in Hintalo.

Do these positive impacts on girls persist? Do other impacts emerge over time? Table 9.8 reports impact estimates at endline for three outcomes: enrollment, the probability that a child advances two grades between 2012 and 2014 (a measure of schooling efficiency); and the highest grade attained at endline.

Table 9.8 Impact of the SCTPP on school enrollment, schooling efficiency, and grade attainment, May 2014, by location, age, and sex

	Enrollment	Probability that child advanced two grades between 2012 and 2014	Highest Grade attained	Sample size
All children, 6-16	0.026 (0.019)	0.007 (0.022)	-0.022 (0.099)	1,751
Abi Adi	0.010 (0.026)	-0.020 (0.036)	-0.137 (0.156)	781
Hintalo	0.055 (0.031)*	0.062 (0.034)*	0.046 (0.153)	970
Hintalo, Girls, 6-11	0.133 (0.068)**	0.140 (0.067)**	0.489 (0.175)***	193
Girls, Hintalo, 12-16	0.042 (0.052)	0.096 (0.061)	-0.209 (0.270)	288
Boys, Hintalo, 6-11	0.039 (0.069)	-0.001 (0.062)	-0.039 (0.197)	241
Boys, Hintalo, 12-16	0.082 (0.056)	0.131 (0.076)*	0.151 (0.270)	237

Notes: *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Starting with the full sample, we see no impact of the SCTPP on any of these schooling outcomes, nor do we observe any impacts in Abi Adi. In additional work (available on request), we extensively explored age and sex disaggregations within the Abi Adi sub-sample but never found any evidence of impact. As we noted above, given the high initial level of schooling outcomes in Abi Adi, this is not surprising.

The results for Hintalo Wajirat, however, point to the existence of positive impacts of the SCTPP. Across all children 6-16, by endline the SCTPP raised enrollment by 5.5 percentage points and improved schooling efficiency—specifically the probability that children advanced two grades in two years—by 6.2 percentage points. Both impacts are statistically significant at the 10 percent level. When we disaggregate by age and sex within Hintalo, we see that the SCTPP continues to have large positive effects for girls aged 6-11. It raises the likelihood on enrollment by 13.3 percentage points, schooling efficiency by 14 percentage points and grade attainment by a half grade. These are large effect sizes and they are all highly statistically significant. By contrast, there are no impacts on older girls’ schooling outcomes or on schooling outcomes of boys aged 6-11. There is some evidence that the SCTPP improves schooling outcomes for older boys (aged 12-16), most notably an improvement in grade efficiency of 13 percent, but for the most part these are imprecisely measured.

9.5 Child Labor: Descriptives

As outlined earlier, one of the core objectives of the program is to improve child welfare through participation in schooling, improved access to food as well as health services. It also aims to improve on child labor participation both at home and outside. The program document explicitly mentions that ‘child rights’ and welfare as one of key outcome indicator to measure program impacts (page 33). This is done through not only providing children with better access

to schooling, health and nutrition, but also through improvements on child labor participation and reducing time spent out of schooling. The document further outlines that these outcomes should be measured against the extent of participation of children in work (both on farm and off-farm) at home and outside.

In this part of the chapter, we assess the extent to which these goals have been achieved. We used detailed child and household level data collected through the household level survey administered in 2012 and 2014. That said, it should be noted from the outset that measuring child labor is a difficult task particularly in the rural context as children are involved in several complex activities that are not always easy to account for. For this reason, our assessment focuses on some of the more explicit child labor engagements in and outside of the household. These include children’s participation in wage employment (outside of the households), in own business activities, and household chores. We report these, both at the household level, in terms of proportion of households that involved children in any of these activities, and, at the child level, in terms of actual time spent by children on any of these activities.

The percentage of households who use child labor for wage employment and own business is presented in Table 9.9. This has increased over time in both Hintalo (by 4 percentage points) and Abi Adi (by 10 percentage points), possibly because average child age increases over this two year period. This variation across the two location is not surprising given towns like Abi Adi have more opportunities for own businesses and wage employment than rural areas like Hintalo.

Table 9.9 Proportion of households that used child labor on wage and own businesses

	All		Hintalo		Abi Adi	
	Baseline	Endline	Baseline	Endline	Baseline	Endline
Beneficiary	0.04	0.08	0.01	0.04	0.08	0.15
Control	0.05	0.12	0.02	0.06	0.09	0.23
Random	0.05	0.1	0.01	0.06	0.14	0.2
Total	0.04	0.1	0.01	0.05	0.09	0.19

Looking at the change by treatment status, in general, the increase seems to be smaller for beneficiary households than control. The percentage of beneficiary households that used child labor has increased by 3 percent in Hintalo, while the increase for households in the control and random group is 4 percent and 5 percent, respectively. The increase in child labor reported by beneficiary households (7%) is half of the increase in households from the control group (14%) and almost the same as households in control group (6%). A test, to check whether this smaller increase on beneficiaries is due to SCTPP, is conducted in the next section.

Tables 9.10a and 9.10b present the number of days children worked on wage employment and own business disaggregated by gender. Households were asked how many days their children worked on wage employment in each of the months prior to the survey. To minimize recalling error, child labor days reported for the most recent three months is used for analysis. As compared to boys, girls’ wage labor days were higher in Hintalo and almost the

same in Abi Adi (see Table 9.10a). But, over time, boys' wage labor days decrease both in Hintalo and Abi Adi while girls' wage labor days decrease only in Hintalo. In Abi Adi, there is increasing girls' wage labor days while child wage labor days decrease both for boys and girls in Hintalo. It is important to remember from Table 9.9 that the percentage of households using child labor for wage and own business was higher and increases by higher percentage in Abi Adi than Hintalo.

Table 9.10a Number of days that children worked on wage employment in the most recent three months

	Wage employment				Own businesses			
	Boys		Girls		Boys		Girls	
	Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
All								
Beneficiary	43.93	29.61	39.93	51.27	5.87	14.14	5.2	8.58
Control	36.46	28.08	60.5	40.06	6.11	13.07	4.47	11.01
Random	61.67	38	60	44	8.38	12.45	6.3	17.92
Total	42.47	29.55	45.32	45.03	6.39	13.47	4.96	11.12
All Hintalo								
Beneficiary	46.25	30.3	32	31.43	2	11.14	5	6.83
Control	36	21.63	70	34.42	7.17	14.91	3.18	8.05
Random		27.6		38.67	20	7.33	1	12.17
Total	41.86	26.25	60.5	34.05	8.13	12.57	3.74	8.12
Abi Adi								
Beneficiary	43	28.54	40.54	68.63	6.14	14.63	5.28	9.26
Control	36.6	35.29	32	51.33	5.82	12.61	4.97	11.69
Random	61.67	90	60	60	6.71	14.38	6.89	19.65
Total	42.65	34.23	41.27	61.13	6.07	13.67	5.38	11.99

Table 9.10b presents the number of child labor days used on own businesses in a typical month. The number of days children worked on own business activities increased for both boys and girls. The increase in girls' labor days is however smaller for beneficiary households than for non-beneficiary households.

Other than wage employment and own businesses, child labor is also used in many forms of household tasks or chores include fetching water and firewood, cattle herding, cleaning, cooking, child care, working on family farm. Table 9.11 presents the average labor hours a child spent on household chores per day.

Table 9.10b Number of child labor days used on household businesses in a typical month

	Boys		Girls	
	Baseline	Endline	Baseline	Endline
All				
Beneficiary	5.87	14.14	5.2	8.58
Control	6.11	13.07	4.47	11.01
Random	8.38	12.45	6.3	17.92
Total	6.39	13.47	4.96	11.12
All Hintalo				
Beneficiary	2	11.14	5	6.83
Control	7.17	14.91	3.18	8.05
Random	20	7.33	1	12.17
Total	8.13	12.57	3.74	8.12
Abi Adi				
Beneficiary	6.14	14.63	5.28	9.26
Control	5.82	12.61	4.97	11.69
Random	6.71	14.38	6.89	19.65
Total	6.07	13.67	5.38	11.99

Table 9.11 Average labor hours spent on household chores by a child, per day

	Hintalo		Abi Adi	
	Baseline	Endline	Baseline	Endline
Beneficiary	5.57	3.43	3.21	3.52
Control	4.96	4.17	3.58	3.53
Random	5.35	4.43	2.88	4.16
Total	5.25	3.97	3.35	3.62

Table 9.11 presents a general picture of the number of hours spent on household chores. A more detailed account is presented in Table 9.12. This shows that children spend most of their time fetching water and collecting firewood, followed by cattle herding both in Hintalo and Abi Adi. This picture remains stable over time. However, over time, time spent on all household chores has declined going from the baseline to the endline.

We can compare our results to those from the most recent Ethiopia Demographic and Health Survey (EDHS 2011). The latter is a nationally representative data and helps us put our results in perspective. The EDHS considers child labor on household chores for two child age groups for which we have data. For both age groups, the EDHS defines child labor on household chores if children worked for 28 hours or more a week. The results for these age groups calculated from our sample are presented in Table 9.13. Overall, the percentage of children engaged in household chores is higher among females than males both in Hintalo and Abi-Adi.

Table 9.12 Average children labor hours spent on different household chores per day

		Baseline							Endline						
		Fetching water, firewood	Cleaning	Cooking	Child care	Work on family farm	Cattle herding	Other family or outside business	Fetching water, firewood	Cleaning	Cooking	Child care	Work on family farm	Cattle herding	Other family or outside business
Hintalo excluding	Beneficiary	2.31	1.17	0.71	0.33	0.21	0.81	0.03	1.38	0.66	0.54	0.32	0.17	0.86	0.06
	Control	1.77	0.81	0.52	0.27	0.32	1.21	0.06	1.34	0.61	0.48	0.32	0.49	1.42	0.08
Bahr Tseba	Random	1.6	0.72	0.39	0.71	0.34	1.59	0.02	1.33	0.59	0.43	0.63	0.61	1.62	0.09
	Total	1.92	0.91	0.56	0.38	0.29	1.15	0.04	1.35	0.62	0.49	0.39	0.41	1.27	0.08
Bahr Tseba	Beneficiary	2.26	1.42	1.09	0.14	0.3	0.98	0.04	1.7	0.83	0.74	0.32	0.28	0.83	0.12
	Control	1.69	1.05	0.73	0.37	0.29	0.97	0.02	1.52	0.54	0.5	0.15	0.26	0.64	0.1
	Random	1.05	0.45	0.2	0.2	0.16	2.02	0.05	1.62	0.79	0.46	0.44	0.72	2	0.13
	Total	1.82	1.11	0.8	0.26	0.27	1.13	0.03	1.6	0.68	0.58	0.26	0.34	0.92	0.11
Abi Adi	Beneficiary	0.92	0.9	0.6	0.39	0.01	0.11	0.27	1	1.06	0.79	0.39	0.04	0.23	0.35
	Control	1.02	0.87	0.6	0.63	0.06	0.23	0.19	0.83	0.95	0.76	0.52	0.07	0.5	0.31
	Random	0.72	0.64	0.44	0.62	0	0.31	0.17	0.67	0.99	0.77	0.91	0.09	0.69	0.38
	Total	0.94	0.84	0.58	0.55	0.04	0.21	0.21	0.86	0.99	0.77	0.54	0.07	0.44	0.33

Table 9.13 Percent of children in household chores for 28 hours or more per week, by gender, location, and treatment status

Location	Treatment status	Gender	Time	Percentage of children age 6-11 years involved in household chores for 28+ hours per week				Percentage of children age 12-24 years involved in household chores for 28+ hours per week			
				Boys		Girls		Boys		Girls	
				Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
				Hintalo	Beneficiary	20%	31%	38%	31%	47%	24%
	Control	21%	37%	29%	36%	45%	38%	56%	39%		
	Random	26%	45%	28%	40%	55%	50%	69%	50%		
	Total	22%	37%	32%	36%	47%	35%	62%	41%		
Abi Adi	Beneficiary	9%	17%	18%	27%	27%	30%	55%	40%		
	Control	10%	17%	20%	31%	33%	25%	66%	44%		
	Random	8%	27%	13%	35%	22%	33%	56%	66%		
	Total	9%	19%	18%	31%	29%	28%	61%	46%		

For children aged 12-24 years, 47 percent of boys and 62 percent of girls from Hintalo, and 29 percent of boys and 61 percent of girls from Abi-Adi were involved in child labor at baseline. At endline, this has decreased to 35 percent of boys and 41 percent of girls in Hintalo, and 28 percent of boys and 46 percent of girls in Abi-Adi, respectively, participating in household chores for 28 hours or more. These figures are consistent with the national figures reported in EDHS 2011—where, for example, 40 percent of children age 12-24 are engaged in household chores for 28 or more hours in a week. For the lower age group of 6-11, the results show a mixed picture partly because this is a younger age group and the picture might significantly change as they grow older.

9.6 Child Labor: Impact Analysis

We begin by considering the impact of the SCTPP on child wage labor and on nonfarm own business activities. Double difference results are presented in Table 9.14 and the 2014 single-difference results are presented in Table 9.15. Both generate comparable results. The SCTPP did not have significant impact on child labor outcomes except for girls' work on family businesses in Abi Adi.

Table 9.14 Impact of the SCTPP on wage and business labor days, by location and sex: double-difference

		Child labor dummy	Wage labor days		Business labor days	
			Boys	Girls	Boys	Girls
Abi Adi	Impact estimate	-0.024	-0.657	0.424	0.172	-1.052
	Standard error	0.026	0.503	0.435	0.372	0.355***
	Sample size	927	927	927	898	898
Hintalo	Impact estimate	0.008	0.299	0.103	-0.064	0.035
	Standard error	0.012	0.27	0.138	0.065	0.048
	Sample size	1,443	1,443	1,443	1,354	1,354

Table 9.15 Impact of the SCTPP on wage and business labor days, by location and sex: single-difference, 2014

		Child labor dummy	Wage labor days		Business labor days	
			Boys	Girls	Boys	Girls
Abi Adi	Impact Estimate	-0.021	-0.573	0.424	0.171	-1.049
	standard error	0.026	0.464	0.441	0.373	0.355***
	Sample Size	927	927	927	898	898
Hintalo	Impact Estimate	0.008	0.296	0.103	-0.063	0.034
	standard error	0.012	0.271	0.138	0.065	0.049
	Sample Size	1,443	1,443	1,443	1,354	1,354

Table 9.16 reports the impact of the SCTPP on the amount of time children spent doing household chores. We wondered if the SCTPP affected the total amount of time spent by all children in a household on these tasks; these household-level estimates are reported in Table 9.17.

Table 9.16 Total number of hours a child spent on household chores, child level

	Impact estimate	Standard error	p-value	Sample size
Abi Adi				
Double difference	0.2	0.301	0.507	548
Single difference, 2014	0.203	0.303	0.501	548
Hintalo				
Double difference	0.066	0.23	0.775	806
Single difference, 2014	0.066	0.23	0.773	806

Table 9.17 Total number of hours children spent on household chores, household level

	Impact estimate	Standard error	p-value	Sample size
Abi Adi				
Double difference	0.341	0.482	0.479	548
Single difference	0.17	0.364	0.641	806
Hintalo				
Double difference	0.243	0.288	0.399	1,373
Single difference	0.244	0.488	0.616	548
Single difference	0.24	0.288	0.405	1,373

9.7 Summary

Improving schooling outcomes is a core objective of the SCTPP. With this in mind, data were collected on schooling (enrolment, attendance) and grade attainment were collected for all children 6 to 18 in all survey rounds. These data show rising rates of enrollment and grade attainment in both Abi Adi and Hintalo Wajirat. In Abi Adi especially, by endline, enrollments approach 100 percent for children aged 9-15. There are many factors that could account for these changes; in this chapter, we assessed the contribution of the SCTPP to schooling outcomes.

The SCTPP has no effect on school outcomes in Abi Adi. It has a modest effect on enrollment and schooling efficiency in Hintalo Wajirat. It has large, positive, and statistically significant impacts for girls 6-11 years of age and living in Hintalo Wajirat. It raises the likelihood on enrollment by 13.3 percentage points, schooling efficiency by 14 percentage points, and grade attainment by a half grade. This pattern of impacts suggests that cash transfer programs in Ethiopia are most likely to improve schooling attainments when (1) existing attainments are relatively low; and (2) when improvements in outcomes are constrained by demand-side characteristics.

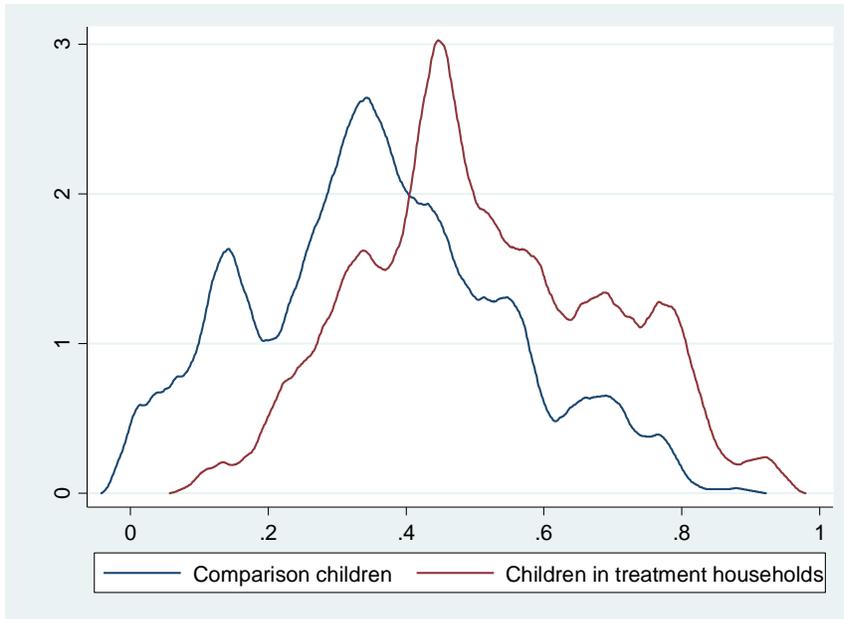
Conversely, it is important to recognize that gains in school enrolment and retention could be reversed among low-income households if they stop receiving cash transfers.

Children will drop out from school if the program ends. Especially children couldn't continue their education in other areas like Adigudem, because we don't have the capacity to pay for house rent [PF #2/MN].

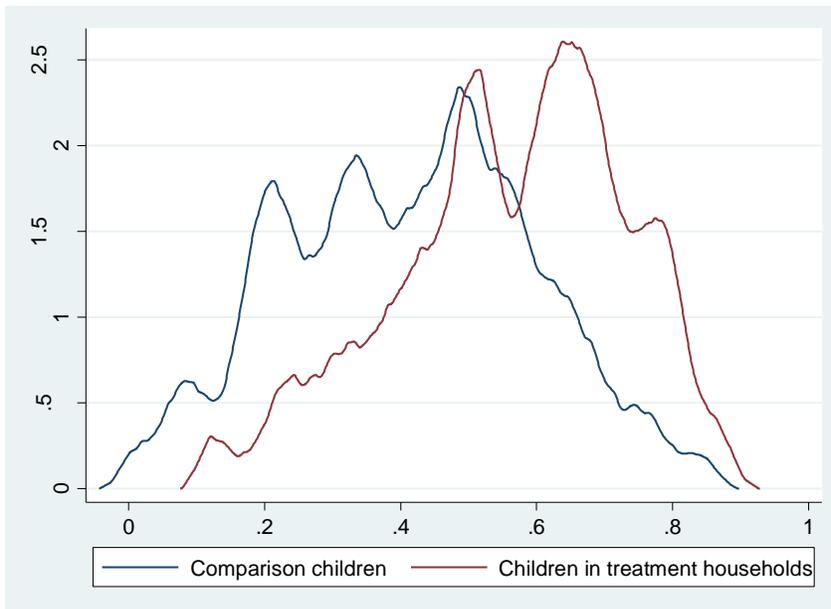
Children in both Abi Adi and Hintalo spend a considerable amount of time on household tasks such as fetching water and firewood. In both locations, the percentage of children engaged in household chores is higher among females than males. The SCTPP appears to have had no effect on this. It has reduced, by one day, the amount of time girls spend in nonfarm own business activities.

9.8 Appendix: Common Support: Overlap Plots of Propensity Scores

Abi Adi



Hintalo Wajirat



10. The Impact of the SCTPP on Maternal Health

10.1 Introduction

One of the core goals of the SCTPP was to improve children's schooling outcomes, as well as their health and nutrition. Because a mother's health often has impacts on the outcomes of her children, we took care to measure key indicators of maternal health. While other chapters discuss these outcomes for children, the current chapter discusses measures of maternal health. We begin by discussing our metrics of physical maternal health, then provide descriptive statistics of these measures in 2012 at baseline and 2014 at endline. We then assess the extent to which the SCTPP has contributed to these changes. In addition to physical health, the chapter also discusses mental maternal health, a potentially important contributor to good childcare.

10.2 Physical Maternal Health—Body Mass Index

10.2.1 Contexts

Body mass index (BMI) is an important component of maternal health because children born to underweight women are more likely to be stunted themselves. In the most recent Demographic Health Survey (DHS) fielded in Ethiopia in 2011, the average BMI of women in Ethiopia was 20, while the average in Tigray was 19.3. In all Ethiopia, 27 percent of women were considered thin and undernourished, with a BMI under 18.5, while in Tigray, the rate climbed to 40 percent. Younger women (under 20 years) in the DHS had lower body mass than did older women (age 20-49); elderly women (over age 50) are not included in the DHS. Women in rural areas also had lower body mass than did women in urban areas.

The SCTPP sample is quite different from the DHS sample. 2 percent of the SCTPP maternal sample is under the age of 20, and an additional 50 percent are between 20 and 49 years old. Unlike the DHS, the SCTPP includes elderly women, comprising nearly 48 percent of the sample. The average age of women in the SCTPP study is 48 years old. 38 percent of women in the SCTPP maternal sample report that they are married, while 22 percent live alone.

Table 10.1 shows the average body mass index of respondents in Abi Adi and Hintalo, also broken out into the beneficiary, control, and random samples. The table also shows the percentage that are underweight (BMI<18.5). At baseline, the average body mass of beneficiaries in Abi Adi was comparable to the DHS sample from Tigray. Women in the control group and random sample had higher body masses. Women in Hintalo had slightly lower body masses, again with beneficiaries lighter than women in the control group and random sample.

Table 10.1 Maternal health, body mass at baseline

	Beneficiary	Control	Random	N
Abi Adi				
BMI	19.4 (3.0)	20.2 (3.1)	20.6 (2.8)	1,019
Underweight (percent)	39.9 (0.5)	33.2 (0.5)	25.4 (0.4)	1,019
Hintalo				
BMI	19.1 (2.4)	19.5 (2.4)	19.9 (2.1)	1,715
Underweight (percent)	44.3 (0.5)	35.3 (0.5)	22.6 (0.4)	1,715

Source: Baseline household survey.

10.2.2 Changes in maternal body mass, 2012/14

Information from the repeated DHS surveys shows that maternal body mass was improving in Ethiopia, but has recently stalled. In 2000, the percentage of underweight women in the full Ethiopia DHS sample was 30 percent. In 2005, the percentage had fallen to 27 percent. As reported earlier in this chapter, in 2011, 27 percent of women in Ethiopia were underweight. This improvement and then leveling off was seen in both urban and rural areas.

Because the body mass of beneficiaries in Abi Adi and Hintalo was comparable to the DHS sample in Tigray, and because improvements in body mass have stalled nationwide, we may not expect to find substantial increases in BMI over our study period for beneficiaries. Respondents in the control group and random sample had higher average body mass than did the average beneficiary, so we may expect improvements for them to be smaller still.

Table 10.2 shows statistics on body mass from the endline survey fielded in May 2014. Body mass was mostly constant in Abi Adi between the baseline and endline surveys for all three samples (beneficiary, control, and random). BMI improved slightly, by an average of 0.2 points, while the percentage of respondents who were underweight fell by an average of 2 percentage points.

Table 10.2 Maternal health, body mass at endline

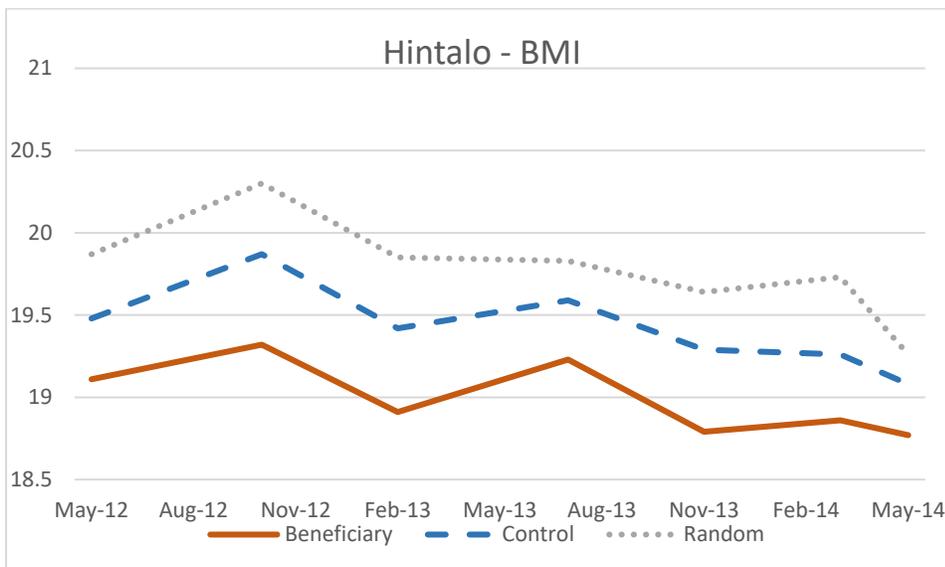
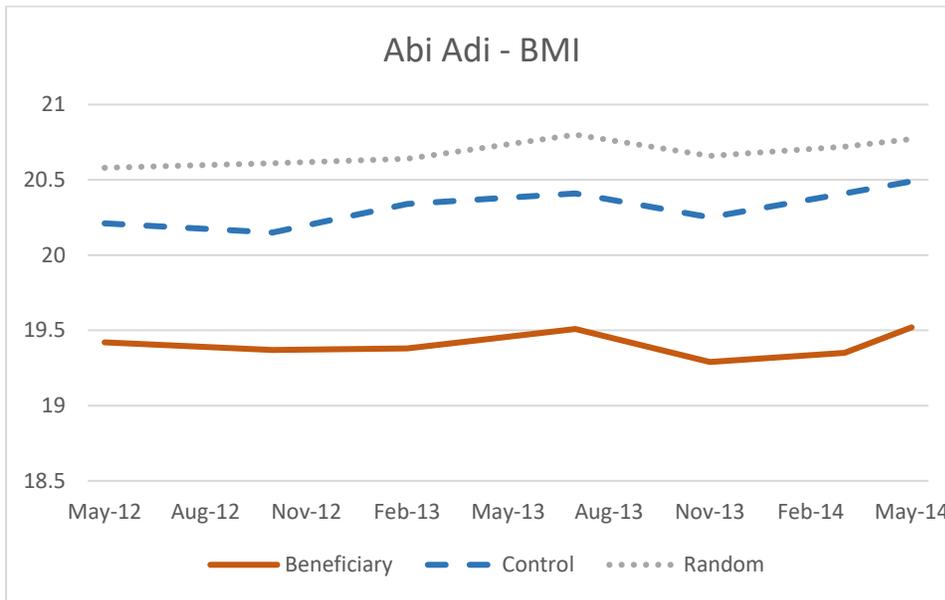
	Beneficiary	Control	Random	N
Abi Adi				
BMI	19.5 (3.0)	20.5 (3.2)	20.8 (3.3)	1,059
Underweight (percent)	39.6 (0.5)	29.1 (0.5)	23 (0.4)	1,059
Hintalo				
BMI	18.8 (2.5)	19.1 (2.3)	19.3 (2.2)	1,860
Underweight (percent)	49.7 (0.5)	43.4 (0.5)	35.7 (0.5)	1,860

Source: Endline household survey.

Results from Hintalo are markedly different. BMI fell for all three groups, by an average of -0.4 points, while the percentage of respondents who were underweight increased by an average of 9 percentage points. While they were still better off than beneficiaries overall, the worsening of body mass was worst in the random sample.

Figure 10.1 shows these results for body mass graphically. The plot shows that BMI was relatively stable in Abi Adi, with small seasonal variations. In Hintalo, there is a clear downward trend in BMI for all three groups, with larger seasonal variation than in Abi Adi.

Figure 10.1 Maternal health: Body mass over time



10.2.3 The impact of the SCTPP on maternal body mass

Because average body mass did not change for any group in Abi Adi, and was falling for all groups in Hintalo, we may not expect to find large impact estimates after controlling for selection. Table 10.3 shows the estimates of the impact of the SCTPP on maternal body mass index. The SCTPP had no statistically significant effect on body mass. After controlling for selection, body mass for beneficiaries in Abi Adi increased slightly relative to the control group, and decreased slightly for beneficiaries in Hintalo, but neither difference is statistically different from zero.

Table 10.3 Maternal health: Impact of SCTPP on body mass

	Impact on BMI	Sample size
Abi Adi	0.115 (0.172)	629
Hintalo	-0.01 (0.164)	729

Notes: Standard errors are shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

10.3 Mental Maternal Health—Depression and Anxiety

10.3.1 Contexts

Poor maternal mental health has been associated with poor child health and development in Asia (Patel, Rodrigues, and DeSouza 2002), and suggested in Ethiopia (Harpham et al. 2005). The SCTPP evaluation survey includes a brief module of questions to measure the mental health of both new mothers and other women in the sample, and is used to assess the impact of the SCTPP on mental health.

The mental health status of women was assessed in the quantitative survey using two sets of questions. The Self-Reported Questionnaire (SRQ-20) is a 20-question survey developed by the World Health Organization, and consists of a series of yes or no questions pertaining to the existence of signs or symptoms of mental distress. For example, a few of the questions read: “Do you feel unhappy? Do you cry more than usual? Is your daily work suffering?” Generally, higher numbers of “yes” answers indicate increased levels of mental health difficulties. The SRQ-20 has been validated and in use in Ethiopia since 1988 (Beusenberg and Orley 1994), and has been used to detect perinatal common mental disorders in Ethiopia (Hanlon et al. 2008). The precise module used in the quantitative survey was translated into Tigrinya based on the Amharic version developed by Youngmann et al. (2008). Based on the results from Youngmann et al. (2008), one of the standard questions was discarded as unreliable, leaving 19 questions.²⁵ The questions were then asked to the primary adult female of each household. Consistent with Youngmann et al. (2008) and several other international studies, we use seven “yes” responses as an approximate cut-off point for a valid positive

²⁵ The deleted question was “Do you find it difficult to enjoy your daily activities?”

indicator of the presence of psychopathology. The SRQ-20 was measured at both baseline and endline, and in each of the monitoring surveys.

In the later survey rounds, mental health was also assessed with the Kessler 6 questionnaire, developed by the United States government’s National Center for Health Statistics. The set of questions asks the respondent to indicate how often they experience one of six symptoms of mental distress. For example, a few of the questions read: “During the past 30 days, about how often did you feel nervous — would you say all of the time, most of the time, some of the time, a little of the time, or none of the time? During the past 30 days, about how often did you feel hopeless — all of the time, most of the time, some of the time, a little of the time, or none of the time?” The respondent’s responses are aggregated across the six questions, with a scores ranging from 6 to 30. Scores between 6 and 11 indicate low levels of distress, while scores between 12 and 19 indicate mild to moderate distress and scores between 20 and 30 indicate severe distress. The K-6 was validated as a method of assessing maternal mental health in the Ethiopian context by Tesfaye et al. (2010). The K6 was measured in the SCTPP evaluation at endline, and in the 4th and 5th monitoring rounds.

In a study that used the SRQ-20 to assess perinatal maternal mental health in Ethiopia, Harpham et al. (2005) found that 33 percent of women reported 7 or more symptoms of mental distress. With a broader sample that included non-perinatal women and men in Addis Ababa, Gelaye et al. (2012) found that 18 percent of respondents had SQR scores of 7 or more.

Table 10.4 shows that at baseline in May 2012, there were high levels of mental distress, especially among beneficiaries and in Abi Adi. Both in terms of the raw number of “yes” responses in the SRQ, as well as the proportion indicating seven or more symptoms, respondents in Abi Adi reported worse mental health than did respondents in Hintalo. Further, beneficiaries reported worsened mental health than did respondents in the control group or random sample by both measures as well.

Table 10.4 Maternal health: Mental distress at baseline

	Beneficiary	Control	Random	N
Abi Adi				
SQR Yes answers (max 19)	7.1 (5.3)	5.6 (4.9)	3.5 (3.7)	1,280
Percent with 7 or more Yes answers	51.5 (50.0)	36.9 (48.3)	19.2 (39.6)	1,280
Hintalo				
SQR Yes answers (max 19)	5.4 (4.9)	4.2 (4.4)	2.4 (2.8)	2,365
Percent with 7 or more Yes answers	34.6 (47.6)	24 (42.7)	8.4 (27.8)	2,365

Source: Baseline household survey.

10.3.2 Changes in maternal mental health, 2012/14

Table 10.5 shows that the measures of mental distress at endline are worse than at baseline by every measure for every group. The SRQ scores increased by an average of 1.5 points in Abi Adi, with 50 percent of all respondents now reporting seven or more symptoms. In Hintalo, the SRQ score increased by an average of 3.2 points, and 54 percent of respondents show seven or more symptoms. Beneficiaries had higher levels of mental distress, with 64 percent of recipients in Abi Adi reporting seven or more symptoms on the SRQ and 66 percent reporting severe distress in Hintalo. The newly added K6 measure of mental health also shows high levels of distress, with average scores showing moderate levels of distress in all groups, and 18 percent of beneficiaries in Abi Adi and Hintalo reporting severe distress.

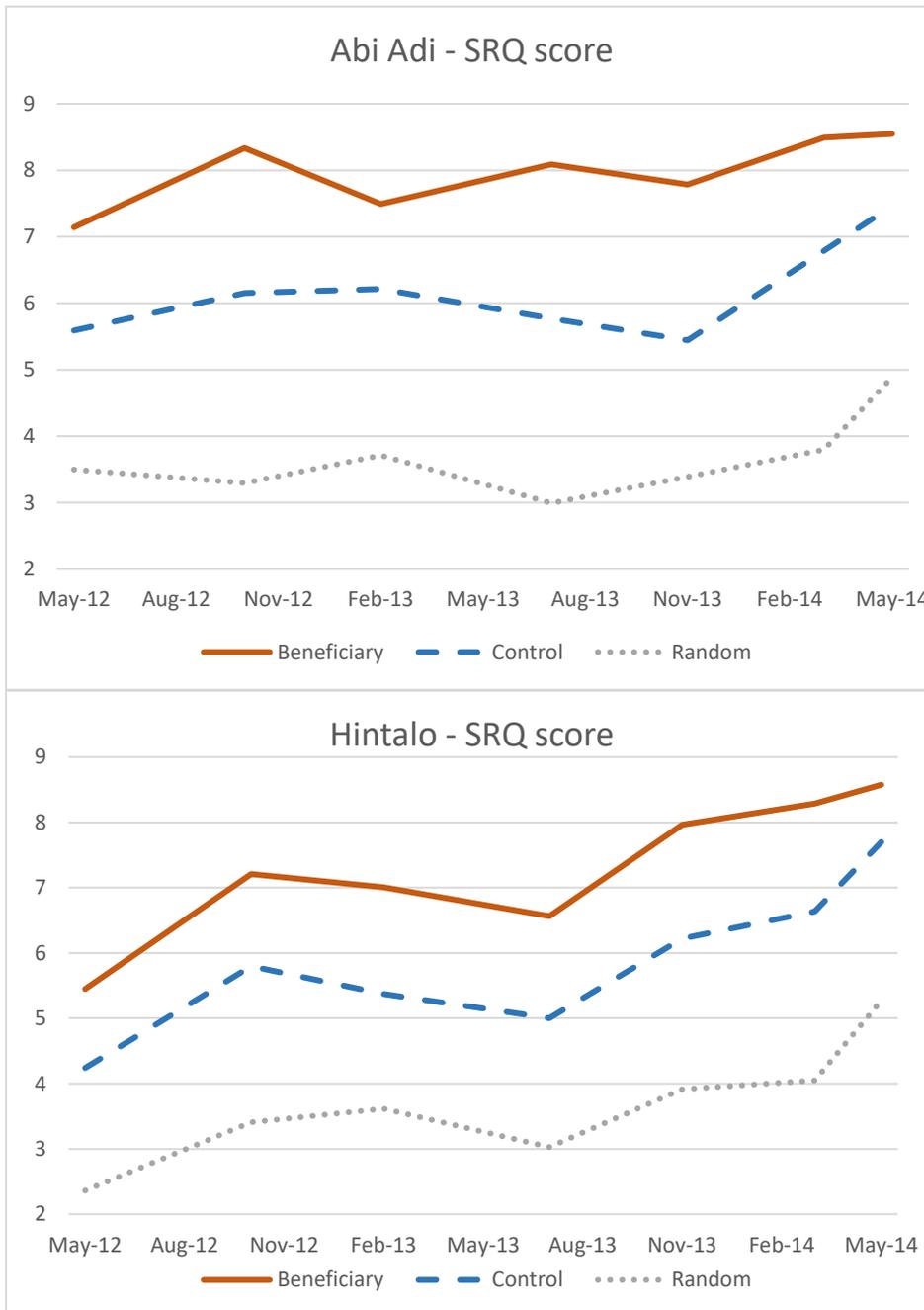
Table 10.5 Maternal health: Mental distress at endline

	Beneficiary	Control	Random	N
Abi Adi				
SQR Yes answers (max 19)	8.5 (5.0)	7.5 (5.1)	4.9 (4.4)	1,120
Percent with 7 or more Yes answers	63.8 (48.1)	53.1 (50)	31.7 (46.7)	1,120
K6 score (min 6, max 30)	13.7 (6.0)	12.9 (5.8)	10.8 (5.0)	1,120
Severe distress	18.3 (38.7)	12.6 (33.2)	8.1 (27.4)	1,120
Hintalo				
SQR Yes answers (max 19)	8.6 (4.7)	7.7 (4.6)	5.3 (4.4)	2,002
Percent with 7 or more Yes answers	66 (47.4)	59.3 (49.1)	35.8 (48.0)	2,002
K6 score (min 6, max 30)	13.7 (5.7)	13.1 (5.6)	11.2 (5.1)	1,999
Severe distress	17.7 (38.2)	14.2 (34.9)	7.3 (26.1)	1,998

Source: Endline household survey.

Figure 10.2 shows the pattern of SRQ scores across all survey rounds, including the intervening monitoring rounds. The first panel shows that SRQ scores were generally trending upward in Abi Adi across the whole time period, indicating increased mental distress, with a sharp increase for respondents in the control group (the dashed line) toward the end of the study period. The second panel shows similar statistics for respondents in Hintalo. Again there is a general increased level of distress through the period for all groups, but with a small drop during the July 2013 survey.

Figure 10.2 Maternal health: Mental distress over time



10.3.3 The impact of the SCTPP on maternal mental health

Because levels of mental distress increased for beneficiaries as well as respondents in the control group, we may not expect to find large differential effects of the SCTPP on mental health. We now apply the methods described in Chapter 3 to assess the impact of the SCTPP on maternal mental health. We focus on one main outcome: the SRQ score. Table 10.6 shows results for the SRQ score. In both Abi Adi and Hintalo, the SCTPP had no statistically significant effect on mental health as measured by the SRQ. After controlling for selection, the SRQ

increased slightly in Abi Adi for beneficiaries relative to the control group, and decreased slightly in Hintalo for beneficiaries, but neither change is statistically different from zero.

Table 10.6 Mental health: Impact of SCTPP on mental health

	Impact on SRQ score	Sample size
Abi Adi	0.056 (0.386)	836
Hintalo	0.067 (0.252)	1,244

Notes: Standard errors are shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

10.4 Summary

Improving children’s outcomes is a primary objective of the SCTPP, and because mother’s health may impact children’s outcomes, we assess the impact of the SCTPP on mothers. The data show a worsening of mental health in both Abi Adi and especially in Hintalo. We see no change in physical health for mothers in Abi Adi, but a worsening of mothers’ physical health in Hintalo. The SCTPP had no measurable effect on mothers’ health in either Abi Adi or Hintalo.

10.5 Statistical Appendix

All impact estimates are calculated using inverse probability weighted regression adjustment (IPWRA). Variables included in the treatment model of the IPWRA include the number of household members, number of household members under 3 years of age, number of household members under 6 years of age, number of household members under 11 years of age, number of household members under 19 years of age, number of household members over 60 years of age, number of household members working, number of unemployed household members, number of able-bodied household members, an indicator for a female head of household, an indicator for a child head of household, the age of the household head, an indicator that the household head has 0 years of formal education, a principal component-based livestock index, an indicator that the house has 1 room, and an indicator that the house is in poor condition as assessed visually by the survey enumerator. Plots of the distributions of predicted treatment status by beneficiary status and location are shown in Figures 10.3 and 10.4. Balancing tests of the variables included in the treatment model are available on request, and show that all variables are balanced across 5 bins in Abi Adi and 7 bins in Hintalo, save for one exception: the number of household members unemployed is not balanced for one bin in Hintalo at the 99 percent confidence level. However, because the balancing tests of 17 variables across 12 bins result in 204 total tests, we expect that 2 will appear “statistically significant” by random chance and thus are not concerned about the 1 “statistically significant” test results in Hintalo.

The impact estimate of the effect of the SCTPP on maternal BMI shown in Table 10.3 uses the woman’s BMI at endline as the outcome of interest, and uses the treatment model

described above. The outcome model also includes controls for the woman's BMI at baseline, her age, her age squared, her marital status, and her self-reported health status.

The impact estimate of the effect of the SCTPP on maternal mental health shown in Table 10.6 uses the SRQ 20 score at endline as the outcome of interest, and uses the treatment model described above. The outcome model also includes controls for the woman's SRQ 20 score at baseline, her age, her age squared, her marital status, and her self-reported health status.

Figure 10.3 Common support, Abi Adi

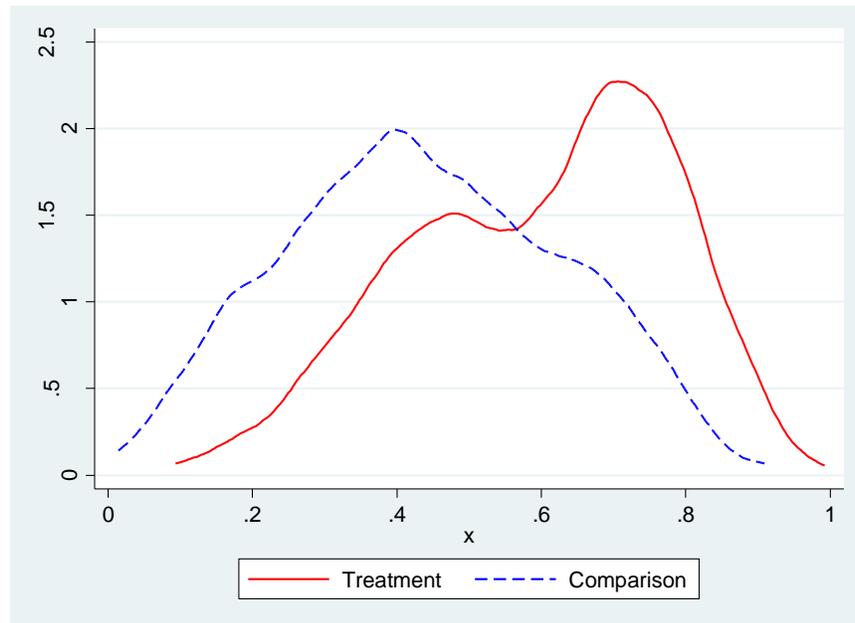
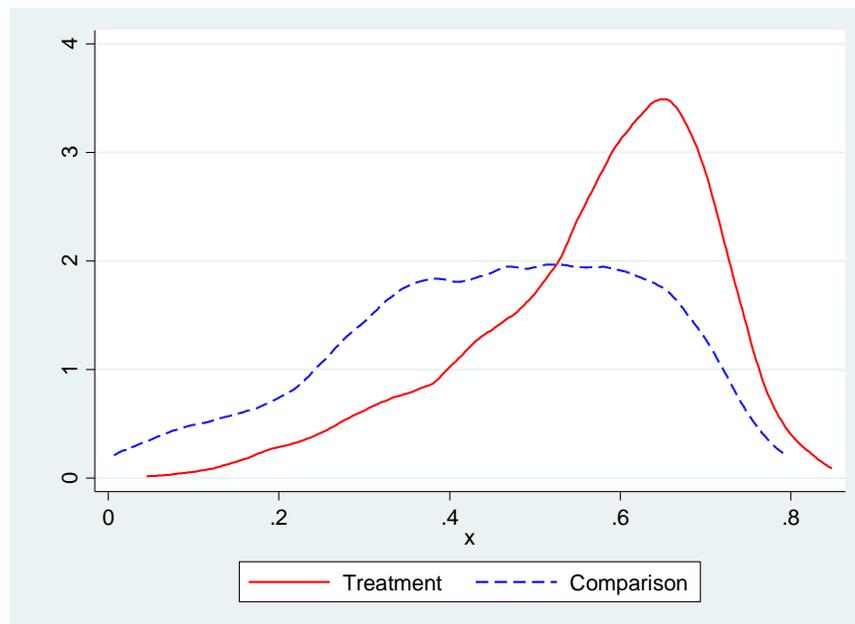


Figure 10.4 Common support, Hintalo



11. The Impact of SCTPP on Household Income Generation

11.1 Introduction

An overriding goal for social protection programs is to protect the poorest and most disadvantaged members of communities from sliding further down into poverty and destitution. However, social protection programs can also contribute to the broader economic growth and development. For example, cash injected into the household economy may be used to start up an income-generating activity, or may trickle down into the rural economy, broadly benefiting the overall community. This chapter assesses whether such changes have occurred and the extent to which they are attributable to the SCTPP.

11.2 Context

The SCTPP operates in both rural (i.e., Hintalo and Bahr Tseba) and urban (the town of Abi Adi) contexts. While the rural households' main economic activity is predominantly agriculture, households from the town rely mainly on several nonagricultural income-generating activities typically found in poor rural town settings in Ethiopia and elsewhere. Other sources of income in the rural context include income transfers from different sources, including NGO and government transfers. Other income sources in the rural setting include income from livestock products and services, wage employment, some form of own business activities, as well as transfers from different sources.

11.2.1 Landownership, modern input use, and operations

Households' income from agricultural production depends on whether households have access to agricultural land and the way they operate it. It also depends on whether or not they use better technologies to increase productivity (e.g., chemical fertilizers and improved seeds). The household questionnaire administered in the SCTPP survey included questions related to these issues.

Table 11.1 presents the landownership and operating status of households as of May 2012. The majority of households in Hintalo (Bahr Tseba included) reported that they owned some land, although a nonnegligible number (7-10 percent) of households reported they do not own any land. This is similar across treatment status as well as locations. Interestingly, landownership did not vary across treatment groups, but who operates it varied substantially between the treatment and comparison groups. Approximately three-quarters of the beneficiary households in Hintalo (Bahr Tseba included) reported that they had sharecropped out their land compared to 40-54 percent for the control and 15-40 percent for the random households in the same location. Some beneficiary and non-beneficiary households have also reported that they rent out their land, but this figure was slightly lower for the latter. Some households in all locations, particularly in Abi Adi, seem to sharecrop land, but this figure was lower for beneficiary households in all locations. This is not completely surprising, given that beneficiary households more often lack the required resources, such as labor, draft animals, and liquidity, needed to operate their land by themselves.

Table 11.1 Landownership and operation

Status	Beneficiary	Control	Random	Valid cases (N)
	(percent)			
Hintalo (excluding Bahr Tseba)				
Percentage of agricultural landowners	93.2	93.3	89.4	1,919
Not leased or rented out and in production	20.0	57.2	81.1	4,048
Not leased or rented out and not in production (fallow)	0.1	0.9	0.7	4,048
Rented out	1.4	0.3	0.2	4,048
Sharecropped out	77.0	40.2	14.9	4,048
Loaned/gifted out	0.0	0.0	0.0	4,048
Rented in	0.4	0.0	0.7	4,048
Sharecropped in	0.3	0.5	2.1	4,048
Received via loan/gift	0.0	0.1	0.2	4,048
Other	0.3	0.3	0.0	4,048
Not applicable	0.5	0.5	0.0	4,048
Bahr Tseba only				
Percentage of agricultural landowners	93.2	91	87.5	465
Not leased or rented out and in production	20.7	42.2	56.5	4,048
Not leased or rented out and not in production (fallow)	1.2	0.8	0.0	4,048
Rented out	2.5	1.2	1.6	4,048
Sharecropped out	71.8	53.5	40.3	4,048
Loaned/gifted out	0.0	0.0	0.0	4,048
Rented in	0.0	0.0	0.0	4,048
Sharecropped in	1.3	0.0	1.6	4,048
Received via loan/gift	0.0	0.0	0.0	4,048
Other	0.0	0.4	0.0	4,048
Not applicable	2.7	2.0	0.0	4,048
Abi Adi				
Percentage of agricultural landowners	26.2	22.0	17.7	1,276
Not leased or rented out and in production	7.8	21.9	29.6	4,048
Not leased or rented out and not in production (fallow)	6.41	3.9	0.0	4,048
Rented out	3.23	3.1	0.0	4,048
Sharecropped out	79.6	67.2	59.3	4,048
Loaned/gifted out	0.0	1.6	0.0	4,048
Rented in	0.0	0.0	0.0	4,048
Sharecropped in	1.34	2.3	11.11	4,048
Received via loan/gift	0.47	0.0	0.00	4,048
Other	0.60	0.0	0.00	4,048
Not applicable	0.55	0.0	0.00	4,048

Source: Berhane et al. (2012b).

Modern input use also varied by treatment status in Hintalo. A smaller proportion of beneficiaries and a larger proportion of the random group were using fertilizer and improved seeds (see Table 11.2). Beneficiary households appear to be the least visited by extension agents in Hintalo and Bahr Tseba.

Table 11.2 Household agricultural input use, by land operators and extension visits

	Beneficiary	Control	Random	N
	(percent)			
Hintalo Wajirat (7 <i>tabias</i>)				
Used dap or urea	33.70	44.28	49.73	764
Bought dap or urea on credit	65.83	74.55	74.75	433
Used improved seeds	5.58	4.74	8.11	763
Visited by DA	17.96	37.99	47.35	1,769
Bahr Tseba				
Used dap or urea	29.17	28.99	27.27	133
Bought dap or urea on credit	60.12	71.05	42.86	77
Used improved seeds	18.07	18.84	18.18	133
Visited by DA	11.94	22.95	38.10	428

Source: Berhane et al. (2012b).

11.2.2 Income from sale of agricultural produce

Agriculture production in these areas involves crop production, mainly cereals. Teff, barley, wheat, and sorghum are the main staple crops produced. Table 11.3 reports the percentages of households that produce and sell these four important crops during this period.

Table 11.3 Crop production and sales

	Beneficiary	Control	Random	Valid cases (N)
	(percent)			
Hintalo (excluding Bahr Tseba)				
Teff producers	16.0	19.5	21.6	1,770
Barley producers	31.6	32.7	38.8	1,770
Wheat producers	29.2	34.8	35.7	1,770
Sorghum producers	56.8	64.7	68.7	1,770
Food crops sold	6.8	11.1	9.9	1,772
Bahr Tseba only				
Teff producers	14.7	16.9	16.7	427
Barley producers	36.6	48.9	52.4	427
Wheat producers	41.1	46.7	47.6	427
Sorghum producers	19.7	17.9	21.4	427
Food crops sold	8.6	8.2	5.2	429

Source: Berhane et al. (2012b).

While households in Bahr Tseba are largely wheat and barley producers, households in the rest of Hintalo most commonly produce sorghum. There is little distinction between households by treatment status when it comes to what they produce. However, as compared to the control and random groups, beneficiary households in Hintalo tend to sell a smaller proportion of their food crops than in Bahr Tseba.

11.2.3 Income from livestock products and services

As in many parts of rural Ethiopia, agricultural households in Hintalo and Bahr Tseba mix crop and livestock. Livestock is thus an important integral part of livelihoods, serving as both store of asset and liquidity. Households use livestock for many reasons including to generate income

from sales of livestock itself, or its services and products. Even more important is that livestock is a key source of draft animals; households lacking such a key resource are doomed to fail, as they often miss the critical planting days (Berhane et al. 2012b).

Table 11.4 Average number of livestock owned, by households

Location/indicators	Beneficiary	Control	Random	Valid cases (N)
Hintalo (excluding Bahr Tseba)				
Cows/bulls of any type per household	0.08	0.10	0.18	907
Donkeys/mules/camels per household	0.18	0.29	0.49	905
Oxen per household	0.24	0.46	0.75	916
Sheep/goats per household	0.37	0.48	0.89	905
Bahr Tseba only				
Cows/bulls of any type per household	0.06	0.07	0.12	112
Donkeys/mules/camels per household	0.15	0.20	0.33	111
Oxen per household	0.21	0.32	0.60	115
Sheep/goats per household	0.14	0.61	0.83	111
Abi Adi				
Cows/bulls of any type per household	0.04	0.06	0.16	214
Donkeys/mules/camels per household	0.01	0.10	0.39	212
Oxen per household	0.01	0.08	0.08	212
Sheep/goats per household	0.73	0.68	0.92	213

Source: Berhane et al. (2012b).

Table 11.4 summarizes the average number of specific animals owned by each group in each location. Beneficiaries own smaller numbers, regardless of location and type of animal. Households in Hintalo owned larger number of livestock as compared to Households in Abi Adi. Obviously, sustaining livestock requires grazing areas that are less likely to exist in a town like Abi Adi. Ownership of sheep and goats was larger in Abi Adi as compared to Hintalo.

Using the baseline data collected in May 2012, we examine the percentage of households who provided livestock services and who sold livestock products. Table 11.5 presents this information by location and treatment status. Generally, beneficiaries providing livestock services and selling livestock products were smaller percentages.

Table 11.5 Households providing livestock services and products

	Beneficiary	Control	Random	Total	Valid cases (N)
All					
Households providing livestock services ^a	0.03	0.05	0.13	0.05	3,667
Households selling livestock products ^b	0.07	0.16	0.23	0.13	3,667
Hintalo excluding Bahr Tseba					
Households providing livestock services	0.03	0.06	0.14	0.06	
Households selling livestock products	0.11	0.25	0.33	0.19	
Bahr Tseba					
Households providing livestock services	0.02	0.03	0.19	0.04	
Households selling livestock products	0.03	0.09	0.21	0.07	
Abi Adi					
Households providing livestock services	0.03	0.04	0.1	0.04	
Households selling livestock products	0.04	0.05	0.06	0.05	

Source: Household survey, May 2012.

^a Livestock services: selling hides, ploughing, renting out.

^b Livestock products - butter, milk, honey, and eggs.

11.2.4 Income from own businesses and off-farm activities

Apart from farming activities, households engage in own business activities or may be employed in some nonfarm activities to earn income. In the quantitative household survey, households were asked if any household member was engaged in any business activity (e.g., crafts, trade, food processing) or any other paid activity outside of the household, either for cash or in-kind payment. Results, as of May 2012, are summarized in Table 11.6.

Compared to those in Abi Adi, only a small percentage of households in Hintalo engage in business activities. For example, 34 percent of beneficiary households in Abi Adi, as opposed to 3 percent in Hintalo (4 percent in Bahr Tseba), are engaged in business activity. The percentage of non-beneficiary households engaged in business activity is relatively higher for Bahr Tseba than for the rest of Hintalo. The main reason for this might be explained by the target groups reached by the SCTPP, who are more likely to be unable to work, as a woreda official in Abi Adi pointed out.

Participants with relatively good physical condition and attitude have involved in small business, and their change can sustain for a certain period, but for the majority the change is not sustainable as they are totally dependent on the cash [WO/AA].

The most common businesses operated by households were involved were weaving/spinning, handcraft (e.g., pottery), agricultural goods (grain, banana, pepper, etc.) trade, nonagricultural (retail) goods trade, and Tella (local beer).

Table 11.6 Own business and nonfarm activities

Categories	Household engaged in entrepreneurial activities	Household has at least one member working outside of the household for cash/in-kind payment	Valid cases (N)
	(percent)		
Full sample			
Beneficiary	9.7	10	1,693
Control	21	15	1,531
Random	22	19	430
Hintalo (except Bahr Tseba)			
Beneficiary	3	3	864
Control	7	4	800
Random	8	8	253
Bahr Tseba only			
Beneficiary	4	3	217
Control	11	5	197
Random	21	4	47
Abi Adi			
Beneficiary	34	22	612
Control	46	37	534
Random	50	46	130

Source: Berhane et al. (2012b).

Households were asked if they were involved in other nonfarm activities in the form of paid labor outside of the household: they were asked if at least one household member worked outside of the household in the year before the survey (May 2012) for cash or in-kind payments. Results, reported in column two of Table 11.6, indicate that only 10 percent of beneficiary households, as compared to 15 percent of the control and 19 percent of the random households, are engaged in this type of off-farm work. These percentages are pushed up by the relatively high number of households participating in paid work in Abi Adi. Rural percentages are low, ranging from 3–8 percent, the lower end being for the beneficiary households, which constitute the most labor constrained group among the three treatment status groups. This pattern is also observed in Abi Adi—the percentage of beneficiary households that reported they had participated in this type of activity is lowest among the three groups of households.

11.2.5 Transfers

In addition to income from main economic activities, households also depend on a number of other income sources, ranging from informal risk-sharing groups and reciprocal relationships between friends, relatives, and neighbors, to formal government sources (e.g., PSNP and pensions) or nongovernmental organization (NGO)-based transfers. The survey instrument included a range of questions regarding such transfers to the household in the year preceding the survey. Table 11.7 reports a summary of other transfers, as of May 2012, grouped into three broad categories: pensions, non-PSNP government or NGO transfers, and informal transfers from friends or relatives (Berhane et al. 2012b).

Large proportions of households in Abi Adi, regardless of their treatment status, reported receiving transfers from friends and relatives. Average informal transfers are also higher in Abi Adi than in Hintalo (see last column of Table 11.7). Such differences between the two locations may also stem from practical barriers to exchange, such as the remoteness and inhibiting topography in some of the villages in Hintalo. It should also be noted that 13 percent of the urban control households are pensioners (Berhane et al. 2012b).

Table 11.7 Access to other formal and informal transfers and average transfers

	Households that received transfers in the last 12 months from			Amounts of transfers from friends and relatives (birr)
	Government pension	Other government/ NGO transfers (percent)	Friends or relatives	
Hintalo (except Bahr Tseba)				
Beneficiary	1.0	2.0	4.0	451
Control	2.0	4.0	1.0	352
Random	1.0	6.0	6.0	293
Bahr Tseba only				
Beneficiary	4.0	2.0	7.0	388
Control	4.0	3.0	4.0	346
Random	2.0	9.0	11.0	654
Abi Adi				
Beneficiary	1.0	1.0	24.0	743
Control	13.0	2.0	22.0	852
Random	9.0	0.0	27.0	2,829

Source: Berhane et al. (2012b).

11.3 Changes in Income-Generating Activities: 2012-2014

In this section we present the effects of the SCTPP on income-generating activities. We first present the descriptive results and then the impact evaluation method results as outlined in Chapter 3.

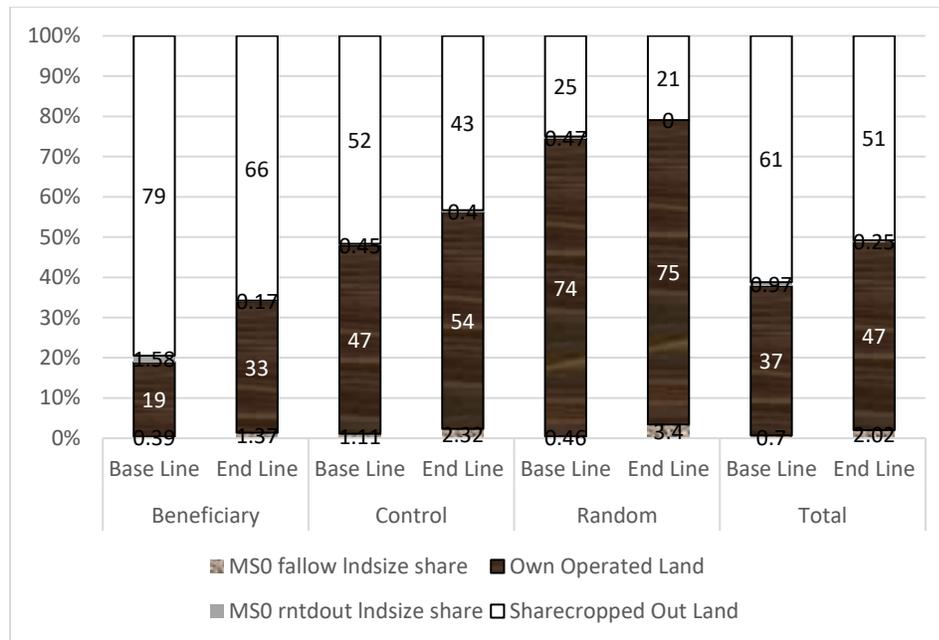
11.3.1 Agricultural production

We focus on households from Hintalo, beginning with land operating status.

Figure 11.1 summarizes how households divided their owned land for different categories of operating status: owner operated, sharecropped out, rented out, and fallow. The figure presents the share of land size under these categories from total owned land size of households.²⁶ The largest shares are land sharecropped out and land operated by owners while other rentals and fallow land have insignificant shares, both before and after the implementation of the SCTPP. There are systematic differences across groups with randomly sampled households much more likely to operate their own land.

²⁶ Note that this is total owned land; it does not include rented in land.

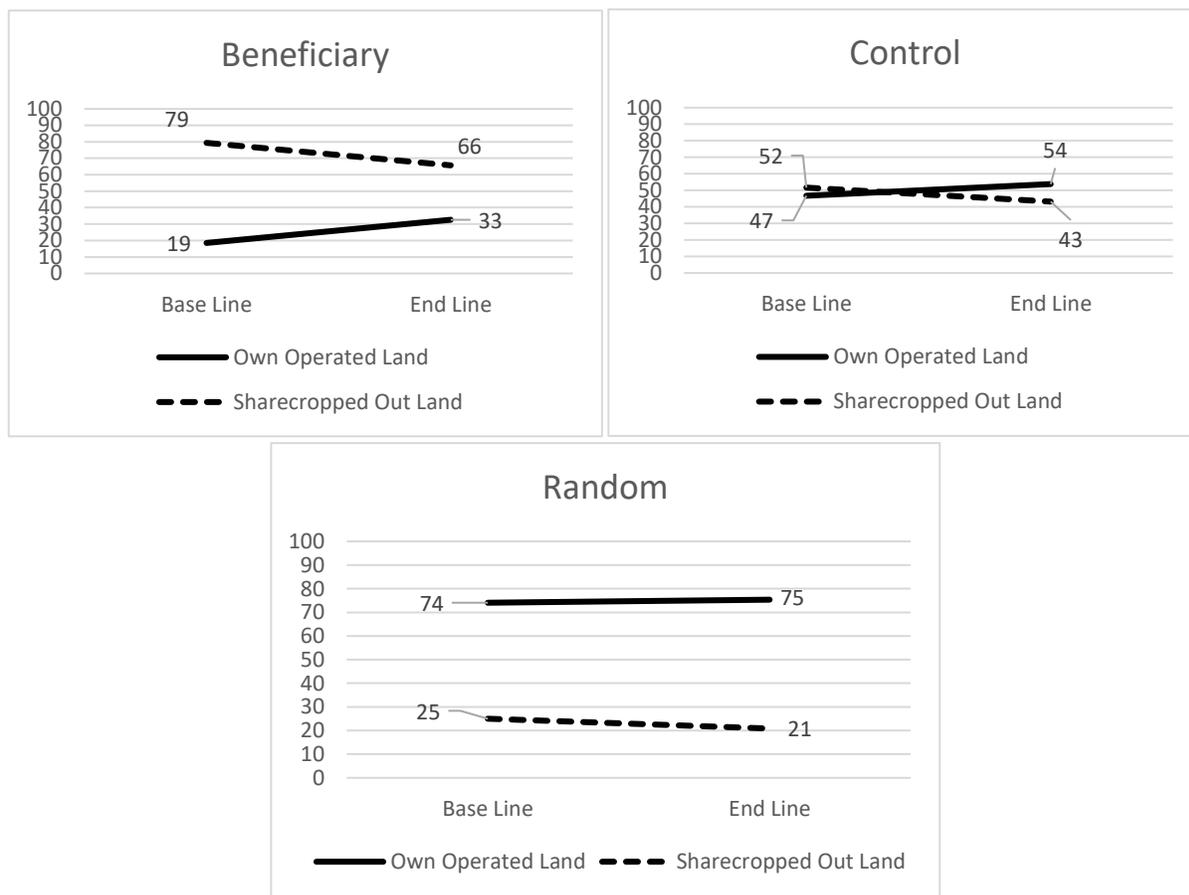
Figure 11.1 Percentage of different land operating status, by land size, Hintalo



Over time, regardless of treatment status, households increasingly operated their land instead of sharecropping out; the share of land being operated by owners has increased by 10 percent while the share of land being sharecropped out decreased by the same percentage. The shift from sharecropping out to operating land by owners is higher for beneficiary households as compared to non-beneficiary households. Figure 11.2 presents the shift for beneficiary, control, and random households separately in a way that makes it easy to compare the changes by treatment status. The lines in the figure start at baseline and finish at endline. For beneficiaries, we can see that the broken line (which represents the share of sharecropped out land) lies above the solid line (which represents the share of land operated by owners), showing that their land is largely sharecropped while the reverse is the case for households in the random group.

The flatness/steepness (slope) of the lines in Figure 11.2 show the magnitude of changes over time. The less steep it is, the less the magnitude of the changes is. So, comparing the changes for beneficiaries with households in the control and random group, we can see that the share of sharecropped out land decreases by 13 percent for beneficiaries while it decreases by only 9 and 4 percent for households in the control and random group, respectively. The share of land that beneficiaries operated themselves increases by 14 percent while it increases by only 7 and 1 percent for households in the control and random group.

Figure 11.2 Changes in sharecropped out and owner operated land shares, by treatment status, Hintalo



One of the possible trends we can expect with such increase in use of own land is an increase in long-term land investments like terracing, tree planting, and gully rehabilitation. Results shown in Table 11.8 are consistent with this, showing the fact that across all groups, the percentage of households who made long-term investments also increased.

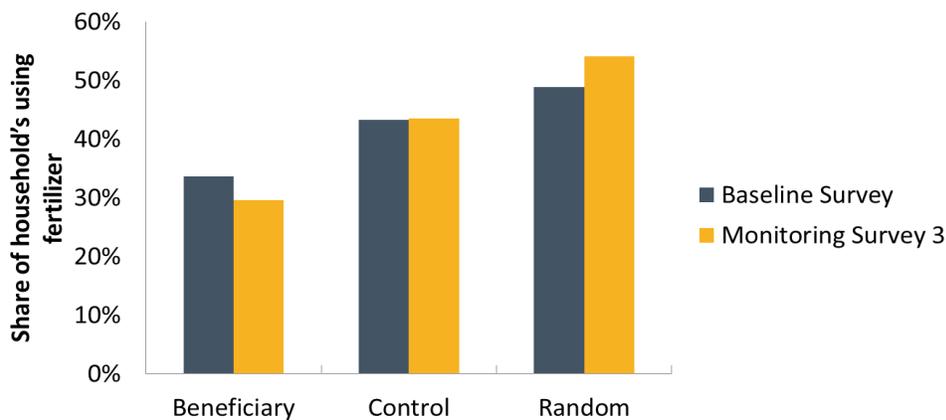
There is an increase in percentage of households visited by development agents (DAs) regardless of treatment status (Table 11.8). However, fertilizer use by beneficiaries has decreased. Figure 11.3 compares two main planting seasons before and after the SCTPP implementation [2011 and 2013 Meher seasons] in terms of percentage of households who used fertilizer. The percentage has declined slightly for beneficiaries while remaining steady or increasing in control and randomly sampled households, respectively (Berhane et al. 2013).

Table 11.8 Households visited by extension agents and making long-term land investments, by treatment status, Hintalo

Variables of interest	Treatment status	Time	Baseline	Endline
Percentage of households making long-term land investments	Beneficiary		9.4	25
	Control		16.7	34
	Random		21.5	44
Percentage of households visited by extension agents	Beneficiary		18	40
	Control		35	55
	Random		46	64
	Total		29	49
	Valid Cases (N)		2,159	2,079

Source: Household surveys, 2012, 2014.

Figure 11.3 Fertilizer use



Source: Berhane et al. 2013.

Households mainly produce cereals, though there are some changes in this over time; there is a reduction in percentage of households who grow cereals from 87 percent to 84 percent in Bahr Tseba and from 91 percent to 84 percent in the rest of Hintalo (Table 11.9). Households in Bahr Tseba continue growing mainly wheat and barley. Households in the rest of Hintalo were mainly growing sorghum. But in 2013, on the Meher season of 2005/06 E.C households across Hintalo moved away from sorghum and into barley and wheat.

Table 11.9 Cereal producers

Type of crops	Treatment status	Location	Hintalo excluding Bahr Tseba		Bahr Tseba	
		Time	Baseline	Endline	Baseline	Endline
(percent)						
Cereal producers	Beneficiary		0.91	0.84	0.86	0.81
	Control		0.92	0.85	0.9	0.88
	Random		0.87	0.81	0.81	0.79
	Total		0.91	0.84	0.87	0.84
Teff producers	Beneficiary		0.14	0.32	0.14	0.12
	Control		0.18	0.38	0.16	0.16
	Random		0.19	0.39	0.15	0.08
	Total		0.17	0.35	0.15	0.13
Barley producers	Beneficiary		0.27	0.49	0.34	0.62
	Control		0.3	0.56	0.45	0.67
	Random		0.35	0.59	0.46	0.58
	Total		0.29	0.53	0.4	0.64
Wheat producers	Beneficiary		0.29	0.45	0.37	0.4
	Control		0.32	0.48	0.43	0.5
	Random		0.32	0.5	0.42	0.48
	Total		0.31	0.47	0.4	0.45
Sorghum producers	Beneficiary		0.54	0.08	0.19	0.02
	Control		0.6	0.11	0.17	0.03
	Random		0.61	0.1	0.19	0.08
	Total		0.58	0.09	0.18	0.03

Source: Household surveys, 2012, 2014.

In a country like Ethiopia, with land not abundantly available to households, income from agricultural production largely depends on productivity per hectare or yield. Given that there is enough rainfall, use of fertilizer can have a positive impact on productivity or yield.

Table 11.10 presents changes in yield for the four main cereals. There is no single unifying pattern to these. Yields of sorghum and teff appear to fall while wheat and barley rise. The increase in productivity of wheat and barley shows an interesting difference by treatment status: beneficiary households' productivity has increased by a larger amount as compared to the increase in control households' productivity.

Table 11.10 Cereals yield, in quintal per hectare, Hintalo

Type of cereal	Treatment status	Time:	
		Baseline	Endline
(Quintals per hectare)			
Teff	Beneficiary	4.52	5.68
	Control	5.6	5.2
	Random	7.12	4.6
	Total	5.36	5.32
Barley	Beneficiary	6.84	11.96
	Control	8.48	9.36
	Random	10.8	10.88
	Total	8.16	10.68
Wheat	Beneficiary	5.92	14.96
	Control	7.4	9.52
	Random	8.44	17.96
	Total	6.88	13
Sorghum	Beneficiary	10.76	6.48
	Control	10.36	6.8
	Random	11.16	10.88
	Total	10.64	7.32

Source: Household surveys, 2012, 2014.

11.3.2 Changes in come from livestock products and services

Income from livestock services and products is an important source of income for households in Hintalo and, perhaps surprisingly, Abi Adi too. The percentage of households providing livestock services and selling livestock products increased over time by 8 and 9 percentage points, respectively. Some participants used SCTPP cash to buy livestock, either to increase their asset-holdings or to derive use-value from the animals, including rearing them for sale.

There are a few households who reproduce poultry [TSW/BT].

I bought a chicken and now the number of chickens has reached nine [EPM #9/S].

Although the percentage of households providing livestock services has increase regardless of beneficiary status, there is a decrease in income from livestock services (Table 11.11). This could be because new beginners, as they are new for the market, earn only a small amount of income from providing the services and therefore drag the average income down. It can also be due to a decrease in income from livestock services of those who were already in the market which is what is shown in the last row in Table 11.11. When we see livestock products, there is an increase in the percentage of households selling livestock products. The increase is higher in Hintalo than in Abi Adi and is higher for beneficiaries than households in the control or random group. In Hintalo, it has increased by 17 percent, while it only increases by 1 percent in Abi Adi. In Hintalo, specifically in Bahr Tseba, beneficiaries show a 19-percentage-point increase, while households in the control and random group show 11- and 2-percentage point increases, respectively.

Income from livestock products has increased in Abi Adi but has decreased in Hintalo, including Bahr Tseba. Table 11.11 presents income from livestock products in a typical month. In general, income from livestock products has decreased in Bahr Tseba, but beneficiaries follow quite a different path. The decrease is largely dominated by a decrease in income from selling livestock products on households from the control and random group. But beneficiaries' income from livestock products has increased in Bahr Tseba. It will be of interest to check if this is actually due to the SCTPP.

11.3.3 Changes in income from own businesses and wage employment

It requires some level of initial investment to own a business and some kind of skill to be employed for wage. Otherwise, individuals without some kind of skill would be employed as a laborer for wage which only requires their physical labor. Poor households usually do not have either the initial capital to start a business nor some kind of skill to be employed for a better wage. Therefore, they end up participating less in business and getting a smaller amount of income from physical labor-demanding wage employment. However, SCTPP cash transfers provided working capital for some participants to start small businesses:

After the SCTPP, I borrowed birr 5,000 and established a shop. Now the shop is working and starts to repay the loan from its profit. I used to pay house rent of birr 150 for the shop from the SCTPP [PM # 1/AA].

I am engaged in basketry and I am getting a profit of birr 20 per week [PF #3/AA].

I am also involved in retailing of vegetables because of the cash transfer [CPF/BT].

Across all groups, Table 11.12 shows that the percentage of SCTPP survey households participating in own business is increasing over time. More of the increase comes from households in the random group (16 percent increase). Geographically, a 9 percent increase is observed in Hintalo and a larger increase of 16 percent is observed in Abi Adi. Thus, the increase comes more from Abi Adi. Participation in own business has been and is larger for households in the random group. The changes over time are also more for households in the random group both in rural (Hintalo) and Urban (Abi Adi) areas.

When we compare beneficiaries with households in the control group, the percentage of beneficiary households participating increases in a similar amount in general, but a bit better (by 2 percent more) in Abi Adi as compared to Hintalo, both in Bahr Tseba and the rest, where beneficiaries show a similar increase in participation.

Table 11.11 Livestock services and products

	Treatment status	Location		Hintalo Excluding		Bahr Tseba		Abi Adi	
		Time:		Bahr Tseba		Bahr Tseba		Abi Adi	
		Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Households providing livestock services (percent)	Beneficiary	0.03	0.09	0.03	0.11	0.02	0.1	0.03	0.06
	Control	0.05	0.14	0.06	0.16	0.03	0.12	0.04	0.12
	Random	0.13	0.27	0.14	0.29	0.19	0.21	0.1	0.27
	Total	0.05	0.13	0.06	0.15	0.04	0.12	0.04	0.11
	Valid cases (N)	3,667	3,667	1,912	1,912	467	467	1,289	1,289
Annual income from livestock services (birr)	Beneficiary	493	99	216	69	1,829	51	596	200
	Control	1,027	189	1,059	81	352	73	1,137	449
	Random	1,576	369	1,912	80	388	43	1,491	1,057
	Total	1,049	204	1,101	77	738	59	1,061	535
	Valid cases (N)	182	490	109	296	20	56	53	138
Households selling livestock products (percent)	Beneficiary	0.07	0.19	0.11	0.28	0.03	0.22	0.04	0.06
	Control	0.16	0.26	0.25	0.4	0.09	0.2	0.05	0.08
	Random	0.23	0.33	0.33	0.49	0.21	0.23	0.06	0.06
	Total	0.13	0.24	0.19	0.36	0.07	0.21	0.05	0.06
	Valid cases (N)	3,667	3,667	1,912	1,912	467	467	1,289	1,289
Income from livestock products, in typical month (birr)	Beneficiary	94	136	104	103	26	284	76	169
	Control	162	182	150	152	168	152	246	448
	Random	203	153	160	132	567	230	179	376
	Total	152	160	140	131	257	223	166	324
	Valid cases (N)	467	857	374	680	35	97	58	81
Annual income from livestock services (birr) (excluding new beginners)	Beneficiary	493	147	216	30	1,829	33	596	450
	Control	1,027	110	1,059	51	352	68	1,137	227
	Random	1,576	235	1,912	59	388	40	1,491	560
	Total	1,049	168	1,101	49	738	47	1,061	410
	Valid cases (N)	182	79	109	47	20	6	53	26

Source: Household surveys, 2012, 2014.

Notes: *livestock services: selling hides, ploughing, renting out; **livestock products: butter, milk, honey, and eggs.

There is also a general trend that percentage of households participating in wage employment is increasing, more of which is from households in the control (12 percent increase) and random groups (11%). Beneficiaries show only an 8 percent increase. Rather, households from the control group have shown a consistent, larger increase in participating on wage employment. Thus, we can actually say that the increase in wage employment is largely a story of households in the control group. Although smaller in amount, beneficiary households have also shown an increase in participation on wage employments.

The number of household members participating in wage employment does not to change over time. Table 11.13 presents the average number of household members participating on wage employment for participant households and the average stands at 1 member per household, regardless of location and treatment status. The average daily wage has increased over time; but all the change is from Abi Adi. Beneficiaries wage shows smaller change compared to non-beneficiary households. Households in the control group experienced a larger increase in wage compared to others. This strengthens what we mentioned previously, that wage employment has been all the story of households in the control group and participation in own business is led by households in the random group.

11.3.4 Changes in income from transfers

As of May 2014, a considerable proportion of households receive transfers from friends and relatives: close to 20 percent in Hintalo excluding Bahr Tseba and close to 35 percent in Abi Adi. Unlike transfers from friends and relatives, few households receive other transfers from the government (pensions) and from NGOs. Table 11.14 summarizes the percentage of households receiving transfers from these sources by treatment status and location over time.

Pensioners are larger in percentage terms in Abi Adi than in Hintalo and in the control group than households in the beneficiary or random group as was the case in May 2012. Not surprisingly, the changes appear in towns like Abi Adi and Bahr Tseba—these changes are again largely from households in the control group. Transfers from friends and relatives has generally increased by 5 percent and the increase varies by treatment status from 0 for households in the random group to 7 percent for beneficiary households. The increase also varies by location, the highest increase (10%) being in Hintalo excluding Bahr Tseba and the lowest increase being in Abi Adi. In Hintalo excluding Bahr Tseba, beneficiaries show the largest increase (12%) while households in the random group show the lowest increase (5%). The percentage of households receiving transfers and also the amount of the transfer is high in Abi Adi. But the changes over time in terms of the percentage of households receiving transfers are large in Hintalo and specifically on Beneficiary households. Can this be attributed to the SCTPP? In terms of the amount of these transfers, it has decreased in Abi Adi while it is increasing in Hintalo. In Hintalo, the change increases for beneficiary households while decreasing for households in the random group and increasing slightly for the control group.

Table 11.12 Own business and wage employment

Variables of interest	Treatment status	Hintalo excluding							
		Bahr Tseba		Bahr Tseba		Abi Adi		All	
		Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Households engaged in own businesses	Beneficiary	3	11	5	13	34	51	15	26
	Control	7	15	11	20	46	61	21	32
	Random	7	19	21	36	50	69	22	38
	Total	5	14	9	19	41	57	18	30
	Valid cases (N)	1,912	1,731	467	426	1,289	1,198	3,667	3,354
Households engaged in wage employment	Beneficiary	3	11	4	9	24	34	11	19
	Control	4	18	6	14	38	50	17	29
	Random	7	23	10	13	49	52	20	31
	Total	4	15	5	11	33	43	14	24
	Valid cases (N)	1,912	1,912	467	467	1,289	1,289	3,667	3,667

Source: Household surveys, 2012, 2014.

Table 11.13 Income from wage employment

Variables of interest	Treatment status	Location		All		Hintalo		Abi Adi	
		Time:		Baseline	Endline	Baseline	Endline	Baseline	Endline
Average number of household members who get employed for wage [number]	Beneficiary		1.18	1.17	1.06	1.1	1.21	1.2	
	Control		1.16	1.19	1.1	1.13	1.18	1.22	
	Random		1.18	1.26	1	1.23	1.24	1.29	
	Total		1.17	1.19	1.06	1.14	1.2	1.22	
	Valid cases (N)		501	897	99	348	402	549	
Average daily wage (birr)	Beneficiary		34	37	42	40	31	35	
	Control		34	46	41	47	32	45	
	Random		53	59	67	59	48	58	
	Total		37	45	47	47	34	43	
	Valid cases (N)		538	891	107	343	431	548	
Annual household wage income (birr)	Beneficiary		5,895	7,527	7,773	5,942	5,406	8,370	
	Control		5,593	8,872	3,171	6,341	6,114	10,299	
	Random		13,077	11,768	12,899	6,958	13,140	16,161	
	Total		6,951	8,778	6,932	6,326	6,955	10,308	
	Valid cases (N)		526	890	106	342	420	548	

Source: Household surveys, 2012, 2014.

Table 11.14 Access to other formal and informal transfers and average transfers

Variables of interest	Treatment status	Location		Hintalo excluding Bahr Tseba		Bahr Tseba		Abi Adi	
		Time:							
		Baseline	Endline	Baseline	Endline	Baseline	Endline	Baseline	Endline
Government pension	Beneficiary	0.02	0.03	0.02	0.03	0.03	0.03	0.01	0.04
	Control	0.06	0.1	0.02	0.03	0.04	0.15	0.13	0.19
	Random	0.04	0.06	0.01	0.02	0.02	0.05	0.09	0.13
	Total	0.04	0.07	0.02	0.03	0.03	0.08	0.07	0.11
	Valid cases (N)	3,667	3,354	1,912	1,731	467	426	1,289	1,198
Friends or relatives	Beneficiary	0.18	0.25	0.08	0.2	0.12	0.12	0.34	0.36
	Control	0.18	0.24	0.08	0.18	0.11	0.16	0.34	0.36
	Random	0.16	0.16	0.06	0.11	0.19	0.15	0.36	0.26
	Total	0.18	0.23	0.08	0.18	0.12	0.14	0.34	0.35
	Valid cases (N)	3,667	3,667	1,912	1,912	467	467	1,289	1,289
Amounts of transfers from friends and relatives	Beneficiary	444	153	47	100	64	120	1,137	238
	Control	257	142	92	98	63	56	570	239
	Random	581	94	121	46	157	60	1,612	198
	Total	381	141	76	92	73	87	947	234
	Valid cases (N)	3,667	3,667	1,912	1,912	467	467	1,289	1,289

Source: Household surveys, 2012, 2014.

11.4 The Impact of the SCTPP on Income-Generating Activities

Using the methods discussed in Chapter 3, we can test if any of the changes in income-generating activities are actually due to the SCTPP. Based on the descriptive discussions above, we have chosen some variables that we think can be variables of interest. Table 11.15 summarizes the test results of these variables by location.

The disaggregation by location is very important given the dominance of farming in Hintalo and other income-generating activities such as own business and wage employment in Abi Adi. In line with that, the impact of SCTPP might be directed to the dominant income-generating activities, and if there is room for improvement.

In Hintalo, the SCTPP has helped beneficiaries by significantly increasing cereals' yield. It has also significantly increased the proportion of beneficiary households' receiving transfers from friends and relatives. In Abi Adi, the SCTPP seems to benefit beneficiaries by significantly reducing the proportion of beneficiary households who participate on wage employment and by significantly increasing the proportion of households who participate on selling livestock products. In the descriptive discussion, we observed that households in Hintalo increased the share of their land that they operate by decreasing the share of their land that they sharecrop out. We expected this to be caused by the SCTPP, but this shift is not found to be caused by the SCTPP.

Table 11.15 presents the result of the test conducted to check if the SCTPP has impact on some selected indicators. The SCTPP has increased cereals' yield by 12 birr/timad and has increased the percentage of beneficiary households receiving transfers by 6 percent. These changes are found to be statistically significant. Households in Hintalo are shifting more of their land to be operated by themselves from sharecropping it out, over time. This does not, however, seem to be associated with the SCTPP. Beneficiaries, with the cash they are receiving from the SCTPP, might be able to operate their land better as compared to their counterparts without the SCTPP, thus leading to increase in yield.

Table 11.15 Impact of the SCTPP on income-generating activities, by location

Sources	Impact of SCTPP on [...]	Abiadi			Hintalo			All		
		Impact estimate	Standard Errors	Sample size	Impact estimate	Standard Errors	Sample size	Impact estimate	Standard Errors	Sample size
Agriculture	Share of sharecropped out land	-2.386	4.141	180	3.98	2.623	1,233	3.349	2.37	1,422
	Share of owner operated land	1.7	2.641	180	-3.124	2.523	1,233	-2.75	2.266	1,422
	Yield In birr per timad [cereals]	-0.099	3.377	927	11.731	5.665**	1,443	6.814	3.66*	2,391
Livestock	Proportion of households participating in selling livestock products	0.026	0.014*	927	0.04	0.025	1,443	0.027	0.017	2,391
Nonfarm	Own business participants	-0.019	0.04	898	-0.02	0.02	1,355	-0.015	0.019	2,270
	Wage employment participants	-0.079	0.037**	927	-0.013	0.018	1,443	-0.024	0.018	2,391

Note: Table shows impact estimates using an inverse-probability-weighted regression adjustment estimator - probit treatment model - linear outcome model - average treatment effect on the treated - with heteroskedasticity robust Standard Errors.

The impact of the program in Abi Adi is found to be on wage employment and participation in selling livestock products. Table 11.5 shows that the SCTPP has reduced the percentage of households participating in wage employment by 8 percent and has increased the percentage of households participating on selling livestock products by 3 percent, which are found to be statistically significant changes.

The benefits from wage employment largely depend on the skills one acquires, especially in towns like Abi Adi. If one doesn't have skills, it again depends on the labor power or physical strength of the participant. Most of our beneficiaries lack skills and the physical strength that the employment may demand. If they have the physical strength to do so, they lose it over time as they will not eat enough to compensate for calories they spend. Generally, due to this and other possible reasons, their daily wage from wage employment is smaller (see Table 11.13). Thus, it is not surprising to see the SCTPP significantly reducing the percentage of beneficiary households participating on wage employment. On the other hand, selling livestock products like butter, milk, honey, and egg is not relatively physically demanding, but requires some level of initial small investment. With the SCTPP in Abi Adi, where there could be very good demand for such products, beneficiaries may see it profitable to invest some small amount and start selling these livestock products. Thus, it is in line with our expectation to see the SCTPP significantly increasing the percentage of households participating in selling livestock products.

11.5 Summary

This chapter examines different income-generating activities of households living in Abi Adi and Hintalo Wajirat. It describes levels and trends in income derived from different sources. It also assesses whether these changes can be attributed to the SCTPP.

Overall, farmers in Hintalo shifted land from sharecropping out to operating it by themselves. In line with that, an increase in long-term land investments and visits by extension agents is observed. All these together, with other possible factors, seem to push the yields for some cereals up. The percentage of households providing livestock service and selling livestock products has also increased. Although most of the increases come from households in the random and control group, an increasing trend in terms of percentage of households participating on own business and wage employment is also observed. Transfers from the government in terms of percentage of pensioner households has increased but most of them are households in the control group. Rather, transfers from friends and relatives, specifically in Hintalo, has increased in favor of beneficiary households. All these changes cannot be attributed to the SCTPP; many other possible factors can also cause these changes.

The impact estimation results indicate that the SCTPP has brought about significant impacts on different indicators in Hintalo and Abi Adi. In Hintalo, the SCTPP has helped beneficiaries by significantly increasing cereals' yield. It has also significantly increased the proportion of beneficiary households' receiving transfers from friends and relatives. In Abi Adi, the SCTPP seems to benefit beneficiaries by significantly reducing the proportion of beneficiary

households who participate on wage employment and by significantly increasing the proportion of households who participate on selling livestock products.

In conclusion, it should be noted that some respondents expressed reservations about whether positive changes in the sources and levels of participants' income will be sustained if and when the support from the SCTPP comes to an end.

It will not be sustainable for all participants, even for the few households who are involved in small businesses, the changes will stop right after the program ends [TSW/MN].

The qualitative fieldwork highlighted interesting attitudes toward agriculture and the SCTPP as sources of income. Some respondents pointed out that agriculture is not very reliable, due to recurrent but unpredictable droughts, and agricultural income is seasonal. Conversely, SCTPP participants indicated that the cash transfers are “reliable and regular” [CPF/AA]—but some also pointed out that lack of information about when the program will end makes the SCTPP unreliable as a source of household income.

The SCTPP is more reliable than the sharecropping because he is too old and disabled to work on his farm. In terms of seasonality the sharecropping is seasonal as he only harvests once per year through rain-fed agriculture. On the other hand, he receives the cash every month and 12 times a year [CPM/MN].

Crop production is unreliable because of the recurrent drought and the harvest is only one time per year [CCmF/S].

Agriculture is reliable, seasonable and it is once a year. The SCTPP is every month and regular but it is not reliable because I don't know when it ends [CPM/BT].

Such concerns raise important implications about the importance of providing supplementary support for livelihood activities, in addition to cash transfers, if the program objective is to achieve sustainable reductions in extreme poverty.

12. The Impact of the SCTPP on Asset Holdings

12.1 Introduction

The primary objectives of the SCTPP are to reduce poverty and hunger, improve schooling outcomes and the nutritional status of pre-school children. However, the program's log frame also notes that the SCTPP expects that beneficiaries will use their transfers in an "economically sound and socially responsible way" (Tigray 2011, 28), including the investment of transfers in income generating assets. In this chapter, we assess the impact of the SCTPP on assets. Consistent with the indicator in the log frame, we start with those assets that can generate income such as farm tools and livestock. We also assess whether beneficiaries invested in assets that improved their living standards such as bednets or mobile phones.

12.2 Impact on Productive Assets

Data on productive assets used for farming were collected in the baseline (May-June 2012) and endline (May-June 2014) household surveys. Households were asked about their ownership of the following items: Plow sets; plows; imported sickles; locally made sickles; pick axes, spades and shovels; axes; pruning or cutting shears; malakino; hoes; leather straps; traditional beehives; modern beehives; and drip irrigation equipment. Figure 12.1 shows the distribution of ownership of these items at baseline and endline for all households in Hintalo Wajirat while Figure 12.2 shows these distributions for all households that were SCTPP beneficiaries in May 2012.

Across all households in Hintalo, ownership of productive farm equipment, while somewhat low initially rises between 2012 and 2014 (Figure 12.1). This is especially true for items connected with plowing (plows, plow sets, leather straps) but also for traditional beehives and hoes. Among SCTPP beneficiaries at baseline (Figure 12.2), ownership of these items is lower than that observed for all households. This is exactly what we would expect given that the SCTPP is targeted towards the poorest households in Hintalo. Between 2012 and 2014, ownership of many of these items also rises.

SCTPP beneficiaries own more farm productive assets at the end of the program than they did at the beginning. To what extent is this change a consequence of the SCTPP itself as opposed to general improvements in incomes that are causing asset levels to rise for all households. To assess this, we begin by noting that we are interested in how overall productive asset levels change and not necessarily changes in individual items. Further, because different households may choose to invest in different items, the statistical power with which we have to detect changes in individual items is relatively low. To improve our ability to detect changes in ownership over all, we construct an index of ownership of farm tools. This index, constructed using a statistical procedure called principal component analysis, is a composite scale based on the ownership of the 13 items described above. Essentially, ownership of each item is given a weight and then summed across all items. These are then scaled so the minimum value was zero and the maximum value one. Because the index runs from zero to one, changes in the

score between 2012 and 2014 can be interpreted as percentage changes. As with work in other chapters, we express impacts in terms of changes and we use the inverse-probability-weighted regression-adjustment (IPWRA) estimators described in chapter three to construct these impact estimates. Results are shown in Table 12.1. We also show results for a select few farm items, to contextualize the change in the overall index.

Figure 12.1 Ownership of farm productive assets, by all households in Hintalo Wajirat, 2012 and 2014

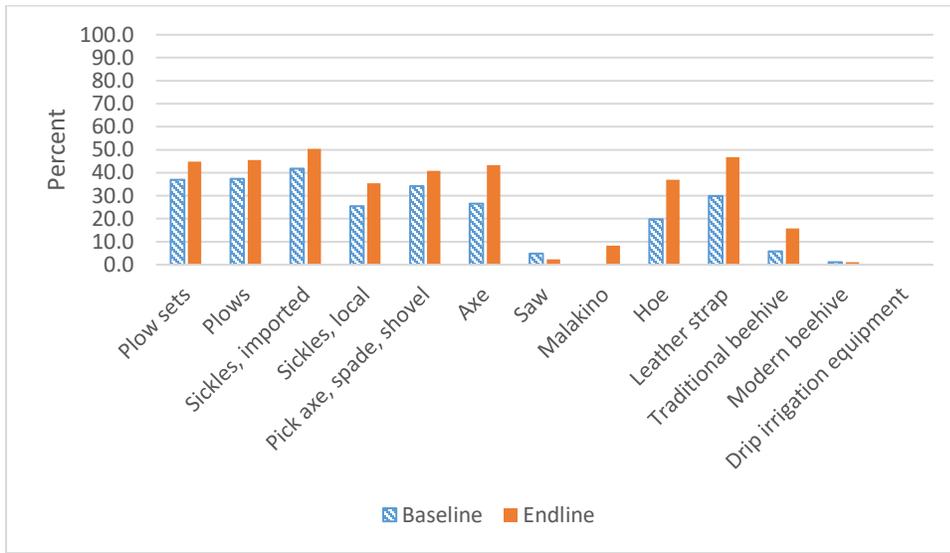


Figure 12.2 Ownership of farm productive assets, by SCTPP beneficiaries in Hintalo Wajirat, 2012 and 2014

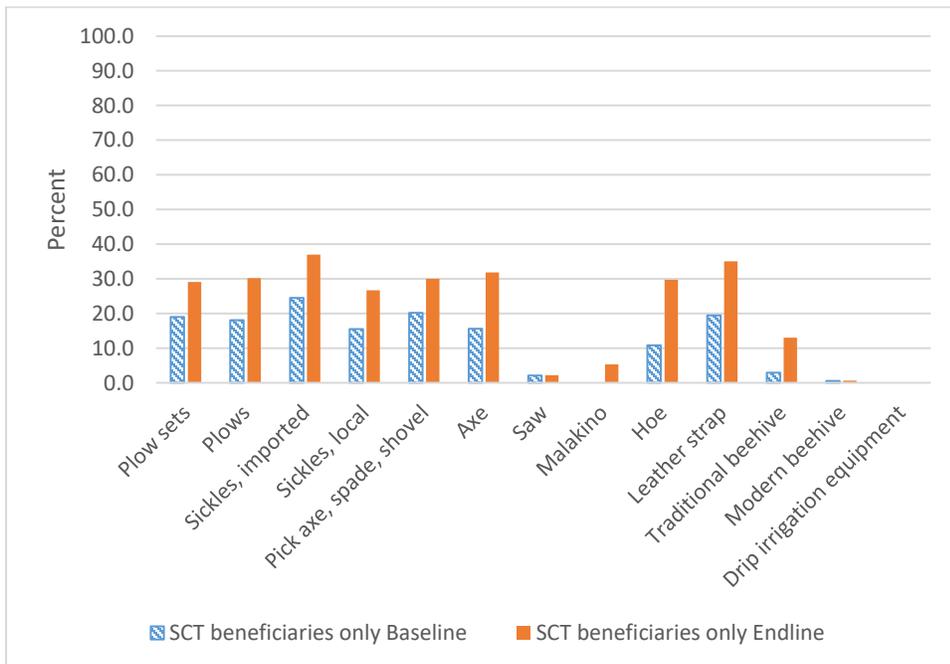


Table 12.1 Impact of the SCTPP on ownership of farm productive assets, Hintalo Wajirat

	Coefficient and standard error	Sample size
Farm tool index	0.019** (0.008)	1,460
Number of plows	0.039 (0.03)	1,460
Number of imported sickles	0.064 (0.04)	1,460
Number of hoe	0.051 (0.035)	1,460
Number of leather straps	0.074* (0.042)	1,460

Notes: Standard errors shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

Table 12.1 shows that the SCTPP lead to a 1.9 percent increase in the ownership of farm productive assets. While this is a positive impact, it is also a small impact. Results from the individual items show that this is drawn from an increase analogous to 0.04 plows, 0.06 sickles, 0.05 hoes, and 0.07 leather straps per beneficiary family. This small impact is not especially surprising when we look again at Figure 12.2. Notice there that many of the items where we see large changes are items which are relatively inexpensive to purchase. For example, in our data, a traditional beehive costs typically costs around 100 birr. By making small savings from month-to-month, an SCTPP beneficiary could save enough money to buy such an item. We see much less change in more expensive items such as modern beehives or drip irrigation equipment. The survey instrument also asked about more expensive farm tools such as chemical sprayers and water pumps but so few farmers own these that no impact can be detected.

12.3 Impact on Livestock

One reason why the impacts on farm productive assets is relatively small is that beneficiaries might be choosing to invest some of their transfers in other types of assets. We consider this possibility first by examining how livestock holdings evolve over time. As with farm assets, we focus on Hintalo Wajirat.

In Table 12.2, we distinguish between households that were SCTPP beneficiaries at baseline, households selected to be in the control group and the small number of randomly sampled households. As with durable assets, we see increases in livestock holdings over the two year study period. The increase in livestock wealth was in concentrated in small animals. For example, in Hintalo, 42 percent of households owned at least one chicken, an increase from 27 percent at baseline. Table 12.2 also tells us that SCTPP beneficiaries have accumulated livestock. The percentage of SCTPP households owning any animals has risen from 25 to 51 percent. Ownership of oxen, cows and donkeys have doubled (but from very low bases) and the average SCTPP household now owns 1.69 chickens, up from 0.69 chickens in 2012. But notice that livestock holdings in control households also rise as do, but to a lesser extent households in

the random sample. So, as with our discussion of farm tools, these descriptive statistics tell us that in terms of livestock holdings, SCTPP beneficiaries are wealthier in 2014 than they were in 2012; but it does not tell us if this increase in wealth was caused by the SCTPP.

Table 12.2 Livestock holdings, by treatment status, 2012 and 2014

	Beneficiary	Control	Random
Owens any animals, 2012	25.8	49.5	73.5
Owens any animals, 2014	51.6	69.3	78.5
Numbers owned			
2012			
Oxen	0.132	0.448	1.063
Cows	0.192	0.449	1.093
Donkey/mules/camels/horses	0.0896	0.269	0.583
Sheep/goats	0.176	0.344	1.046
Chickens	0.686	1.357	2.132
2014			
Oxen	0.274	0.533	0.940
Cows	0.480	0.701	1.457
Donkey/mules/camels/horses	0.202	0.387	0.712
Sheep/goats	0.583	0.937	1.404
Chickens	1.689	1.923	2.546
Percentage of households owning			
2012			
Oxen	0.11	0.32	0.62
Cows	0.10	0.22	0.46
Donkey	0.08	0.22	0.44
Sheep	0.06	0.10	0.24
Chicken	0.17	0.33	0.47
2014			
Oxen	0.20	0.37	0.57
Cows	0.22	0.30	0.53
Donkey	0.16	0.30	0.53
Sheep	0.16	0.23	0.31
Chicken	0.36	0.45	0.54

Source: Baseline and endline household surveys.

Note: Sample size is 2,387.

Table 12.3 provides results from our impact estimates. This shows that in Hintalo Wajirat, the SCTPP increased the likelihood that a beneficiary household owned livestock by seven percentage points. However, with livestock holdings rising in the control households, and because different households choose to invest in different types of livestock, we cannot discern impacts on specific types of animals apart from chickens. The results show that beneficiaries in Hintalo were able to obtain an addition 0.5 chickens because of the SCTPP. Analogous to the farm equipment index, we constructed a livestock index but did not find evidence of statistically significant increases in livestock holdings by this measure.

Table 12.3 Impact of the SCTPP on livestock holdings at endline, Hintalo Wajirat

	Coefficient and Standard Error
Own any animals	0.07*** (0.027)
Oxen	-0.003 (0.03)
Cows/bulls	0.068 (0.053)
Donkeys/mules/horses/camels	0.005 (0.022)
Sheep/goats	0.11 (0.076)
Chicken	0.45*** (0.162)
Livestock Index	0.008 (0.005)

Notes: Standard errors shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level. Sample size is 1,460.

12.4 Impact on Consumer Durables

Given these positive, but small, impacts, we wondered if beneficiaries were using some of the transfers they had saved to acquire consumer durables which would improve their standard of living. We begin by examining a few key indicators: durable assets, including jericans, metal beds, bednets, and mobile phones; and livestock, including oxen, cows, other large livestock, small livestock, and chickens. Table 12.4 shows levels of durable asset holdings at baseline in May 2012, for respondents in Abi Adi and Hintalo by beneficiary status. Across all indicators, and in both locations, beneficiaries have fewer durable assets than do respondents in the control group, who have fewer durable assets still than the random sample. Table 12.4 also shows that levels of asset ownership in urban Abi Adi are higher than in rural Hintalo. Table 12.5 shows levels of durable asset holdings at endline (2014).

Comparing Table 12.4 and Table 12.5, we see that durable asset holdings are increasing for all groups and in both locations, with especially large increases in bednets and mobile phones. By May 2014, 55 percent of households in Abi Adi had at least one mobile phone, increased from 25 percent at baseline, while 29 percent of households in Hintalo had at least one mobile phone, increased from 4 percent at baseline. There are big improvements in the holdings of these items by SCTPP beneficiaries. For example, the mean number of mobiles owned by SCTPP households increases from 0.17 to 0.58 in Abi Adi and from 0.03 to 0.31 in Hintalo.

As with farm equipment, we construct an index of ownership of consumer durables based on the following items: improved charcoal/wood stoves; fernel; kerosene stove; biomass stove; kerosene lamp; pump lamp; large barrels; jerry can; sofa; leather bed; wood bed; metal

bed; mosquito bed nets; radios; television; tape or CD player; modern chair; modern table; wheelbarrow; bicycle; animal carts; and mobile phone. The index is scaled from zero to one, thus changes in the index can be interpreted as percentage changes.

Table 12.4 Mean holdings of selected consumer durables at baseline (2012)

	Beneficiary	Control	Random
Abi Adi			
Jerry cans	1.58	1.96	2.55
Metal bed	0.78	1.00	1.47
Bednet	0.61	0.84	1.44
Mobile phones	0.17	0.31	0.73
Hintalo			
Jerry cans	1.05	1.30	1.58
Metal bed	0.08	0.12	0.18
Bednet	0.11	0.12	0.13
Mobile phones	0.03	0.04	0.08

Source: Baseline household survey.

Note: Sample sizes are 1,280 in Abi Adi and 2,387 in Hintalo Wajirat.

Table 12.5 Mean holdings of selected consumer durables at endline (2014)

	Beneficiary	Control	Random
Abi Adi			
Jerry cans	1.78	2.24	2.67
Metal bed	0.82	1.05	1.40
Bednet	1.11	1.22	1.55
Mobile phones	0.58	0.89	1.53
Hintalo			
Jerry cans	1.20	1.47	1.74
Metal bed	0.16	0.22	0.30
Bednet	0.35	0.37	0.42
Mobile phones	0.31	0.43	0.47

Source: Endline household survey.

Note: Sample sizes are 1,280 in Abi Adi and 2,387 in Hintalo Wajirat.

Table 12.6 shows results for the consumer durable index. There is a positive and significant effect in Hintalo, but the magnitude of the impact, 0.8 percent, is small. There is no statistically significant impact in Abi Adi.

Table 12.6 Impact of SCTPP on a consumer durable asset index

	Coefficient and Standard Error
Abi Adi	
Durables index	-0.01 (0.011)
Hintalo	
Durables index	0.008** (0.003)

Notes: Standard errors are shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at

the 5 percent level; ***, significant at the 1 percent level. Sample sizes are 929 for Abi Adi and 1,460 for Intalo Wajirat.

We experimented with assessing impacts on specific durables; results are shown in Table 12.7. This shows positive impacts of the SCTPP in Hintalo, on the number of jerry cans (0.15) and bednets (0.17). But it also has some strange results, negative effects on jerry cans and mobiles in Abi Adi that do not make sense to us.

Table 12.7 Impact of the SCTPP on durable asset holdings

	Coefficient and standard error
Abi Adi	
Number of jerry cans	-0.196* (0.119)
Number of metal beds	-0.038 (0.052)
Number of bednets	0.15** (0.067)
Number of mobile phones	-0.131** (0.056)
Hintalo	
Number of jerry cans	0.152*** (0.055)
Number of metal beds	0.009 (0.02)
Number of bednets	0.173*** (0.032)
Number of mobile phones	0.014 (0.032)

Notes: Standard errors are shown in parentheses below coefficient estimates.
 *, significant at the 10 percent level; **, significant at the 5 percent level;
 ***, significant at the 1 percent level. Sample sizes are 929 for Abi Adi and 1,460 for Intalo Wajirat.

Finally, we note that explored whether the SCTPP had an impact on housing quality but we could not find statistically significant effects.

12.5 Summary

Over the two years covered by our studies, SCTPP beneficiaries accumulate assets in a variety of forms. They have more farm equipment, livestock and consumer durables. Some of these increases are large. To take two examples, in 2012, SCTPP households in Abi Adi owned a tiny 0.17 mobile phones. By 2014, this had increased to 0.58. In 2012, 25 percent of SCTPP households in Hintalo Wajirat owned livestock; by 2014, this had increased to 51 percent.

Undoubtedly, SCTPP beneficiaries are better off. How much of this is due to the SCTPP? The impacts appear to be modest. In Hintalo, the SCTPP increased holding of farm productive assets by two percent and consumer durables by 0.8 percent. It increased the likelihood that they own any form of livestock or animals by seven percent with this driven largely by increase in poultry (chickens). In Abi Adi, we find no consistent evidence of impacts on assets.

12.6 Statistical Appendix

All impact estimates are calculated using inverse probability weighted regression adjustment (IPWRA). Variables included in the treatment model of the IPRWA include: number of household members, number of household members under 3 years of age, number of household members under 6 years of age, number of household members under 11 years of age, number of household members under 19 years of age, number of household members over 60 years of age, number of household members working, number of unemployed household members, number of able bodied household members, an indicator for a female head of household, an indicator for a child head of household, the age of the household head, an indicator that the household head has 0 years of formal education, a principal component based livestock index, an indicator that the house has 1 room, and an indicator that the house is in poor condition as assessed visually by the survey enumerator. Plots of the distributions of predicted treatment status by beneficiary status and location are shown in Figures 12.3 and 12.4. Balancing tests of the variables included in the treatment model are available on request, and show that all variables are balanced across 5 bins in Abi Adi and 7 bins in Hintalo, save for one exception: the number of household members unemployed is not balanced for one bin in Hintalo at the 99 percent confidence level. However, because the balancing tests of 17 variables across 12 bins result in 204 total tests, we expect that 2 will appear “statistically significant” by random chance and thus are not concerned about the 1 “statistically significant” test results in Hintalo.

The impact estimate of the effect of the SCTPP on outcomes shown in Tables 12.1, 12.3, 12.6, and 12.7 uses the variable measured at endline as the outcomes of interest, and uses the treatment model described above. The outcome model also includes controls for the baseline levels of the variable.

Figure 12.3 Common support: Abi Adi

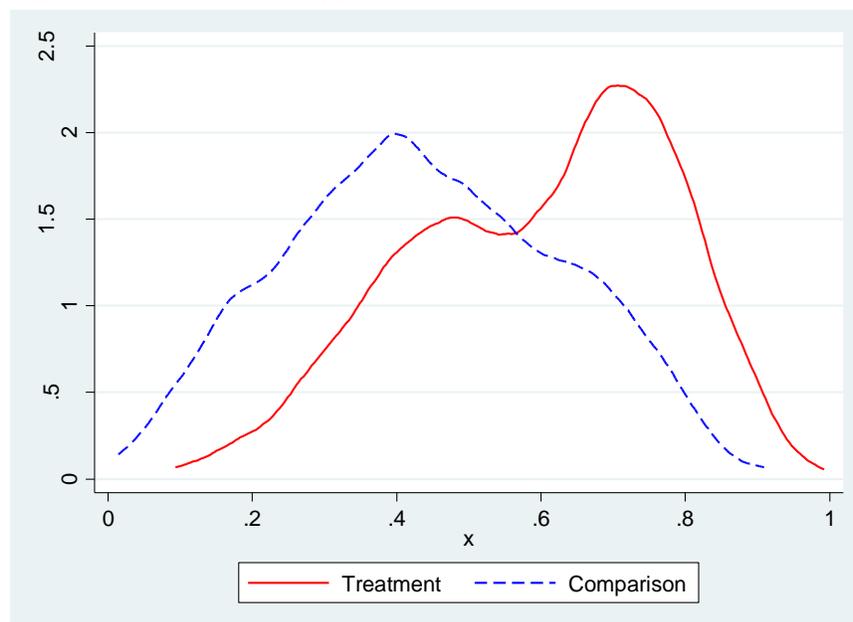
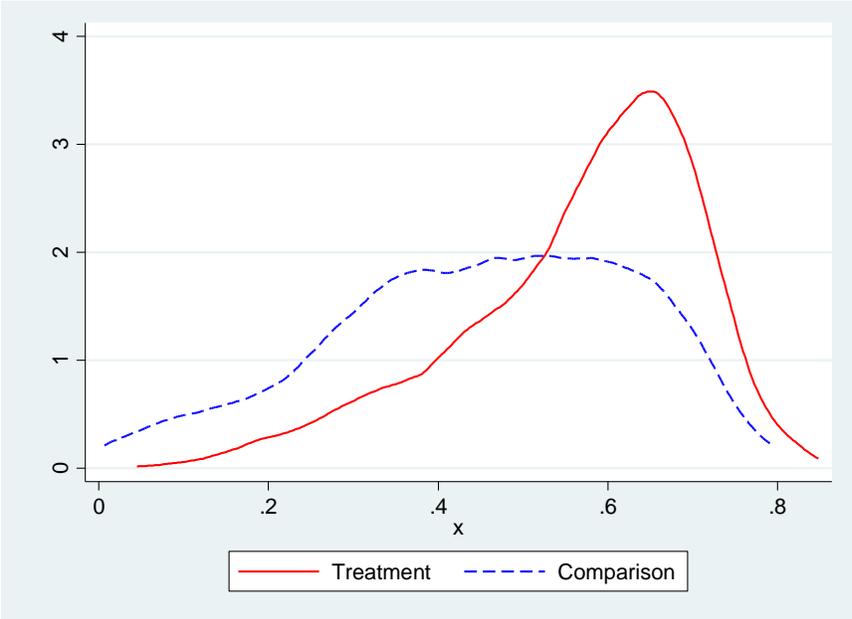


Figure 12.4 Common support: Hintalo



13. The Impact of the SCTPP on Trust and Informal Social Protection

13.1 Introduction

While the SCTPP was designed to improve the lives of its beneficiaries, similar programs have sometimes had unintended negative effects. This chapter examines the possibility of negative effects in two areas: informal transfers and trust and social cohesion. After the introduction of government cash transfer programs, it has sometimes been observed that the beneficiaries' family and friends reduce the amount of informal support and transfers they had previously been providing, leaving the beneficiary potentially no better off than they were before the program. We first look for evidence that informal support to beneficiaries was affected by the SCTPP. Next, governments and practitioners sometimes worry that because formal programs may interrupt informal supports, the program may unintentionally reduce trust and social cohesion in the community. We also look for evidence that the SCTPP had this negative effect. Finally, we report qualitative evidence on whether the SCTPP has any impact on participation in semi-formal social protection mechanisms and associations.

13.2 Informal Transfers

One concern about formal transfers from government agencies is that they may crowd out informal transfers. That is, when a beneficiary starts to receive formal transfers from the local government, their family and friends may respond by providing less financial assistance to the beneficiary, leaving the beneficiary no better off than they were before the government program. This section of the report examines several measures of informal transfers to test whether the SCTPP has had negative effects on the support that beneficiaries used to enjoy from their family and friends.

13.2.1 Measurement

To examine the effect of the SCTPP on informal transfers, we measure the respondent's receipt of informal transfers either in cash or in-kind. During the baseline and endline survey, we ask detailed questions about when the transfer was received, so we are able to reconstruct the fraction of respondents who report receiving a transfer in each of the quarters before the baseline survey was fielded. Because we are mildly concerned that respondents' recollections of their informal transfers may fade over time, we concentrate our analysis on the three quarters before the baseline survey. Recall that the baseline survey was fielded about eight months after the SCTPP began in Abi Adi and most parts of Hintalo, so the quarter 6-9 months before the baseline survey can be considered a true baseline measurement.

We also collected data on the modality of informal transfers, cash or in-kind, and for cash transfers, on the total amount of informal transfers received in cash. Data on informal cash transfers are also presented, though it should be noted that it is difficult to infer the total value of all informal transfers received by comparing the relative sizes of cash transfer receipts because the value of in-kind transfers is unobserved.

13.2.2 Contexts

Table 13.1 shows summary statistics on informal transfers from the baseline survey. The first panel shows information from urban Abi Adi while the second panel shows information from rural Hintalo. The first row shows the percentage of respondents who report ever receiving a transfer in the 12 months before the baseline survey. The rates of transfer receipt are fairly similar across the three sampling groups in Abi Adi, with 37 percent of beneficiaries, 36 percent of respondents in the control group, and 39 percent of respondents in the random sample reporting receiving at least one transfer in the past 12 months.

Table 13.1 Informal transfers at baseline

	Beneficiary	Control	Random	N
Abi Adi				
Received transfer in 12 months before baseline survey	0.366	0.358	0.385	1,278
Received a transfer 6-9 months before baseline	0.185	0.159	0.223	1,278
Received a transfer 3-6 months before baseline	0.128	0.145	0.177	1,278
Received a transfer in 3 months before baseline	0.173	0.175	0.162	1,278
Received transfer in cash last 12 months	0.266	0.250	0.346	1,278
Total cash received 12 months before baseline survey	1,123	1,203	4,571	424
Hintalo				
Received transfer in 12 months before baseline survey	0.0936	0.0862	0.0800	2,377
Received a transfer 6-9 months before baseline	0.0269	0.0291	0.0233	2,377
Received a transfer 3-6 months before baseline	0.0306	0.0291	0.0300	2,377
Received a transfer in 3 months before baseline	0.0399	0.0351	0.0233	2,377
Received transfer in cash last 12 months	0.0547	0.0511	0.0333	2,377
Total cash received 12 months before baseline survey	413.6	388.9	338.9	180

Source: Baseline household survey.

However, as described in the measurement section, we collected detailed information on when each transfer was received and thus are able to reconstruct transfer receipt by quarter in the year before the baseline survey. The second line shows the fraction of respondents who report receiving a transfer 6-9 months before the baseline, which was before the SCTPP began. Here we see instead that 19 percent of beneficiaries reported receiving a transfer before the SCTPP began, while only 16 percent of respondents in the control group report receiving a transfer. The third line shows data from the 3-6 months before the baseline survey, covering the period just after the SCTPP started. Here we see that the groups have inverted, with only 13 percent of beneficiaries reporting they received a transfer just after the SCTPP started, while 15 percent of respondents in the control group report receiving an informal transfer. By the 3 months just before the baseline survey, the rates of informal transfers are about equal between the two groups. Taken together, these data suggest that the SCTPP may have crowded out informal transfers in Abi Adi.

The last two rows of the first panel show first the fraction of respondents who reported receiving an informal transfer in cash over the 12 months before the baseline survey, and for those who reported at least one cash transfer, the average amount of cash received. Beneficiaries and respondents in the control group in Abi Adi are equally likely to report receiving a transfer in cash (27 and 25 percent respectively), while respondents in the random

sample are substantially more likely to report a cash transfer in the last 12 months (35%). Additionally, while beneficiaries and respondents in the control group report similar sized total receipts (1123 and 1203 birr), respondents in the random sample report more total cash transfers (4571 birr).

The second panel shows analogous data for Hintalo. Rates of informal transfers are lower in Hintalo, with 9 percent of beneficiaries, 9 percent of respondents in the control group, and 8 percent of respondents in the random sample reporting ever receiving a transfer in the 12 months before the baseline survey. The second through fourth lines show informal transfers by quarter leading up to the baseline survey. In Hintalo, we do not see the dramatic drop in informal transfers to beneficiaries just after the SCTPP began; however, because the initial rates of informal transfers are lower, we may need a more sophisticated statistical method to uncover real differences.

The final two rows of the second panel of Table 13.1 show that as in Abi Adi, beneficiaries and respondents in the control group report similar rates and sizes of cash transfers received over the 12 months before the baseline survey (5 percent report receiving a cash transfer in both groups, with an average of 413 and 389 birr reported in total receipts), while respondents in the random sample report lower rates of cash transfer receipt (3%) and smaller sizes of total informal transfers for those reporting at least one transfer (339 birr).

The qualitative fieldwork also found relatively low levels of informal community support prior to the start of the SCTPP. Only one SCTPP participant from Abi Adi indicated having received continual support before SCTPP. More often, respondents mentioned support being provided only in times of trouble.

I never got any assistance from anybody [CPF/MN].

We didn't receive any assistance before the cash transfer [PM/AA].

Yes, I used to live because of the community support, both in food and cash [CMP/AA].

I received support from the community three times, all in cash (300, 400 and 250 birr) while I was going to Mekelle and May-Chew for medication [PF #2/S].

Before presenting statistics on informal transfers for respondents at endline, we first present figures showing trends in informal transfers using data from the monitoring surveys. Figure 13.1 shows trends in reported informal transfers received over the previous 3 months across the 5 waves of monitoring surveys, and including informal transfers for the 3 quarters before the baseline survey. The top panel shows results for Abi Adi broken out by respondent group, while the lower panel shows similar data for Hintalo. The first pattern that is evident is that informal transfers are rising for all group in both areas through November 2013. After November 2013, transfers continue to rise in Abi Adi through the final monitoring survey, while informal transfers fall off in Hintalo.

Across sampling groups, in Abi Adi, the data show that while informal transfers were initially higher for the beneficiary group, informal transfers to beneficiaries fall just after the beginning of the SCTPP and remain lower than informal transfers to respondents in the control group until November 2012, one year after the SCTPP began. After November 2012, informal transfers to beneficiaries climb higher than informal transfers to respondents in the control group, and remain higher through the final monitoring survey. In Hintalo, the pattern of lowered informal transfers to beneficiaries is not as clear in the means of the data; rather, a more sophisticated statistical technique may be required.

Figure 13.1 Informal transfers over time

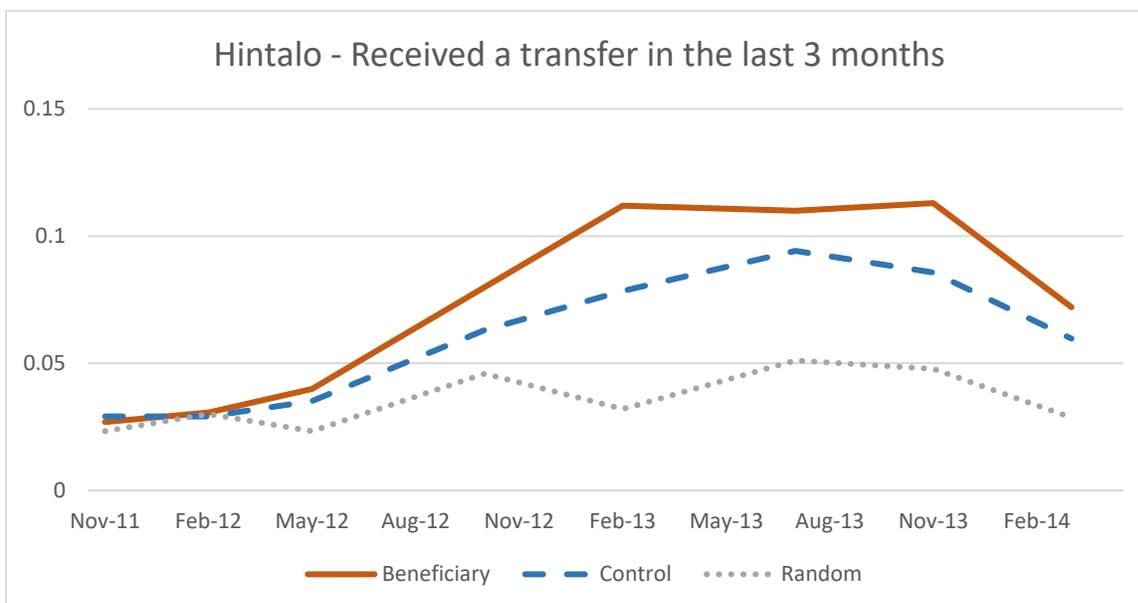
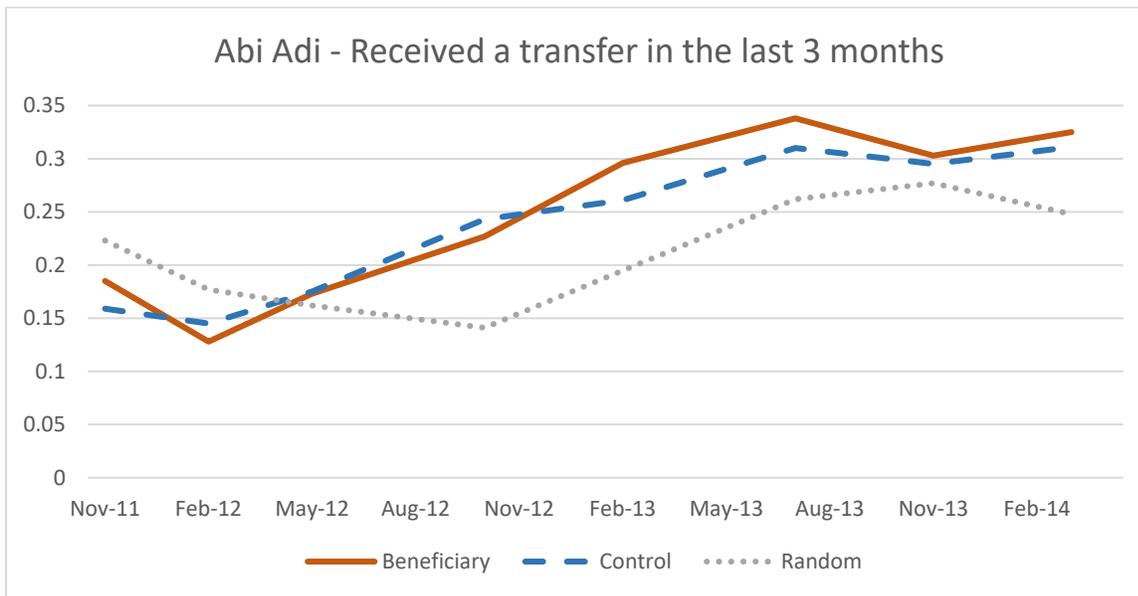


Table 13.2 shows summary statistics for measures of informal transfers from the endline survey. As expected due to the rise in reported informal transfers in the monitoring surveys, a higher fraction of respondents in Abi Adi report receiving an informal transfer over the past 12 months at the endline survey than at the baseline. Sixty percent of beneficiaries and respondents in the control group in Abi Adi report receiving an informal transfer in the 12 months before the endline survey, while 52 percent of respondents in the random sample report an informal transfer. There are similarly sized increases in all groups. A similar fraction of respondents report receiving a cash transfer in the 12 months before the endline survey (43 percent in all groups), and while the size of total receipts for those who received an informal transfer are similar in the beneficiary and control groups (1,431 and 1,615 birr, respectively), the size of total receipts is much larger in the random sample (5,893 birr). Most interestingly, though a greater fraction of beneficiaries and respondents in the control group report receiving a cash transfer in the year before the endline survey than in the year before the baseline survey (43 percent at endline, compared to 25-7 percent at baseline) the size of total receipts for those who received a cash transfer has not changed substantially (1,400-1,600 at endline, compared to 1,100-1,200 at baseline).

Table 13.2 Informal transfers at endline

	Beneficiary	Control	Random	N
Abi Adi				
Received transfer in 12 months before endline survey	0.598	0.599	0.519	1,192
Received transfer in cash last 12 months	0.436	0.429	0.434	1,192
Total cash received 12 months before endline survey	1,431	1,615	5,893	691
Hintalo				
Received transfer in 12 months before endline survey	0.328	0.324	0.249	2,155
Received transfer in cash last 12 months	0.204	0.216	0.169	2,155
Total cash received 12 months before endline survey	819.7	1,102	955.0	658

Source: Endline household survey.

As in Abi Adi, there are more reported informal transfers at endline in Hintalo than at baseline, with 32 percent of beneficiaries and respondents in the control group reporting receiving an informal transfer in the last 12 months, while 25 percent of respondents in the control group report receiving an informal transfer. As at baseline, a similar fraction of beneficiaries and respondents in the control group report receiving a cash transfer in the 12 months before the endline survey (20 and 21 percent respectively) while slightly fewer respondents in the random sample report receiving a cash transfer (17%). For those who reported receiving a cash transfer in the last 12 months, the size of total receipts was smallest for beneficiaries (820 birr), a bit larger for respondents in the random sample (955 birr), and largest for those in the control group (1102 birr).

13.2.3 Impact of the SCTPP on informal transfers

Table 13.3 shows the impact of the SCTPP on measures of informal transfers after correcting for selection into the program. The first line of the first panel shows that in Abi Adi, after correcting for selection, there was no measureable difference in the receipt of informal transfers before the SCTPP began between beneficiaries and respondents in the control group. The second line

shows that informal transfers to beneficiaries were significantly lower after the SCTPP began, while the third line shows that informal transfers to beneficiaries remained lower at endline.

Table 13.3 Impact of the SCTPP on informal transfers

	Coefficient and Standard Error	Sample size
Abi Adi		
Received transfer: difference in pre-SCTPP giving	-0.006 (0.03)	928
Received a transfer in last 12 months: single baseline difference	-0.081** (0.037)	928
Received a transfer in last 12 months: single endline difference	-0.068* (0.037)	900
Hintalo		
Received transfer: difference in pre-SCTPP giving	-0.013 (0.009)	1,456
Received a transfer in last 12 months: single baseline difference	-0.037** (0.018)	1,456
Received a transfer in last 12 months: single endline difference	-0.013 (0.029)	1,370

Notes: Standard errors are shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

The second panel shows results for Hintalo. Again the first row shows that after correcting for selection, there was no statistical difference in informal transfers to beneficiaries or respondents in the control group. The second line shows that as in Abi Adi, informal transfers to beneficiaries fell after the SCTPP began. The third row show that while informal transfers to beneficiaries remained lower at endline, the difference between beneficiary and control groups was no longer statistically different from zero.

The qualitative research confirms that participation in the SCTPP appears to have affected community support provided to SCTPP participants. When asked about assistance received after SCTPP began and whether community support had changed, SCTPP participants having received support previously noted a decrease in that support and some mentioned that support stopped entirely after SCTPP.

Now the support from my nephew stopped because he knows I am receiving cash from the program [PM #1/BT].

The labor assistance from my daughter now decreased [PF #3/S].

Nonprogram participants, on the other hand, generally reported continuing to give the same amount of community support to poor households. This holds for respondents from the comparison group only; control group respondents reported not having the resources to support others.

I continued giving this assistance but the amount varies according to my income [CCmM/AA].

I continued giving this assistance at the same level [CCmF/BT].

Despite the willingness to continue support to poor families, respondents in the control and comparison groups appeared less willing to continue informal support to SCTPP participants. When asked about changes in levels of support, one respondent from the comparison group reported that after the start of the SCTPP, he decreased support for poor households at holidays “because they have money” (CmM #5/BT). When asked whether they felt differently about supporting SCTPP participants, most nonparticipant respondents felt that SCTPP participants no longer needed their support. Only some comparison group respondents felt that they should still help SCTPP participants.

At this time I cannot assist them because they are in a better position than me. I only receive 147 birr pension but the minimum support from SCTPP is 155 birr/month [CnF/BT].

Yes, I feel differently because at this time the SCTPP beneficiaries are better than me because of the cash. He only gets 100 birr per month but the participants receive at least 155 birr/month [CCnM/S].

One control group respondent expressed the expectation that SCTPP participants should provide help to the community.

Yes because the participants have better income than me and I feel the other way round that the participants can assist him [CnM #3/AA].

A respondent from the comparison group in May Nebri noted that the formalization of community support through CCC funds led to a decrease in the total amount of support mobilized as everybody is being asked for the same contribution. SCTPP participants are also asked to contribute to the CCC fund but participation in the SCTPP does not appear to have increased the degree of informal support provided by SCTPP participants. In response to the question “Have you given any assistance to friends, neighbors, or relatives since you started receiving SCTPP cash?” SCTPP participants reported that their contributions to the CCC fund mean noted that the SCTPP amount is not enough to allow them to provide assistance to other community members beyond the support through the CCC.

We give in cash to the CCC to assist other poor households who are not receiving SCTPP cash [PM/BT].

No, I didn't give any assistance to anybody because the cash is not enough for me. But I contribute 2 birr/month through the CCC for poor households who are not participating in the SCTPP [CPM/AA].

No, it is not enough for us let alone to support others [PF/MN].

The limited ability of SCTPP participants to provide support to others was corroborated by non-SCTPP participants when they were asked whether they receive support from SCTPP households:

No I never receive any assistance from the participants as these households are poor [CCmF/BT].

No, because the cash support from SCTPP is not enough for them [CnM #1/AA].

SCTPP participants reported that they are generally not asked for loans because people know the amount provided is small. Only a few SCTPP participants reported that people asked them for loans, and only one reported giving small loans to her neighbor.

Nobody asked for help (including loan) so far, rather, I ask credit from traders whenever I need [it], knowing he can repay from the SCTPP cash [CPM/MN].

Since the SCTPP amount is small, participant respondents also generally reported that they do not feel differently about obligations to offer community support, although several do feel that they should provide support but cannot.

Still I feel that I am the poorest of the poor, and I have no feeling to support to others [PM #2/BT].

The money is not enough to support my family, and I didn't feel more pressure to help others [EPM#2/S].

I know I have [to] help people who are not receiving, but the amount is very small to give money to other people [CPF/AA].

13.3 Trust and Social Cohesion

In addition to concerns that formal social protection programs may negatively affect informal financial networks, some also worry that community trust and social cohesion could be negatively affected. For example, beneficiaries may receive less assistance with daily tasks if their neighbors believe they no longer need help, or community members may be upset that they were not selected to participate in the program. This section examines several measures of trust, assistance for the elderly, and social cohesion to test for potential negative effects of the SCTPP.

13.3.1 Measurement

Trust and social cohesion are measured in several ways. First, we aggregate three qualitative questions about trust into a Trust Index. The primary respondent was asked to report they agree with three statements, with 7 indicating complete agreement and 1 indicating complete disagreement. The three statements are: most people are basically honest; most people can be trusted; I feel I can trust my neighbors to look after my house if I am away. The minimum score on the index is 3 while the maximum is 21; higher scores indicate more trust.

Second, a similar index is constructed to reflect how the elderly feel they have been integrated into their extended families and other social networks. Respondents over the age of 60 were asked the degree to which they agree with the following four statements: in your extended family, everyone generally gets along well; your extended family is attentive to your needs; the young people in your extended family and in your village treat you with respect; your extended family and your neighbors are friendly with you. The minimum score on the index is 4 while the maximum is 28; higher scores indicate that the elderly person feels better about their status.

We also provide a more concrete measure of assistance to the elderly. Elderly respondents were asked the number of days they were assisted by family, friends, or neighbors with specific tasks over the previous week. Tasks included cooking meals, cleaning the house, cleaning clothes, fetching water, fetching firewood, and buying food. The total number of task days were summed to create a measure of how much help the elderly person received over the previous week, ranging from 0 to a maximum of 42 days.

Finally, we create a social cohesion index. The primary respondent was asked “Thinking about your kushet, during the last year, would you say that nowadays: there is more support to poor people; there are more problems with neighbors; the community is divided.” The respondent provided their degree of agreement with each statement, with agreement receiving a score of 5 and disagreement a score of 1. The responses were then aggregated, with the second and third questions entered inversely because they represent negative outcomes. The social cohesion index runs from 3 to 15, with higher scores indicating better outcomes.

13.3.2 Contexts

Table 13.4 presents summary statistics on trust and social cohesion from the baseline survey. The first line shows that in Abi Adi, measures of trust were similar across the beneficiary, control, and random sample groups. Measures of elderly respect were more variable, with elderly beneficiary respondents indicating they felt like they had lower status than elderly respondents in the control or random samples. While elderly beneficiaries felt they had lower status, they report receiving more days of help than do respondents in the control or random samples. Finally, respondents in the beneficiary and control groups in Abi Adi report similar levels of social cohesion, while respondents in the random sample report lower feelings of social cohesion.

The second panel shows results for Hintalo. As in Abi Adi, beneficiaries and respondents in the control and random samples in Hintalo report similar levels of trust in their community. The level of trust is a bit higher in Hintalo than in Abi Adi. As in Abi Adi, elderly beneficiary respondents report they feel lower levels of status than do respondents in the control and random samples, but the differences in Hintalo are much smaller. Elderly beneficiary respondents in Hintalo report more days of help than do beneficiaries in Abi Adi, and also more than elderly respondents in the control and random samples in Hintalo. Finally, unlike in Abi Adi, beneficiaries in Hintalo report higher levels of social cohesion than do respondents in the control and random samples, though the differences are not large.

Table 13.4 Trust and social cohesion at baseline

	Beneficiary	Control	Random	N
Abi Adi				
Trust (min 3, max 21)	14.44	14.38	14.95	1,280
Respect for elderly (min 4, max 28)	20.05	21.04	23.44	555
Days help for elderly (min 0, max 42)	3.063	1.879	2.500	556
Social cohesion index (min 3, max 15)	7.322	7.440	6.516	1,203
Hintalo				
Trust (min 3, max 21)	15.55	15.50	15.09	2,368
Respect for elderly (min 4, max 28)	20.92	21.09	21.64	1,440
Days help for elderly (min 0, max 42)	4.288	2.450	3.196	1,433
Social cohesion index (min 3, max 15)	7.454	7.409	7.392	2,286

Source: Baseline household survey.

Table 13.5 shows similar summary statistics using data from the endline survey. The first row shows that respondents in Abi Adi again report similar levels of trust in their community members across sampling groups, but lower levels of trust than at baseline. The elderly report no difference in status from baseline to endline in the beneficiary and control groups, though elderly respondents in the random sample report lower levels of status at endline. Elderly beneficiaries in Abi Adi report an average of 1.1 fewer days of help over the previous week at endline than at baseline, while days of help fell by 0.4 days in the control group and 1.6 days in the random sample. Beneficiaries in Abi Adi reported a small drop in social cohesion from baseline to midline, while respondents in the random sample reported no drop.

Table 13.5 Trust and social cohesion at endline

	Beneficiary	Control	Random	N
Abi Adi				
Trust (min 3, max 21)	13.06	12.56	13.19	1,192
Respect for elderly (min 4, max 28)	20.03	21.70	21.63	593
Days help for elderly (min 0, max 42)	1.938	1.447	0.950	593
Social cohesion index (min 3, max 15)	7.095	7.471	7.089	1,152
Hintalo				
Trust (min 3, max 21)	13.95	13.39	13.93	2,149
Respect for elderly (min 4, max 28)	22.28	22.35	23.39	1,465
Days help for elderly (min 0, max 42)	2.793	1.573	1.711	1,465
Social cohesion index (min 3, max 15)	7.696	8.102	7.784	1,990

Source: Endline household survey.

In Hintalo, respondents also report similar levels of trust across sampling groups, but lower levels of trust than at baseline. Unlike in Abi Adi, the elderly in Hintalo report greater levels of respect at endline than at baseline, with the gains similar across sampling groups. However, days of support for the elderly fell in Hintalo, by an average of 1.5 days for beneficiaries, 0.9 days for respondents in the control group, and 1.5 days in the random sample. Finally, reported levels of social cohesion increased slightly in Hintalo, with larger gains seen for respondents in the control group than for beneficiaries.

13.3.3 Impact of the SCTPP on trust and social cohesion

Table 13.6 shows the estimated impact of the SCTPP on trust and social cohesion after correcting for sample selection. The table shows that while there are differences from baseline to endline, none can be statistically attributed to the SCTPP save for a negative effect of the program on social cohesion in Hintalo. Recall that reported social cohesion increased in Hintalo for all groups from baseline to endline, but increased by a smaller amount in the beneficiary group than in the control group.

Table 13.6 Impact of the SCTPP on trust and social cohesion

	Coefficient and Standard Error	Sample size
Abi Adi		
Trust	0.224 (0.427)	900
Elderly respect	-0.782 (0.566)	459
Days help	0.672 (0.422)	347
Social cohesion	-0.288 (0.177)	826
Hintalo		
Trust	0.458 (0.326)	1,359
Elderly respect	-0.385 (0.319)	1,084
Days help	-0.472 (0.449)	905
Social cohesion	-0.443*** (0.158)	1,207

Notes: Standard errors shown in parentheses below coefficient estimates. *, significant at the 10 percent level; **, significant at the 5 percent level; ***, significant at the 1 percent level.

The qualitative data generally found evidence of positive benefits to the community following the introduction of the STCPP, including greater social cohesion.

Those beneficiaries start to participate in some social events like baptizing of a child and wedding [TSW/AA].

Social workers interviewed generally believed that the SCTPP strengthened community cooperation, particularly since other community members no longer avoided SCTPP participants for fear that they would ask for a loan.

SCTPP strengthens social cooperation between households. Before the cash transfer, the poorest households expected support from others and this caused tensions, but now they are self-sustaining and relations are more harmonious [TSW/Pilot].

Households without support are now getting support from the program and relatively the burden of the community is solved [TSW/MN].

Several respondents mentioned that SCTPP relieves some of the burden on the community, while a few SCTPP participants noted an increase in their creditworthiness.

The poor are now receiving constant payments and are no more being a social burden of the community [PM #1/BT].

We started to get credit from the better-off people and the level of trust on us from the lenders' point of view has increased as a result of SCTPP [EPM/BT].

Yes our creditworthiness increased since receiving the SCTPP [PF/S].

Positive changes were also found within families. Although most participants reported no change in treatment by their family members, one participant in May Nebri reported that his daughter began to assist him with cooking after he started participating in SCTPP. Another participant in May Nebri noted that her sisters and others in the community began to greet her after she started receiving the cash transfer.

Before the cash transfer people fear us that we ask them for help, and they don't want to greet us. Now we have the money and they know that we will not ask them for help and they started to greet us properly [EPF #2/MN].

My neighbors used to leave me in my house when I was sick and poor and I used to ask them for help or credit. But since I joined SCTPP they come and ask me if I want to come shopping with them or if they can buy items for me at the market. The reason is that they know I have my own money now and won't beg them for help or a loan, so they no longer avoid me [PF #6/MN].

The follow-up study also supported the baseline study findings that SCTPP generally did not create tension between participant and nonparticipant households or within households. In fact, most respondents noted only positive changes in community relations since the SCTPP started, including increased creditworthiness and greater community participation, as mentioned above.

Most of the beneficiaries are poor vulnerable households and there is no tension or jealousy between participant households and nonparticipant households in my community [CnF #4/BT].

There is no jealousy because our culture doesn't entertain tension and jealousy [EPM/BT].

There is not any tension or jealousy because of the SCTPP. Rather the community is happy to see the poor people are supported by the program [CPF/MN].

There is no tension or jealousy between households. Even those who are not included feel that the community is benefiting because some members are being supported. The community is also happy because the burden is being lifted off them by the cash transfers. If older people are assisted the younger ones are

happy because this means there is less pressure on them to support the elders [TSW/Pilot].

The greatest tension appears to exist between eligible nonparticipant households and the CCCs and tabia administration. Eligible nonparticipants remain dissatisfied with their status, although this does not spill over into community relations or relations between participants and nonparticipants.

I am not happy with Tabia administration and the CCC, but I don't have problem with the participants, and there is no tension or jealousy between participant households and nonparticipant households [CnM #2/AA].

There is no any tension or jealousy; it is not our culture. The complaints are only with the CCC or Tabia administration, not with participants [PM/MN].

The tension is with the committee not with the community [PM #1/AA].

One respondent from the comparison group in Abi Adi noted that the tabia administration's method for handling complaints regarding eligible nonparticipants seems to have created tension between households as eligible nonparticipants appealing their case were asked to provide names of SCTPP participants whom they considered ineligible.

Yes, because the Tabia Administration usually advice complainants to mention names of participants they considered better than them in wealth status for competition. Consequently, some complainants call names of some participants and this creates tension between participant households and nonparticipant households [CCmM/AA].

13.4 Semi-Formal Social Protection Mechanisms

In addition to informal community support, communities also have a number of semi-formal social protection mechanisms. These mechanisms, such as savings groups, burial societies and women's associations, are community initiated and not formally supported by the government, but they are formalized in terms of membership and expected contributions and returns.

Semi-formal social protection mechanisms operate in all tabias in Hintalo and Abi Adi. With the exception of Sebebera where there is no *iddir*, respondents in all tabias reported that all listed mechanisms²⁷ are present. Seneale also has a women's association and an HIV/AIDS association and respondents in Abi Adi noted the presence of a women's association, a youth association, an HIV/AIDS association, and a credit and savings association.

Since the start of the SCTPP, elderly associations have been initiated in May Nebri, Sebebera, Seneale, Bahr Tseba and Abi Adi. May Nebri also added a disabled association.

²⁷ (1) Iddir, (2) equub, (3) labor cooperation, (4) oxen pairing for ploughing, (5) sharecropping, (6) renting out land, (7) cooperative, (8) farmers' association, (9) religious associations, (10) remittances, and (11) elder association.

Respondents attribute the initiative of elderly associations to the SCTPP, and many SCTPP participants reported joining them and contributing 12 birr per annum.

I know that an Elder Association has formed after the SCTPP started [CnM/AA].

An Elder Association is established after the SCTPP and the members contribute 12 birr a year [PM/BT].

The Elder Association is newly established because of the cash transfer. BoLSA at woreda level initiated the idea, and older beneficiaries have joined the association and contribute 12 birr for the last two years [CmM/MN].

A Disabled Association is established after the SCTPP started. All of them are members of the Disabled Association and contribute 12 birr each year [PM #2/MN].

More generally, the SCTPP appears to have increased participation in semi-formal mechanisms, though this differs considerably by type of mechanism. Membership of an association is most common, with annual contributions varying between 5-24 birr. Respondents reported that joining a cooperative costs a 12 birr registration fee, a credit association costs between 40-100 birr per month, and sharecropping is 50 per cent of the harvest.

While some SCTPP participants indicated joining an equub or iddir since the start of the program, the barrier for participation remains too high for many SCTPP participants. Joining an equub or iddir appears difficult due to high contributions or high joining fees. Equub membership costs vary, with reported contributions between 20 birr a month and 1,000 birr a week, with various levels in between. Iddirs were reported to cost between 1-10 birr a month with an additional contribution of 1.25 or 2.5 kilograms of grain upon a death, although the joining fee can be high.

I joined an Equub after receiving the SCTPP cash. I am a member of Equub within HIV/AIDS association. I contribute 20 birr per month and receive 620 birr in my turn [PM #4/S].

I joined an Equub with a monthly contribution of 100 birr after the SCTPP [PM #2/AA].

To join an iddir is very expensive, sometimes as much as 500 birr, because new members have to pay full contributions made by existing members up to that time [PF/MN].

Given the often high costs of joining and regular contributions required, it is perhaps not surprising that respondents—both SCTPP participants and nonparticipants—express mixed views on STCPP's effect on the semi-formal mechanisms (i.e., iddir, equub, associations). Several respondents in both Hintalo and Abi Adi felt that little had changed, including membership in these institutions.

Most of the mechanisms are for better-off households who can contribute cash regularly, and the SCTPP has not any impact on strengthening them, because the cash is not enough even to cover all demands [CnM/AA].

There is no change because of the SCTPP. Only people who used to participate in these mechanisms are still participating [CnF #5/BT].

Others, however, noted a variety of positive effects, including increased membership and participation among SCTPP participants.

Some beneficiaries were able to join these mechanisms after they started getting money [CmF/AA].

Some beneficiaries started to join Equub after the cash transfer, but they don't involve in Iddir as the premium is high [CmM/MN].

They are regularly contributing to their associations because of the cash [PF #2/S].

13.5 Summary

This chapter tested the possibility that the SCTPP may have had an unintentional negative effect on informal transfers and trust and social cohesion. We find evidence that beneficiaries received fewer informal transfers from their family and friends due to the SCTPP, particularly in Abi Adi. We find no evidence that the SCTPP negatively affected trust and social cohesion in Abi Adi, and while we find some evidence that the program weakened social cohesion in Hintalo, overall levels of reported trust and social cohesion were rising for all groups. There is mixed evidence on whether SCTPP cash finances increased participation in semi-formal social protection mechanisms such as savings groups and burial societies.

13.6 Statistical Appendix

All impact estimates are calculated using inverse probability weighted regression adjustment (IPWRA). Variables included in the treatment model of the IPRWA include: number of household members, number of household members under 3 years of age, number of household members under 6 years of age, number of household members under 11 years of age, number of household members under 19 years of age, number of household members over 60 years of age, number of household members working, number of unemployed household members, number of able bodied household members, an indicator for a female head of household, an indicator for a child head of household, the age of the household head, an indicator that the household head has 0 years of formal education, a principal component based livestock index, an indicator that the house has 1 room, and an indicator that the house is in poor condition as assessed visually by the survey enumerator. Plots of the distributions of predicted treatment status by beneficiary status and location are shown in Figures 13.2 and 13.3. Balancing tests of the variables included in the treatment model are available on request, and show that all variables are balanced across 5 bins in Abi Adi and 7 bins in Hintalo, save for

one exception: the number of household members unemployed is not balanced for one bin in Hintalo at the 99 percent confidence level. However, because the balancing tests of 17 variables across 12 bins result in 204 total tests, we expect that 2 will appear “statistically significant” by random chance and thus are not concerned about the 1 “statistically significant” test results in Hintalo.

Figure 13.2 Common support: Abi Adi

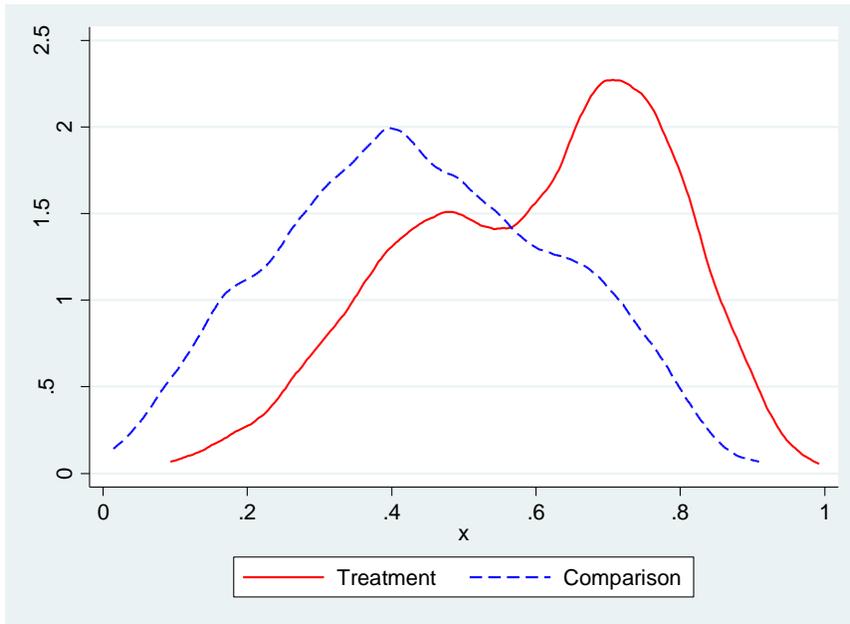
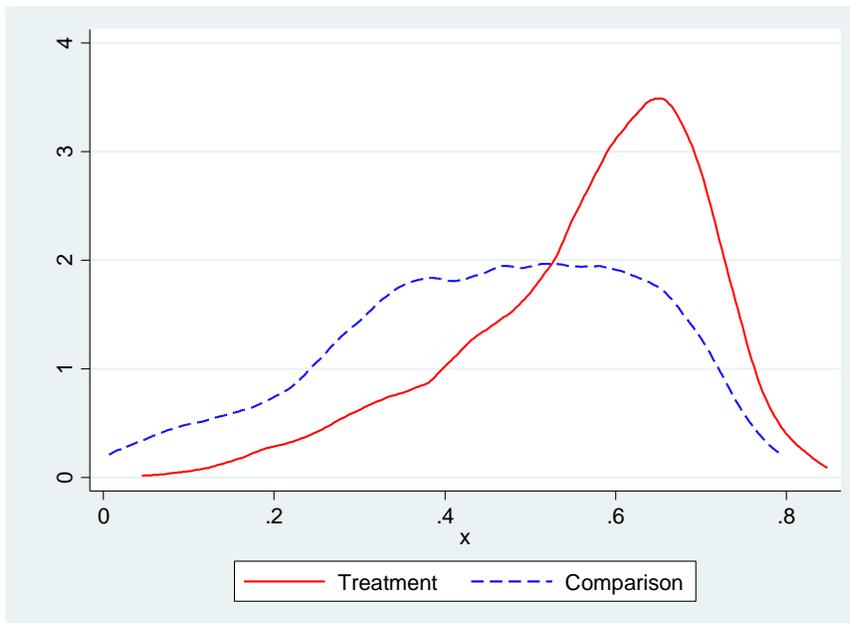


Figure 13.3 Common support: Hintalo



The impact estimate of the effect of the SCTPP on informal transfers shown in Table 13.3 uses transfers received in the 12 months before the endline survey, transfers received in

the 12 months before the baseline survey, and transfers received 12-8 months before the baseline survey as the outcomes of interest, and uses the treatment model described above.

The impact estimate of the effect of the SCTPP on trust and social cohesion shown in Table 13.6 uses the variables measured at endline as the outcomes of interest, and uses the treatment model described above. The outcome model also includes controls for the baseline level of the variable for the trust, days of help, and social cohesion models. The baseline level of elderly respect was not included as its inclusion caused the model not to converge.

14. Lessons learned and implications for future programming

14.1 Introduction

As noted in the introductory material to this report, the Social Cash Transfer Pilot Programme (SCTPP) aims to improve the quality of life for vulnerable children, the elderly, and persons with disabilities. It has three overarching objectives:

- Generate information on the feasibility, cost-effectiveness, and impact of a social cash transfer scheme administered by the local administration.
- Reduce poverty, hunger, and starvation in all households that are extremely poor and at the same time labor constrained; and
- Increase access to basic social welfare services such as healthcare and education.

In this report, we find that:

- d. BoLSA demonstrated that it could effectively implement an ongoing cash transfer program. The SCTPP effectively communicated with beneficiaries, reached its target group and provided full transfers on a timely and consistent basis.
- e. The SCTPP improved household food security and reduced hunger.
- f. The SCTPP had modest effects on schooling and asset formation. There were no large or measurable impacts on a range of other outcomes.

Based on these findings, we summarize lessons learned and their implications for future programming. Specifically, we discuss targeting and re-targeting, payment processes, Community Care Coalitions, payment levels, programme budgets and matching programme objectives with resources and targeting criteria.

14.2 Lessons learned and their implications

Targeting and re-targeting

Targeting processes in the SCTPP work well. *Woreda* and *tabia* officials, CCC members, and SCTPP participants demonstrated sound knowledge of the eligibility criteria and confirmed that the targeting procedures had been correctly applied in all communities surveyed. All this demonstrates the value of pre-intervention training on both programme design and implementation. There was broad acceptance of the eligibility criteria and the targeting decisions, reflecting good communication and outreach work. The CCCs played an important role in explaining the eligibility criteria and increasing acceptance of targeting processes, particularly among that were initially selected, but later cut.

Retargeting was limited. There were a few instances where households were subsequently dropped from the SCTPP either because they had been erroneously included or because their living conditions had changed so much that assistance was no longer needed. Given a fixed budget, this meant that the number of new entrants was limited to the number of places on the programme that opened up subsequent to the death of a beneficiary. Inclusion of new households drew heavily on existing targeting criteria and efforts were made to ensure that these inclusions maintained the existing gender balance of the programme. However, unlike the initial targeting process, there appears to have been less effort to communicating to non-beneficiaries how re-targeting was undertaken with the result that understanding and acceptance of re-targeting was limited. Clearer communication and stronger outreach strategies would improve community knowledge regarding re-targeting.

Payment processes

SCTPP payment processes consistently worked well across the two years of this study. Virtually all beneficiaries reported that they receive their payments on time with more than 90 percent report being paid in full, and 82 percent reporting that they were treated courteously by program staff. This high level of program performance was maintained throughout the life of the program. SCTPP payments are remarkably regular. Once the program was fully operational, more than 95 percent of beneficiaries received their payments each month. This high frequency of payments were maintained over the full duration of the SCTPP.

Future programming should be cognizant of two issues that arose during the SCTPP. One is the number and placement of pay points. There were too few of these initially with the result that some elderly and disabled beneficiaries had some difficulty obtaining payments. Relatedly, a novel feature of the SCTPP was the use of designates, a person authorized by the beneficiary to collect payments on their behalf. While the use of designates provided some clear advantages, initially designated persons were often rewarded in cash or in kind and sometimes conflicts arose as a result of this designation process. While both problems were resolved by endline (by adding a paypoint and through outreach work by CCCs, respectively), they suggest that greater attention to these issues during the design and initial implementation phase would be desirable.

Community Care Coalitions

A novel feature of the SCTPP is the creation of Community Care Coalitions (CCCs). These are community-led groups that serve as a support mechanism for the vulnerable populations in the community. CCCs are hybrid organizations with representation from both government and civil society organizations. CCCs play a critical role in beneficiary identification and selection and assisting in payment processes. They are intended to play a prominent role in the provision of complementary social services and to raise additional resources. Qualitative and quantitative data both indicate that CCCs understand and execute the roles assigned to them. They are well regarded by SCTPP beneficiaries. They clearly exert considerable effort to raise additional funds and are able to identify and distribute these to households in need of assistance. But this is not a substitute for a formal social safety net. Reflecting the poverty of the localities in which these

CCCs operate, the resources they raise benefit only a relatively small number of households. Especially in rural areas, it appears that many CCCs are operating at the limit of volunteerism. Relatively high levels of turnover of CCC membership suggests that they are not able to take on any additional time commitments.

One way of addressing this would be to devote some resources to formalizing the structure and operation of the CCCs as well as ensuring ongoing – rather than one-off – capacity strengthening activities. Formalization could include reviewing membership, duration of membership, a systematic programme of activities or workplans and a capacity development programme.

Payment levels and inflation

Unlike the PSNP, payment levels were not adjusted to account for inflation. Over time, this meant that the purchasing power of the transfers declined. This contributed to the limited impact of the SCTPP. Future programmes should include a mechanism to regularly adjust payment levels in response to rising prices.

Programme budgets

In all social protection interventions there is a tension between providing transfers to large number of beneficiaries but with lower levels of transfers, or restricting the number of beneficiaries and providing them with higher transfers. If the goal of programs like the SCTPP is to reach all those who need these transfers (and thereby reduce undercoverage) *and* have meaningful impacts, budgets need to be set accordingly.

Matching programme goals with budgets, transfer levels and targeting

As noted above, one of the overarching objectives of the SCTPP was to “reduce poverty, hunger, and starvation in all households that are extremely poor and at the same time labor constrained.” In the SCTPP, this was accomplished, in part, by community decisions to target transfers to elderly households. However, the programme logframe lists other goals including increasing school enrolments and attendance and improving the quality of housing stock. The SCTPP had no effect on school outcomes in Abi Adi and only a modest effect on enrollment and schooling efficiency in Hintalo Wajirat. There was no impact on investments in housing.

Given the overarching objective of the SCTPP, the community level targeting that prioritized the elderly was clearly the right decision. But this meant that impacts on children would be limited because these elderly households contained few children. Impacts on housing, and indeed on asset formation more generally, were also small, largely because – given the extreme poverty of the beneficiaries and the relatively small transfer size – most of the transfers were spent on food. If future programmes like the SCTPP want to have wider impacts, transfer levels (and thus programme budgets) and targeting must be consistent with these. Meeting these wider goals also implies closer linkages with livelihood initiatives and social services.

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