PSNP *PLUS*

LINKING POOR RURAL HOUSEHOLDS TO MICROFINANCE AND MARKETS

Impact Assessment of Small Ruminant and Value Chain Interventions
Final Impact Assessment of the PSNP Plus in Dodota and Sire
October 2011

John Burns and Solomon Bogale

Acknowledgements

The PSNP Plus Program "Linking Poor Rural Households to Microfinance and Markets in Ethiopia' was funded by the United States Agency for International Development (USAID). The Program was led by CARE, and implemented by CARE, Save the Children (UK), Catholic Relief Services (CRS) and partners, and the Relief Society of Tigray (REST). The Netherlands Development Organizations (SNV) and the Feinstein International Center, Tufts University provided technical support to the implementing partners. The authors would like to thank Habib Abu, Abdisa Hatewu, Tesema Yami and Sinan Olani for their valuable contributions as members of the research team. We are also grateful to the staff of CRS and partners in Addis and Wonji for supporting the research, with special thanks to Fikru Beyene, Abune Aman, Feyisa Lemmi, Tufa Borena, Sisay Demissu, Getachew Ayele, Arusi Adem, Haji Amano, Wendimu Meskele, Kamil Hussei, Midhekso Shumi, Jeylan Kelil, Abdurahaman Feyo, Sisay Areda, Usman Menza, Workinesh Lemecha, Aberash Zekios and Dr. Legesse Dadi.

This report and the associated study were made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of CARE and its PSNP PLUS partners and do not necessarily reflect the views of USAID or the United States Government.

The content of this report is derived from research carried out by the Feinstein International Center, Tufts University under the USAID funded PSNP Plus project. The contents of this report have not been endorsed by the other PSNP Plus partners, and do not necessarily reflect the views of these organizations.

Contents

SUMMARY 7
1. INTRODUCTION 10
1.1 Background to the PSNP Plus Program 10
1.2 PSNP Plus Overview 11
1.3 Background to the Study in Dodota Sire 14
1.3.1 Study Area General Characteristics 14
1.3.2 Background to the PSNP Plus Project in Dodota Sire 14
2. ASSESMENT METHODOLOGY 16
2.1 Study Design 16
2.1.1 Research Questions 16
2.1.2 Study Components 16
2.1.3 Indicator Selection 17
2.2 Sampling 17
2.2.1 Method and Size 17
2.2.2 Study Locations 18
2.3 Data Collection Methods 20
2.3.1 Household Interviews 20
2.3.2 Focus Group Methods 21
2.4 Data Analysis 21
3 RESULTS 22
3.1 Context and Background 22
3.2 Income 24
3.2.1 Income Sources 24
3.3 Expenditure 26
3.4 Credit and Savings 28
3.5 Asset Levels and Changes 30
3.5.1 Land Holdings 30
3.5.2 Livestock holdings 31
3.5.3 Productive Assets/Tools 33
3.5.4 Household Items 34
3.6 Changes in Household Food Security 35
3.7 Value Chain Production and Sales 35
3.8 Scoring of Project Benefits 38
3.9 Strengths and Weaknesses of Program Interventions 39
4. DISCUSSION 41
4.1 Methodological Issues 41
4.2 Income and Expenditure 41
4.2.1 Income Sources 41
4.2.2 Actual Income and Expenditure 42
4.3 Changes in Access to Microfinance 43
4.4 Changes in Assets 43
4.4.1 Land Holdings 44
4.4.2 Livestock Holdings 44
4.4.3 Productive Assets and Household Items 45
4.5 Changes in Food Security 45
4.6 Utilization of Project Derived Income and Credit 45
4.6.1 Savings and Loan Utilization 45
4.6.2 Utilization of Income from wheat sales and small ruminant fattening 46
CONCLUSION 46
ANNEXES 50
Annex I: Community wealth indicators (n=17 Focus Groups) 50
Annex II: PSNP Screening criteria and indicators 50
Annex III Household Checklist 51

List of Tables

Table 1: Value chain outputs under PSNP Plus 13
Table 2 Sampling frame and actual sample....18
Table 3: Final assessment coverage 19
Table 4 Summary of household questionnaire themes and methods....20
Table 5: Recent livelihoods interventions and events in Dodota Sire 22
Table 6: Characteristics and background data on assessment participants....23
Table 7: Factors contributing to PSNP graduation....23
Table 8: Perceived changes in household income since 2009 25
Table 9: Factors contributing to an increase in income 25
Table 10: Total expenditure before and after PSNP Plus 27
Table 11: Value of savings and loans by source 29
Table 12: Changes in land holdings....30
Table 13 Food security calendar (n=18 groups) 35
Table 14 Factors contributing to improvements in food security....35
Table 15 Wheat production and sales 2011 (2010 Harvest)....36
Table 16: Livestock value chain transfers and sales 37
Table 17: Scoring of other project outcomes (Wheat) 38
Table 18: Scoring of other project outcomes (LVC participants) 38
Table 19 SWOT analysis of Savings and Internal Lending Committees'....39
Table 20 SWOT analysis of the Wheat Value Chain 40
Table 21 SWOT analysis of the Livestock (fattening) Value Chain 40

List of Figures

Figure 1: Changes in relative contributions of different income sources (Wheat)....24
Figure 2: Changes in relative contributions of different income sources (LVC)....24
Figure 3: Key Expenditures (Wheat)....26
Figure 4: Key Expenditures (LVC) 26
Figure 5: Savings & Loans Sources (2008 and 2011) 28
Figure 6: Utilization of savings and credit 29
Figure 7 Comparison of loan utilization and total expenditure on key items....30
Figure 8: Changes in livestock holdings (Wheat)....31
Figure 9: Changes in livestock holdings (LVC) 31
Figure 10: Changes in productive assets (Wheat)....33
Figure 11: Changes in productive assets (LVC) 33
Figure 12: Changes in household items (Wheat)....34
Figure 13: Changes in household items (LVC) 34
Figure 14: Changes in wheat sales 2008-2011 35
Figure 15: Utilization of income from wheat sales (2010 Harvest)....36
Figure 16: Utilization of income from livestock fattening....37

Acronyms and Abbreviations

ACSI	Amhara Credit and Savings Institute
Agric. Inputs	Farming Inputs
CARE	Cooperative for Assistance and Relief Everywhere
CRS	Catholic Relief Services
DECSI	Dedebit Credit and Saving Institution
DPPA	Disaster Preparedness and Prevention Agency
ETB	Ethiopian Birr
FSP	Food Security Program
GFDRE	Government of the Federal Democratic Republic of Ethiopia
GRAD	Graduation with Resilience to Achieve Sustainable Development
HABP	Household Asset Building Program
HH	Household
Land/HI	Land/Home Improvement
IGA	Income Generating Activities
Kg	Kilogram
LIS	Longitudinal Impact Study
LIU	Livelihoods Information Unit (DPPA)
LVC	Livestock (fattening) Value Chain
MDTCS	Micro Development Training and Consultancy Services
MFI	Micro Finance Institute
MoARD	Ministry of Agriculture and Rural Development
OCSSCO	Oromia Credit and Saving Share Company
OFEDB	Oromiya Finance and Economic Development Bureau
OFSP	Other Food Security Programs
PPR	Peste des Petitis' Ruminants
PSNP	Productive Safety Net Program
PSNP-PIM	PSNP Program Implementation Manual
PSNP Plus	Linking Poor Rural Households to Microfinance & Markets (Project)
P.Trade/IGA	Petty Trade/Income Generating Activities
REST	Relief Society of Tigray
RFA	Request for Applications
RFA	Request for Applications
SILC	Savings and Internal Lending Communities
SNV	Netherlands Development Organization
Social Oblig.	Social Obligations (wedding/funeral contributions etc.)
SPSS	Statistics Package for Social Sciences
SWOT *(analysis)*	Strengths, Weaknesses, Opportunities, Threats
USAID	United States Agency for International Development
VC	Value Chain
VSLA	Village Savings and Lending Association
WPB	White Pea Beans
WVC	Wheat Value Chain *(sample)*

SUMMARY

The USAID funded PSNP Plus program 'Linking Poor Rural Households to Microfinance and Markets in Ethiopia' was launched in late 2008 and will run until December 2011. The PSNP Plus was designed as a three-year program in support of the Government of Ethiopia's Productive safety Net Program (PSNP) which provides food and or cash to chronically food insecure households in exchange for labor on rural infrastructure projects, or direct transfers to households unable to participate in physical labor activities. A consortium of six international and national NGO's is implementing the PSNP Plus led by CARE. The program was initially implemented in nine pilot *woredas* in Tigray, Amhara, Oromia and Dire Dawa regional states, with the overall goal of building household resilience and household assets through market linkages and access to microfinance. This goal is directly linked to the objective of facilitating the graduation of households from the PSNP and out of chronic food insecurity.

Since it was launched, the program has been linking PSNP households to both formal and informal microfinance. These interventions have included the establishment of Savings and Internal Lending Committees (SILC), and the provision of credit for agricultural inputs. Complementary to these activities, the program has been linking participating households to market opportunities by supporting the development of livestock, cereal, white pea bean and honey value chains. Ultimately, the combination of the programs microfinance and value chain interventions is expected to contribute towards livelihoods diversification, household resilience, and an increase in household income and assets with associated improvements in PSNP graduation. These outcomes and impacts are reflected in the programs causal model, which in summary proposes that increased access to markets and the enhanced use of microfinance leads to asset accumulation and improvements in PSNP graduation. In order to test this causal logic, a longitudinal impact study (LIS) was included under one of the programs strategic objectives. The LIS included a baseline mid-term and final impact assessment in four of the program study areas. This report present the results from the final impact assessment of the program in Dodota Sire, implemented by Catholic Relief Services and partners. The study focused on assessing the impact of the cereal and livestock (small ruminant fattening) value chains implemented under the program, and to a lesser extent the projects SILC activities. The project in Dodota Sire faced considerable external and internal challenges including a severe drought in the project area during the first year of implementation, and a PSNP re-screening exercise. These events had major implications in terms of project impact, and contributed to delays in implementation. The final assessment was carried out from June to July 2011 using a pre-post test design with a control sample of non-project participants.

The results show that there has been an overall increase in income for both project and non-project participants with project participants seeing a greater increase in comparison to the control group. Participants in the wheat and livestock value chains experienced a 34-35% increase in income since the project started with project factors in part contributing towards this increase. Corresponding with this increase in income, expenditure and investments on certain key items has increased significantly for both the wheat and livestock value chain participants, relative to both the baseline and to the control group. The results also indicate that total expenditure on all the key

indicators assessed has increased significantly for livestock value chain participants, both in absolute terms and relative to the control group.

The results show no significant change in the contribution of income from either of the project value chains relative to all other income sources since the project started. Consistent with this, the results show no significant change in the quantity of wheat sold by cereal value chain participants in 2011 in comparison to 2008. However, only about one quarter of the wheat harvested during the 2010 harvest had been sold at the time of the assessment so the balance potentially represents either household food security benefits or future income benefits. The results also show that cereal value chain participants produced and sold greater quantities of wheat than control group participants from the 2010 harvest, although the difference was not statistically significant. This income translated into 690 Ethiopian *birr* (mean value) per household, and this income was utilized on a variety of livelihoods activities including loan repayments and investments in land, livestock, farming inputs, health and education.

For the livestock value chain participants the sale of fattened animals has translated into 306 Ethiopian *birr* (mean value) per household, with an additional 96 *birr* income being earned from the sale of un-fattened offspring of the animals purchased under the project value chain. This income was mostly reinvested in livestock assets.

The results also show that there have been improvements in household food security since the project started, with focus group participants ranking project related factors such as livestock credit and improved cereal seeds as contributing factors. Similarly, the projects role in contributing to household food security was scored as a moderately important project benefit by household respondents.

The results indicate that access to microfinance has improved since the project started, with a significant increase in the value of loans accessed by project participants and a significant increase in household savings. The results estimate mean household savings and loans combined for 2010-2011 at 706 Ethiopian *birr* for livestock value chain participants and 1,375 *birr* for cereal value chain participants. This money was utilized on a variety of livelihoods investments including land, livestock, farming inputs, food, education and investments in other income generating activities. For cereal value chain participants investments in livestock assets from savings and loans represents roughly 30% of their total reported expenditure on livestock purchases for the same period.

Although the results indicate that project derived income and credit is being invested in livestock, there has still been a significant decline in livestock assets since the project started. This holds true for both project and non-project participants and can mostly be attributed to livestock sales and mortality associated with the drought in 2009. Nonetheless, in comparison to the results from the midterm assessment there has been some positive increase in livestock assets with project participants appearing to recover certain livestock assets faster than control group participants.

The results indicate that there has been a significant increase in certain types of productive assets and a decrease in others for both the intervention and control group participants. There has also been a significant increase in the number of mobile phones owned by wheat value chain participants although this probably has more to do with expanding network coverage than project related factors. The results show no significant changes in land holdings for assessment participants.

In absolute terms, when measured against the baseline the results show either little or negative changes in many of the asset indicators assessed explaining why only 15% of the livestock value chain sample and 16% of the cereal value chain sample have graduated from the PSNP. However, in comparison to post drought asset levels, it would appear that project participants are actually accumulating assets although these have not yet reached pre-project levels. The results also suggest that project factors are contributing towards this recovery, not so much in terms of income contributions and utilization of savings and loans, but in terms of resiliency. Consistent with this, project participants scored asset accumulation as the sixth most important project benefit and resilience to drought and other livelihoods shocks as the second most important benefit out of nineteen outcome indicators or benefits assessed. Participants also scored the projects role in helping them cope with the drought as the fourth and fifth most important benefit, and its role in supporting drought recovery also scored relatively high in comparison to other benefits.

Overall, the project in Dodota Sire has faced considerable internal and external challenges and the 2009 drought has certainly mitigated or at least delayed the potential impact of the project in terms of asset accumulation and PSNP graduation. Nonetheless, the project appears to have contributed to household food security and an increase in income as well as asset recovery. Associated with these improvements the results suggest that the project has improved participants' resiliency to drought and other livelihoods shocks.

1. INTRODUCTION

1.1 Background to the PSNP Plus Program

In recent years considerable progress has been made in addressing chronic food insecurity and the risk of repeated crisis in Ethiopia, much of this can be attributed to the Government of Ethiopia's Food Security Program (FSP). The overall goal of the FSP is to attain food security for both chronically and transitory food insecure households in rural Ethiopia (MoARD, 2009). When it was launched in 2005, the program was built around three key components, a Productive Safety Net Program (PSNP), a Voluntary Resettlement Program and Other Food Security Programs (OFSP). Under the 2010-2015 FSP program, a Capital Intensive Community Infrastructure Component has been included, and the OFSP has been replaced with the Household Asset Building Program (HABP).

The PSNP component of the FSP was specifically designed to assist chronically or 'predictably' food insecure households as opposed to households affected by transitory food deficits. The program provides either cash or food in exchange for labor on rural infrastructure projects, or direct cash and food transfers for households unable to participate in physical labor. The primary objectives of the PSNP are therefore to prevent chronically food insecure households from selling their assets during times of drought, and to build community assets through involving these households in public works programs (Pankhurst, 2009). In 2006 the PSNP provided support to an estimated 8.6 million people, making it the second largest social transfer program in Africa (Sabates-Wheeler and Devereux, 2010).

Ultimately participating households are expected to 'graduate' from the PSNP and out of chronic food insecurity. However, although the PSNP has had a significant impact on smoothing consumption, and protecting the assets of the chronically food insecure (Sharp et al. 2006, Devereux *et al,* 2006), little progress has been made in terms of graduating households from the program (MoARD, 2009).

Various definitions for graduation have been proposed, most of these involve the concept of households moving out of chronic food insecurity (for example see, PSNP-PIM, 2006, Slater *et al*, 2006, and Devereux *et al,* 2006). A PSNP graduation guidance note defines graduation as follows (MoARD, 2007: 2): *"A household has graduated when, in the absence of receiving PSNP transfers, it can meet its food needs for all 12 months and is able to withstand modest shocks. This state is described as being food sufficient".* Essentially graduation involves a two-stage process: the first stage is graduation from the PSNP program, and the second stage involves graduation from the Food Security Program.

In order for households to graduate it is recognized that they need to be linked to Other Food Security Programs that go beyond the PSNP food and cash safety net transfers (MoARD, 2006). The OFSP include interventions that provide credit and loans for agriculture as well as non-farm income generating activities, and the provision of 'agricultural technologies' such as extension services, and inputs (Gilligan *et al,* 2009). While the overall goal of the PSNP is to address food insecurity through household asset protection and community asset creation, the OFSP were designed to increase participant's income from agricultural production, and build up household assets (Gilligan *et al,* 2009). In theory, this accumulation of income and assets enables households to graduate from food insecurity and out of the PSNP. In recognition of this, and in support of the Government of Ethiopia's FSP, in 2008, USAID issued a $ US 12,000,000 Request for Proposals (RFA) entitled "Linking Poor Rural Households to Microfinance and Markets in Ethiopia". The RFA was launched with the objective of demonstrating that the *"adoption of market –led livelihood options for the persistently poor through sustainable links to markets and microfinance services"* results *"in increased assets at the household level and therefore more resilient households"* (USAID, 2008: 18). The RFA also suggests that the value chain approach be considered as an appropriate methodology for linking poor households to

markets. More specifically, the RFA called for projects that would contribute to the following higher goals (USAID, 2008: 18-19):

- Reduced food insecurity and improved resiliency in vulnerable households
- Increased rural economic growth opportunities for the poor to diversify livelihoods
- Demonstrate a new market-driven approach to poverty reduction in Ethiopia
- Expanded adoption and scaling up of market-driven approaches by new actors such as the Government of the Federal Democratic Republic of Ethiopia (GFDRE)
- Improved access to microfinance services through a graduated assistance program

The RFA also required that proposals demonstrate how project results, outcomes, and the '*replicability'* and sustainability of interventions would be measured and documented. Consistent with this, the RFA called for a preliminary causal model presenting the logic of how the project would achieve the desired outputs, outcomes and impacts, and how these would be measured (USAID, 2008). In response to the RFA, the PSNP Plus program was specifically designed to provide alternative and accelerated pathways to PSNP graduation for chronically food insecure households lacking access to other food security and microfinance interventions (PSNP Plus, 2008).

1.2 PSNP Plus Overview

The original PSNP Plus program was launched in late 2008 as a three-year program implemented by a consortium of six international and national NGO's led by CARE. The program was initially implemented in nine pilot *woredas* in Tigray, Amhara, Oromia and Dire Dawa regional states.

The program strategy is based on a push-pull causal model designed to link 42,414 participating households to microfinance and markets through the provision and integration of contextually relevant financial services and value chain interventions. The proposed causal model is based on the assumption that '*improved linkages between poor households and commodity markets, plus enhanced use of microfinance services leads to asset accumulation at household level with associated improvements in PSNP graduation and resilience'* (PSNP Plus, 2008). Consistent with this causal logic, the overall program goal states that:

"*Targeted PSNP households' resiliency improved and livelihood assets enhanced as a means towards achieving graduation*."

In order to achieve this goal, the program was structured around three interlinked objectives designed to bring immediate positive impact to participants (PSNP Plus, 2008).

Objective 1: Targeted PSNP households have increased their financial assets as a result of access to financial products and services.
Objective 2: Targeted PSNP households are engaged in functioning markets.
Objective 3: Government and private sector strategies show greater support for engaging PSNP participants in market-based activities.

Under the first objective, the program provides both formal and informal financial products and services such as credit and savings. Under the second objective, the program has been supporting value chain interventions in honey, white pea beans, cereals and livestock. The combination of these interventions was specifically designed to enable participants to enter markets and accumulate

assets, with the expectation that after three years eighty percent of PSNP Plus households would meet the criteria for PSNP graduation (PSNP Plus, 2008).

The provision of financial services is ultimately geared towards assisting people in building up assets by utilizing loans and savings to invest in high return productive and other income generating activities. For example, the program is designed to assist participants in securing loans for value chain inputs. In the absence of formal microfinance, the program has been promoting the establishment of Village Saving and Loan Associations (VSLA) alternatively called Saving and Internal Lending Committees' (SILC) based on the village agent model developed by CARE. This approach typically involves a group of between 10-25 members. The project provides training and resources to these groups to enable them to manage, maintain and increase their own financial assets such as savings and loans. Under the VSLA/SILC approach, members use their own cash resources to lend funds to one another, charge an acceptable interest rate, and re-lend funds on a rotating basis. The program strategy also involves using these groups as a vehicle to link members to formal microfinance. By demonstrating that group members' financial literacy and knowledge on savings increases over time, the project aims to convince MFI's to accept groups and individuals as clients. As such, the SILC groups are intended as a catalyst to provide the linkage between informal and formal microfinance (MDTCS, 2010).

Under the market linkage component, the program has been supporting four-commodity value chains viz. livestock, honey, white pea beans, and cereals. Among other criteria, the value chains were selected by consortium partners based on the anticipated production potential of these commodities in the project area, income earning potential, and market potential in terms of demand and growth.

The program aims to assist PSNP Plus participants in the production and marketing of these commodities. On the supply side, the objective of these interventions is not only to increase production, but also to improve the quality of these products with a view to adding to their market value. On the production side, the program provides technical support such as training, as well as certain types of specific inputs such as honey production accessories, livestock and improved seed varieties. The training components and transfer of inputs is facilitated through producer or marketing associations established under the program. The production side of the value chains is also complemented by the microfinance component, in that production inputs such as seeds, livestock and beehives are supplied to project participants on a credit basis from formal microfinance institutions such as Oromia Credit and Saving Share Company (OCSSCO), Dedebit Credit and Saving Institution (DECSI) and Amhara Credit and Saving Institution (ACSI).

Under the market linkage component the program has been establishing facilities such as storage and collection centers to prevent spoilage and facilitate marketing, linking farmers to government extension services and the private sector, and establishing market information platforms. Table (1) gives a summary of the objectives and expected outputs of the value chain activities.

Table 1: Value chain outputs under PSNP Plus

Objectives	Expected Outputs
Critical bottlenecks for each value chain inhibiting PSNP household's entry to value chain identified.	• Existing value chain assessments updated and new value chains validated.
Targeted PSNP households start production or improve productivity and quality of selected products.	• Targeted PSNP households have formed producer or marketing associations. • Newly formed producer or marketing associations have access to production inputs. • Targeted PSNP households received training or technical assistance on productivity and quality of production. • Government, private sector, research institutions and others are providing targeted PSNP households with market extension services, post-harvest storage, assistance with handling and marketing. • Women have the skills necessary to be successful entrepreneurs. • Private sector engaged in value chain activities and linkages based on market demand created. • Private sector and producer/marketing associations engaged in contracts, trader credit, warehouse receipt schemes and other contract farming.
Stakeholder forums and coordination groups help value chain actors and stakeholders resolve problems and meet shared goals.	• Coordination group and stakeholder forums established for value chain development.
Market information platforms provide targeted producers with the information necessary to negotiate fair prices, access to technical assistance and productive inputs.	• Market information platforms created.

Source: PSNP Plus Project Proposal (2008)

In line with the PSNP Plus being a pilot program, a specific learning component was incorporated under objective number 3, with a view to generating evidence to influence key stakeholders on how combinations of microfinance and market oriented interventions can enhance PSNP graduation, an independent Longitudinal Impact Study (LIS) was included as a specific program

activity. The study ultimately seeks to test and validate the programs causal model by assessing whether the strategies and activities implemented under Objectives 1 and 2 do indeed result in asset accumulation and more resilient households. The LIS was carried out in four study areas covering each of the regions represented by the program, and all four of the PSNP Plus value chains. The study tracked and assessed changes in household assets over three points in time (baseline, mid-term, end of program) using a variety of research designs and methods. This report presents findings from the final impact assessment of the PSNP Plus project in Dodota Sire district, which took place from June to July 2011.

1.3 Background to the Study in Dodota Sire

1.3.1 Study Area General Characteristics

Dodota Sire is one of 22 administrative districts in Arsi Zone located in the north eastern part of the zone and sharing borders with East Shewa in the north, Jeju district in the east, and Lode Hetosa, Hetosa and Diksis in the south (OFEDB, 2011). The population of the district was estimated at 139,047 in 1997 (OFEDB, 2011). Shortly after the start of the PSNP Plus project, the district was split into two separate *woredas* viz. Sire and Dodota. However, for the purpose of this study the two *woredas* are treated as one study area.

The total area of the district (Dodota Sire) is estimated at 986 square kilometers with elevations ranging from 1400 to 2500 meters, characterized by undulating plains, hills, mountains and degraded land areas (OFEDB, 2011). The district is divided into three agro-climatic zones; namely *weina Dega*/Sub-Tropical, *Kola*/Tropical and *Dega*/Temperate with annual rainfall ranging from 800-1000mm (OFEDB, 2011). There are two main rain seasons with the short *Belg* rains occurring from February to April and the long *Meher* rains from June to October (OFEDB, 2011). Roughly 57% of the land area of the district is considered arable, soils are quite fertile but susceptible to erosion (OFEDB, 2011). Dodota Sire is also periodically affected by drought and an estimated 55% of the population was affected by the drought in 2002/03 (OFEDB, 2011).

1.3.2 Background to the PSNP Plus Project in Dodota Sire

Catholic Relief Services and Wonji Catholic Secretariat have been implementing the PSNP Plus in twelve *kebeles* in Dodota *woreda* and six *kebeles* in Sire *woreda*. The project activities, which started in 2009, fall under two complementary components, namely microfinance and value chains. Under the microfinance component the project aims to improve access to financial products and services by linking participants to formal microfinance institutions (MFI) such as the Oromia Credit and Savings Share Company (OCSSCO). In the interim the project will work with OCSSCO to provide credit services to PSNP Plus participants involved in the program's value chain activities. The program has also been promoting informal microfinance based on the Savings and Internal Lending Committee (SILC) approach This has involved supporting the establishment of SILC groups, and training of community agents and SILC members.

Under the market linkage component the project in Dodota Sire is supporting four value chains viz. honey, white pea beans, cereals and livestock fattening. Among other criteria, the value chains were selected by CRS and PSNP Plus partners based on the anticipated production potential of these commodities in the project area, income earning potential, and market potential in terms of demand and growth. The project aims to assist PSNP Plus participants in the production and marketing of

these commodities. On the supply side the objective of these interventions is not only to increase production, but also to improve the quality of these products with a view to adding to their market value. On the production side the project has been providing technical support including training, as well sourcing specific inputs such as seeds and livestock. The training components and transfer of inputs are facilitated through producer or marketing associations that have been established under the project. The production side is also complemented by the microfinance component, with production inputs such as seeds and beehives supplied to project participants on a credit basis. This takes place through OCSCCO using a project credit guarantee fund. The project has also been establishing market information systems and platforms, and facilities such as storage and collection centers to prevent spoilage and facilitate marketing, as well as to link farmers to government extension services and the private sector.

CRS and partners have also been supporting SILC groups in the area since February 2008 and this activity has been scaled up under the PSNP Plus, the establishment of the SILC groups includes training in the SILC methodology, distribution of SILC kits (safety box, record keeping books, and other stationary) and awareness on different financial products and services (CARE, 2009).

Unfortunately, the project in Dodota Sire has faced a number of internal and external challenges. Firstly, delays in finalizing a project agreement with the regional government resulted in a delay in project start up. Secondly, a PSNP re-screening exercise resulted in many of the already registered project participants being excluded from the PSNP (CARE, 2009). Aside from these challenges project-implementing partners also faced a number of internal issues around staffing and coordination.

These challenges resulted in extensive delays in implementation. For example, although the project started in late 2008, by early 2010 activities implemented under the livestock value chain had been limited to planning and training, and no actual livestock transfers had taken place.

On the other hand, under the cereal value chain, improved wheat seed varieties were provided on credit to 229 households in time for the 2009 planting season (CARE, 2009). However, project participants indicated that little in the way of production benefits or impact could be expected due to a drought in 2009. The drought resulted in household food and income shortages, characterized by the distress sale of livestock, and the employment of other economic coping strategies. As a result of this, the findings from the mid term assessment showed a significant decrease in household livestock assets amongst project and non-project participants alike. This was largely attributed to the combination of livestock sales and an increase in livestock mortality associated with the drought. This event undoubtedly represents the biggest challenge the project has faced.

Given the combination of the drought and delays in implementation, little impact on household assets was expected at the time of the mid term assessment, and the results confirmed this expectation. Taking these factors into consideration, it would be unlikely to expect any significant impact in terms of assets by the end of the project in 2011. As such, the mid term assessment report suggested that the final impact assessment should focus on measuring impact in terms of drought recovery (Bogale *et al,* 2010).

2. ASSESMENT METHODOLOGY

2.1 Study Design

2.1.1 Research Questions

The LIS was designed to test the programs causal model and validate whether improved linkages between poor households and commodity markets, plus enhanced use of microfinance leads to asset accumulation at the household level with associated improvements in PSNP graduation. In order to test this model, the final assessment in Dodota Sire tracked changes in household assets across three points in time (baseline, mid-term and final) using the same household participants for each stage of the study. The final assessment essentially set out to answer the following key research questions:

1. What changes in household assets has occurred since the project started?
2. What factors contributed to any assessed change in these assets?
3. What was the relative contribution of project factors to any assessed change?

The study focused on measuring changes in physical and financial assets such as land, livestock and productive assets, these being benchmarks for PSNP graduation. The study in Dodota Sire focused on the programs cereal and livestock value chains and to a lesser extent on the informal microfinance (SILC) activities.

The study also assessed changes in food security and income, and the relative contribution of different income sources. This was done with a view to capturing the relative impact of the project value chains on household income, and to capture livelihoods diversification, which might be considered a useful proxy for resilience. Actual changes in certain key investments and expenditures were also measured as a proxy for real income, and to capture investments in livelihoods assets such as health, education, livestock and farming inputs. More specifically, the study measured actual project-derived income from both credit and savings, and value chain profits, and assessed the utilization of this income as an alternative way of measuring impact.

2.1.2 Study Components

The assessment in Dodota Sire used a pre-post test design with controls to assess livelihood changes of households participating in the programs, small ruminant fattening and wheat value chain interventions. For the purpose of this study, impact is broadly defined in terms of significant and measurable changes that have taken place since the program started that can be attributed to the programs microfinance and value chain interventions. The study also considers impact in terms of the utilization of project transfers such as credit and project derived income and the livelihoods investments and benefits obtained in relation to these.

There were two main components to the final impact assessment in Dodota Sire, household interviews and focus group discussions. As implied, the household component used an individual household as the unit of analysis - the household also being the unit for PSNP participation and graduation. The household component was designed to collect mostly quantitative data using a conventional questionnaire format, and including a number of standardized participatory assessment methods.

The focus group component was designed to collect mostly qualitative contextual data on the project activities, communities, and areas. The focus group discussions were structured around a set of standardized participatory assessment tools providing some complementary numerical data. A number of key informant interviews were also carried out. These were used to collect secondary data on the project and study area.

2.1.3 Indicator Selection

The choice of indicators was largely based on PSNP graduation benchmarks at the time of the baseline assessment. A number of additional indicators were also collected during pre-baseline scoping visits to the study area. These included additional indicators on assets, sources of income, and common household expenditures. These indicators were then further refined during the pre-testing for the baseline assessment, and validated during the actual baseline study.

2.2 Sampling

2.2.1 Method and Size

For the household component of the study both random and purposive sampling was used for the livestock and cereal value chain (treatment) components. The sampling frame was derived from the list of project participants involved in these two value chains and participants were then selected using simple random sampling. However, due to the limited number of female participants in the project, the sampling frame was stratified to purposively include all female project participants and these were excluded from the random sampling selection. Therefore, only male project participants were randomly selected. For the livestock value chain 50% of male participants were randomly selected, and 100% of female participants were purposively selected. It was decided to randomly select 70% of male participants from the cereal value chain to compensate for high project attrition rates due to a PSNP re-screening exercise. For this reason (project attrition) an additional 11 male participants were purposively included in the baseline sample in order to improve the geographical representation of the assessment. Again, 100% of the female project participants were purposively selected for the cereal value chain sample.

The sampling frame for the cereal category was limited to households that had already received seed transfers under the PSNP Plus project at the time of the baseline assessment. However, the sampling frame for the livestock value chain category consisted of registered project participants, who had been identified to receive asset transfers (livestock) shortly after the baseline assessment.

The PSNP participant lists provided the sampling frame for the comparison (control) group sample, but excluding households involved in PSNP plus project activities. However, respondents were purposively selected based on their willingness and availability to participate in the study. This resulted in a baseline sample of 124 households in the control group.

A total of 610 households were selected across the two intervention-sampling frames. However, during the baseline assessment where the research team identified cross registration between sampling frames, double registration within households, or non-PSNP participants – these were systematically rejected from the sample. As a result of a PSNP re-screening exercise, during the baseline assessment it transpired that a considerable number of households in the cereal value

chain sample were no longer registered PSNP participants. Again these households were rejected from the sample during the baseline assessment. As a result of this and other attrition factors roughly 44 % of the households originally selected were dropped from the cereal and livestock baseline samples. The actual sample for the baseline was then used as the sampling frame for the final assessment, with the entire sampling frame being considered for inclusion. Table 2 shows the final sample assessed for both baseline and final, with a 19% attrition rate for the treatment samples between the two studies.

Table 2 Sampling frame and actual sample

Household (HH) Category	Sampling Frame	Baseline Actual Sample	Final Sample
Wheat Pea Bean Value Chain	190	101	85
Control	NA	124	98
Livestock Value Chain (LVC)	420	166	130
Total (treatment)	**610**	**267**	**215**

The three categories are hereafter summarized in this report as “Wheat” (cereal value chain), “Control” (comparison groups), and “LVC” (livestock value chain).

A total of 35 focus group discussions were carried out over the course of the study. Participants were purposively selected based on SILC membership and availability, but typically excluding respondents involved in the household component. The focus groups also included an unspecified number of participants involved in each of the project value chains.

2.2.2 Study Locations

During the baseline assessment, the research team visited all 18 *kebele’s* in Dodota Sire where the PSNP Plus is being implemented. However, in one of the *Kebele’s* (Koro Degaga) the team was unable to meet with any PSNP Plus project participants. When the project was formulated, Sire and Dodota were considered as one district (Dodota-Sire), and the project was designed to consider the two areas as one project area. However, at the time of the baseline assessment Dodota-Sire had been split into two separate *woredas*, Sire and Dodota respectively and for the purpose of the assessment both *woredas* were combined to represent a single study area. This was largely due to the fact that a large enough sample for each of the value chains could not be derived from treating the two *woredas* as separate geographical entities. During the final assessment, the team were able to visit all the *Kebele’s* covered in the baseline except for one (Amude). Table 3 provides a summary of the geographical coverage of the final impact assessment.

Table 3: Final assessment coverage

No.	*Kebele*	*Woreda*	Category (# of Households)			Methods	
			Wheat VC	LVC	Total	Household Interview	Focus Groups
1	Alelu Gesela	Sire	5	17	22	✓	✓
2	Ebseta Uduga		17	11	28	✓	✓
3	Kolobe Bele		10	9	19	✓	✓
4	Kolobe Bika		3	6	9	✓	✓
5	Kolobe Hawas		0	5	5	✓	✓
6	Ufura Agemsa		7	10	17	✓	✓
7	Amude	Dodota	0	0	0	-	-
8	Amigna Debeso		0	16	16	✓	✓
9	Awash Bishola		8	16	24	✓	✓
10	Belale		5	0	5	✓	✓
11	Badusa		3	8	11	✓	✓
12	Dil Feker		3	0	3	✓	-
13	Dire Kiltu		9	0	9	✓	✓
14	Dodota Alem		9	12	21	✓	✓
15	Lode Sharbe		1	7	8	✓	✓
16	Tedecha Guracha		4	13	17	✓	✓
17	Tero Desta		1	0	1	✓	✓
	Total		**85**	**130**	**215**		

2.3 Data Collection Methods

2.3.1 Household Interviews

The interviews for the household component were carried out by a team of four data collectors under the supervision of an assessment coordinator. These interviews were carried out on an individual basis using a standardized questionnaire that included a number of participatory exercises and some qualitative data. The assessment tools were field tested with non-assessment participants and refined shortly before the actual assessment began. The household questionnaire is attached as Annex III to this report. Table 4 provides a summary of the key themes and methods:

Table 4 Summary of household questionnaire themes and methods

	Section/Theme	Types of Information Collected (method)	Sample
1	Household and Project Background Information	• PSNP and PSNP Plus activities and participation • Household (HH) education levels • Recent livelihoods shocks experienced • HH PSNP graduation status • Factors contributing to PSNP graduation (simple ranking)	N=215 (N= 44)
2	Savings and Loan Information	• Recent HH savings history • Recent HH borrowing history and source of loans • Utilization of HH savings and loans	N=313
3	Asset Inventory	• Current land holdings • Current livestock holdings • Livestock sales and mortality • Current levels of productive assets (tools) and HH items	N=313
4	Income	• Relative contribution of different income sources (proportional piling using 100 counters) • Perceived changes in actual income (proportional piling against a nominal baseline of 10 counters) • Scoring of factors contributing to an increase in income (proportional scoring using 50 counters)	N=313
5	Crop and Honey sales	• Wheat production and sales 2011 • Income utilization from wheat sales 2011 • Livestock fattening and sales 2011 • Income utilization from fattening 2011	N=85 N=130
6	Expenditure	• Actual expenditure on key items	N=313
7	Other benefits (outcomes)	• Scoring of PSNP Plus programs anticipated outcomes (simple ranking and scoring)	N=215

2.3.2 Focus Group Methods

The focus group component of the final assessment used a mixture of qualitative, quantitative, and participatory data collection methods. These discussions were primarily used to collect descriptive contextual information on the PSNP Plus program and more general information on the project area. The focus groups were structured around a checklist, which included a set of standardized participatory exercises. These included a SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of the different program interventions being assessed, and a food security scoring exercise to assess temporal changes in food security.

2.4 Data Analysis

The household results were analyzed collectively with the baseline results, and summarized using Statistical Packages for Social Science (SPSS version 19). Comparisons between the baseline and final, and the treatment and control samples were done to assess changes in; income, income sources, assets, expenditure, and savings and loan values by source with mean values being calculated at ninety five percent confidence interval using SPSS. Crop (wheat) production and sales and factors contributing towards an increase in income were also calculated at ninety five percent confidence interval using SPSS. When available, results were compared with project monitoring data and other program reports.

3 RESULTS

3.1 Context and Background

Table 5: Recent livelihoods interventions and events in Dodota Sire

Year	Intervention	Implementer	Activities/Outcome	Perceived Impact
2003	Provision of credit fund for small ruminant fattening	GFDRE & World Bank	Sheep and goats received on credit	Recipients earned income from the sale of small ruminants
2003	Provision of in kind credit fund for farming ox	GFDRE	Few farmers received farming ox on credit	Farm land effectively utilized
2003	Provision of cash credit fund for cattle	GFDRE & World Bank	Each recipient household received 2,500 ETB	Farmers increased their livestock assets[1]
2003	Other (establishment of revolving fund)	GFDRE	Revolving fund established	No major impact due to repayment disruptions
2003-05	Provision of in kind credit for livestock	GFDRE	Goats & sheep distributed to selected farmers	Recipients built up livestock assets
2003-09	Provision of cereal seeds	GFDRE & CRS	Improved wheat and t*eff* seeds sold to farmers	Wheat and *teff* yields increased during years with normal rainfall
2003-09	Provision of other agricultural inputs	GFDRE	Fertilizer sold on credit	Yields improved in good years
2003-09	Irrigation scheme (flood catchments in water shed)	GFDRE & CRS	Water canals developed	Not enough rain - canals and ponds remained empty
2003-09	Animal disease control	GFDRE	Animals vaccinated	Livestock mortality decreased
2005	Promotion of fodder production	GFDRE	Forage seeds distributed	Forage failed due to rain failure
2005	PSNP food for work labor activity	CRS and GFDRE	Food for work	Poor families accessed food
2005 -09	Food aid handouts[2]	CRS and GFDRE	Food items	Poor families accessed food items
2003-09	Water development	CRS & GFDRE	Water ponds	No impact due to rain failure
2005 -09	Erosion control/tree plantation	CRS & GFDRE	Land terracing and rehabilitation	Soil erosion controlled, and hill sides rehabilitated
2005-10	Feeder roads construction	GFDRE & CRS	Feeder roads	Access to basic services like health, markets, improved
2005-10	Ban on use of certain grazing areas	GFDRE & Community	Ban on use of a dry season grazing field/hill	Vegetation recovered *(but animal feed supply disrupted)*
2006	Extension advice on avian flu control	GFDRE & media	Local chicken population eradicated	Poor SILC members lost alternative source of income required for monthly savings *(egg sales)*
2008	Credit and saving initiatives	CRS and GFDRE	Saving and credit	Insurance against shocks[3]
2008 -09	Promotion of cash crop production	CRS/PSNP Plus	Improved white pea bean, and wheat seeds distributed	Crop affected by drought
2010	Emergency food distributions	WFP	Food distributed	Food insecure HHs assisted
2010	Livestock credit and training	CRS/PSNP Plus	Livestock transfers	Livelihoods strengthened

Year	Shock/Event	Outcome	Perceived Impact
2008	Animal disease outbreak - Kiftina/chito	Mass mortality in small ruminant	Livestock population decreased due to mange
2008	Flood	Flood caused damage to crop and livestock, and soil erosion	Loss of assets
2008	Crop pests (worms)	Loss of wheat and barley seedlings	Wheat and barley yield decreased
2008	Erratic rainfall	Re-germination of matured crops	Loss of crop yield
2009	Rain failure - Genna & Bedhesa rains	Partial crop failure and livestock price decline	Livestock assets depleted due to forced sale of animals

[1] Cattle credit recipients who purchased draft animals were able to expand the amount of land cultivated and increase their harvest

[3] Informants appreciated the easy access to credit especially when cash is quickly needed to cope with unexpected shocks.

Table 6: Characteristics and background data on assessment participants

Household (HH) Background and Project Participation Stats	Wheat '09 (n=101)	Wheat '11 (n=85)	LVC 2009 (n=166)	LVC 2011 (n=130)
Total number currently involved in SILC (percentage)	45 (45%)	44 (52%)	105 (63%)	90 (69%)
Total number involved in Wheat value chain (percentage)	99 (98%)	85 (100%)	11 (7%)	22 (17%)
Total number involved in WPB value chain (percentage)	0	25 (29%)	4 (2%)	16 (12%)
Total number involved in Livestock value chain (percentage)	0	19 (22%)	166 (100%)	130 (100%)
Total number involved in Honey value chain (percentage)	0	ND	0	ND
Highest level of education HH head (average grade)	4.1	4.1	3.2	3.2
Highest level of education other HH member (average grade)	6.2	6.6	5.3	5.7
Total number HHs, graduated from the PSNP	0	14 (16%)	0	20 (15%)
Total number Control Group HHs, graduated from PSNP	0	10 (10%)	0	10 (10%)
Types of shocks experienced in the past year – total # HHs (percentage)				
Rain failure "drought"	101 (100%)	13 (15%)	166 (100%)	9 (7%)
Crop pests or disease	30 (30%)	71 (84%)	40 (24%)	110 (85%)
Livestock disease/death	52 (51%)	53 (62%)	80 (48%)	61 (47%)
Illness or death of family member (reported)	49 (49%)	55 (65 %)	97 (58%)	51 (39%)

Table 7: Factors contributing to PSNP graduation

Reasons (reported)	Number of Responses		
	Wheat (n=14)	Control (n=10)	LVC (n=20)
Forced to graduate	14	8	18
PSNP related asset accumulation	0	1	1
Improved rainfall	0	1	1
Improved seeds	0	2	0
Other government interventions	0	0	1
Improved savings (culture)	0	1	0

Some participants gave a combination of factors resulting in a greater number of responses than respondents

3.2 Income

3.2.1 Income Sources

Figure 1: Changes in relative contributions of different income sources (Wheat)

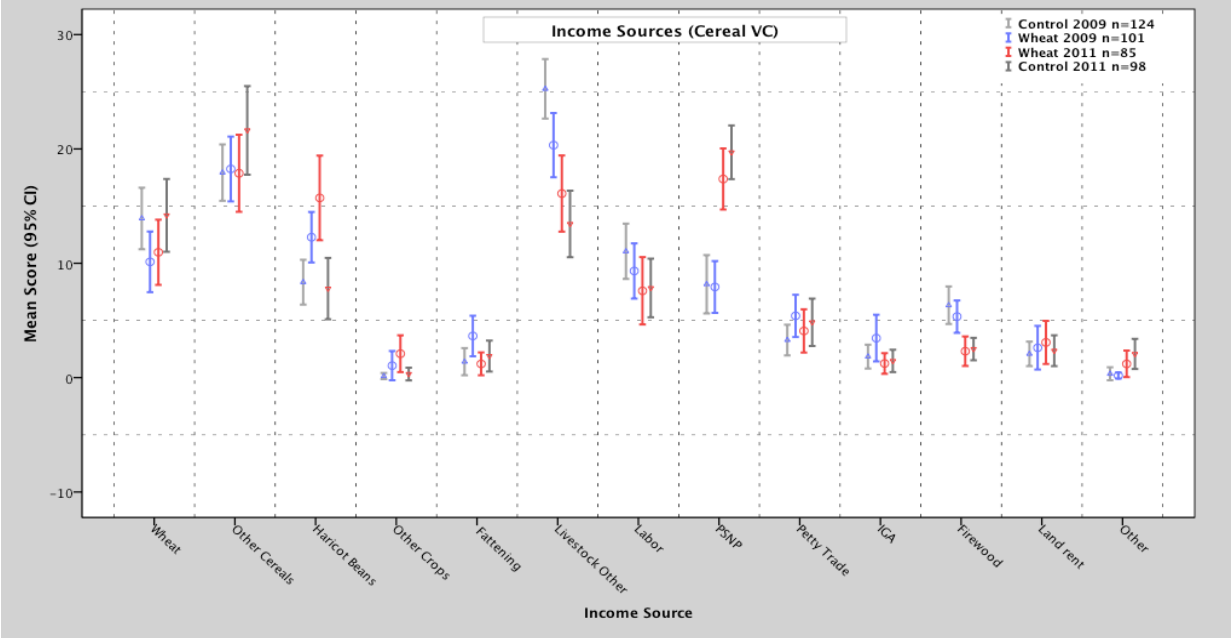
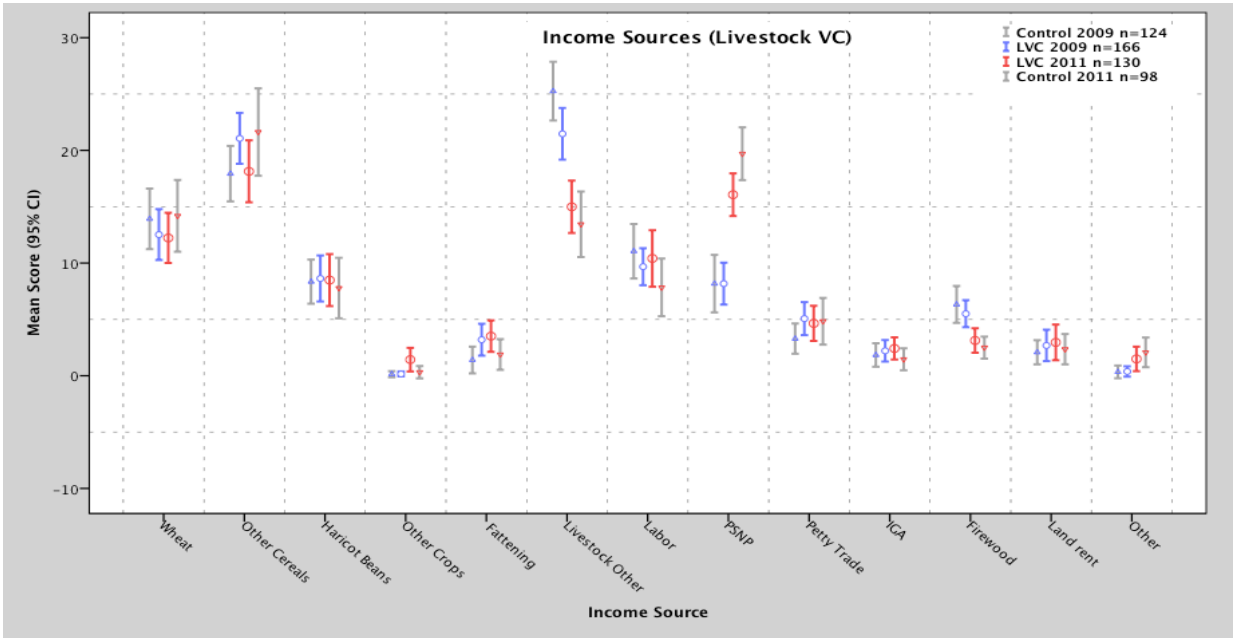


Figure 2: Changes in relative contributions of different income sources (LVC)



Notes on Figures 1-2 - IGA = Income Generating Activities

Figures 1-2 show changes in the relative importance of different income sources since the project started. The results show a significant increase in the relative contribution of income from PSNP labor activities since 2009 although this applies to both the intervention and the control samples. The results also show that there has been a significant decrease in income from livestock production (fattening and control samples) and firewood sales (all categories) since the project started. One possible explanation for this is that the study area was affected by a drought in 2009, and people sold their livestock to compensate for income and production losses associated with this event. In terms of direct project impact, the results show that there has been no significant change in the relative contribution of income from either fattening sales or wheat sales.

Table 8: Perceived changes in household income since 2009

Changes in income against a nominal baseline of 10		
Category	**Mean score (95% CI)**	**Percentage (increase)**
Fattening value chain (n=130)	13.4 (13.1, 13.7)	34%
Control (n=98)	12.6 (12.1, 13.0)	26%
Wheat value chain (n=85)	13.5 (13.1, 14.0)	35%

Data derived by scoring a total of 20 counters against a nominal baseline of 10 counters

Table 9: Factors contributing to an increase in income

LVC (n=125)		Wheat (n=80)	
Factor	**Mean Score (95% CI)**	**Factor**	**Mean Score (95% CI)**
Other Reason	32.0 (30.4, 33.6)	Other Reason	26.1 (23.9, 28.4)
PSNP	10.9 (9.8) 12.1)	PSNP	12.8 (11.0, 14.6)
SILC Investments	4.5 (3.7, 5.3)	Wheat Value Chain	7.1 (5.2, 8.9)
Fattening Value Chain	2.6 (1.7, 3.5)	SILC Investments	3.4 (2.3, 4.5)

3.3 Expenditure

Figure 3: Key Expenditures (Wheat)

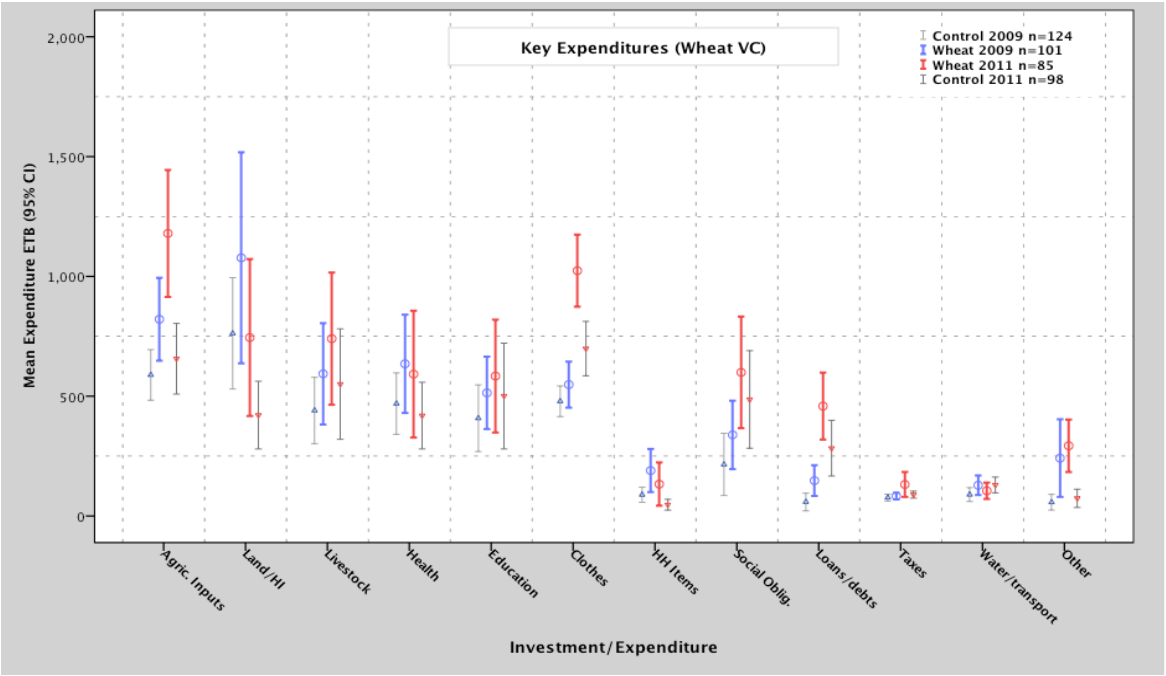
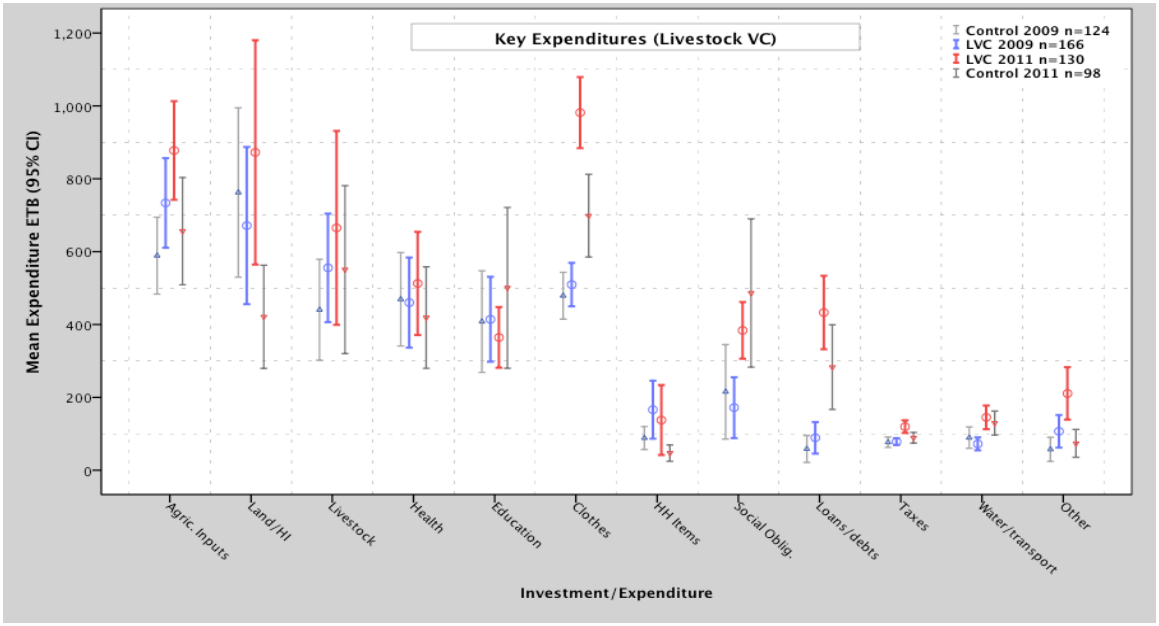


Figure 4: Key Expenditures (LVC)



Notes on Figures 3-4
Agric Inputs = Agricultural/farming inputs
Land/HI = Land rent and or Home Improvement (construction/maintenance)
Livestock = All livestock related investments (includes vaccines/treatment, feed etc.)
HH Items = Household Items
Social Oblig. = Social Obligations (weddings/funerals/contributions etc.)

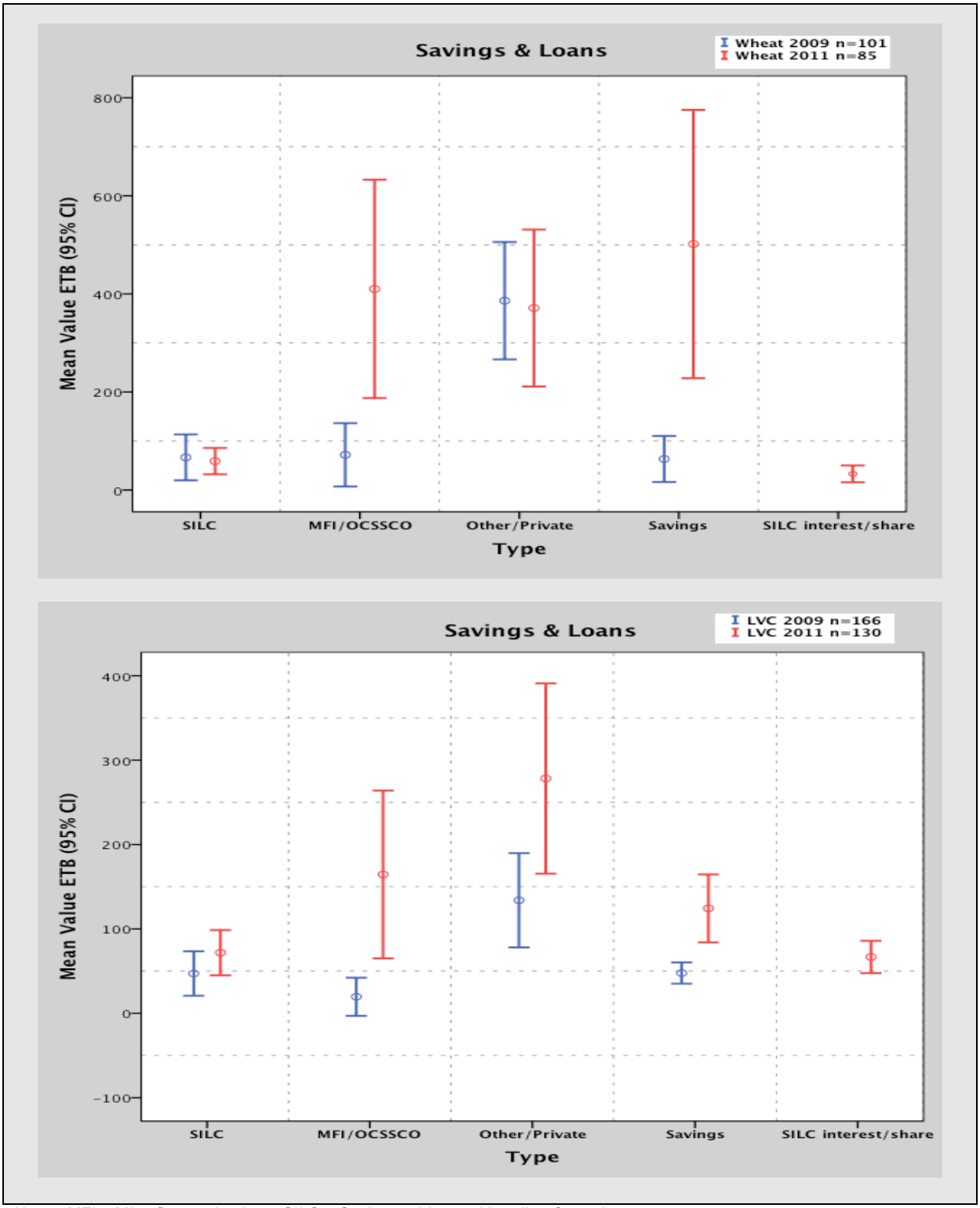
Figures 3-4 show changes in actual expenditure or investments in key items since the project started. The results show that there has been a significant increase in expenditure on clothes and loan repayments for all categories since 2009. The wheat sample has also spent significantly more on clothes, 'other expenses' and invested more in agricultural inputs than the control group in 2011 whereas there was no significant difference in 2009. Similarly the fattening sample spent significantly more on clothes and "other expenses" than the control group in 2011.

Table 10: Total expenditure before and after PSNP Plus

Category	**Mean Expenditure ETB (95%CI)**			
	2009	*Sample 2009*	**2011**	*Sample 2011*
Livestock Value Chain	4030 (3546, 4514)	*166*	5703 (5078, 6328)	*130*
Control Group	3734 (3236, 4233)	*124*	4355 (3757, 4954)	*98*
Wheat Value Chain	5316 (4366, 6266)	*101*	6586 (5618, 7553)	*85*

3.4 Credit and Savings

Figure 5: Savings & Loans Sources (2008 and 2011)

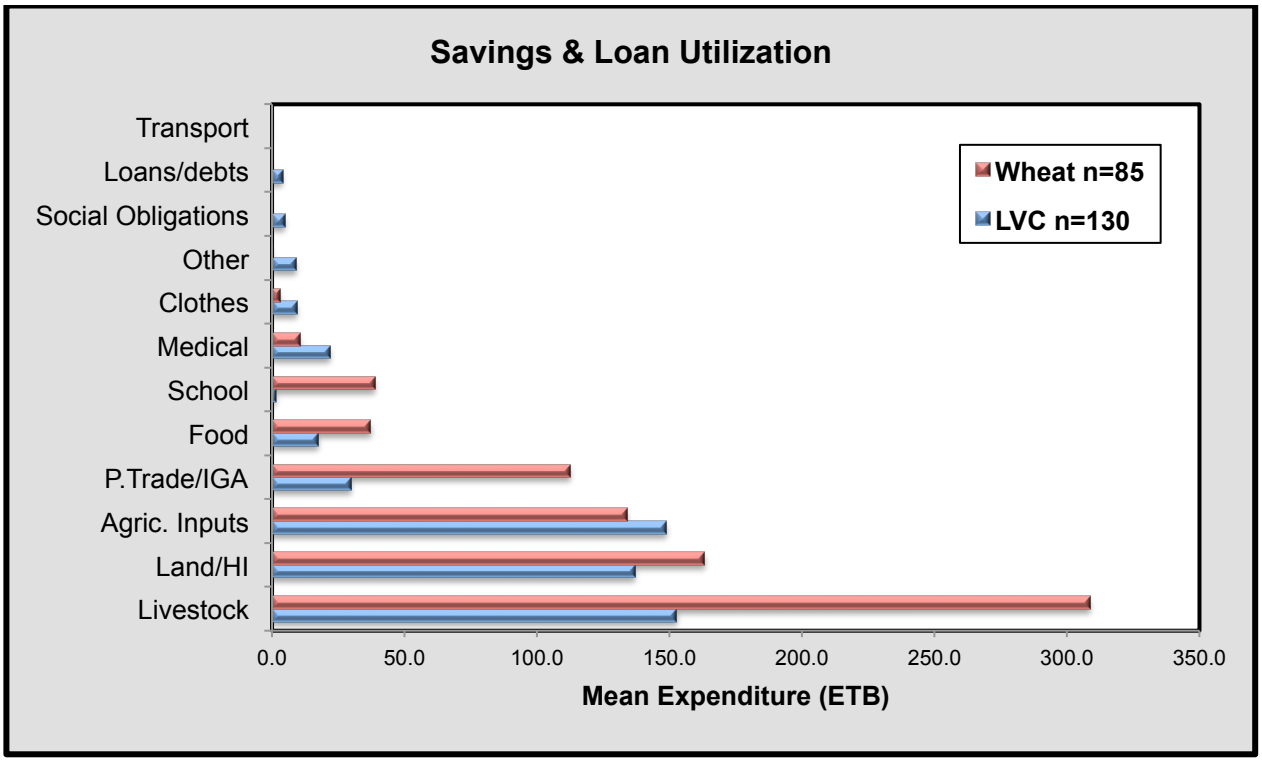


Notes: MFI = Microfinance Institute, SILC = Saving and Internal Lending Committee

Table 11: Value of savings and loans by source

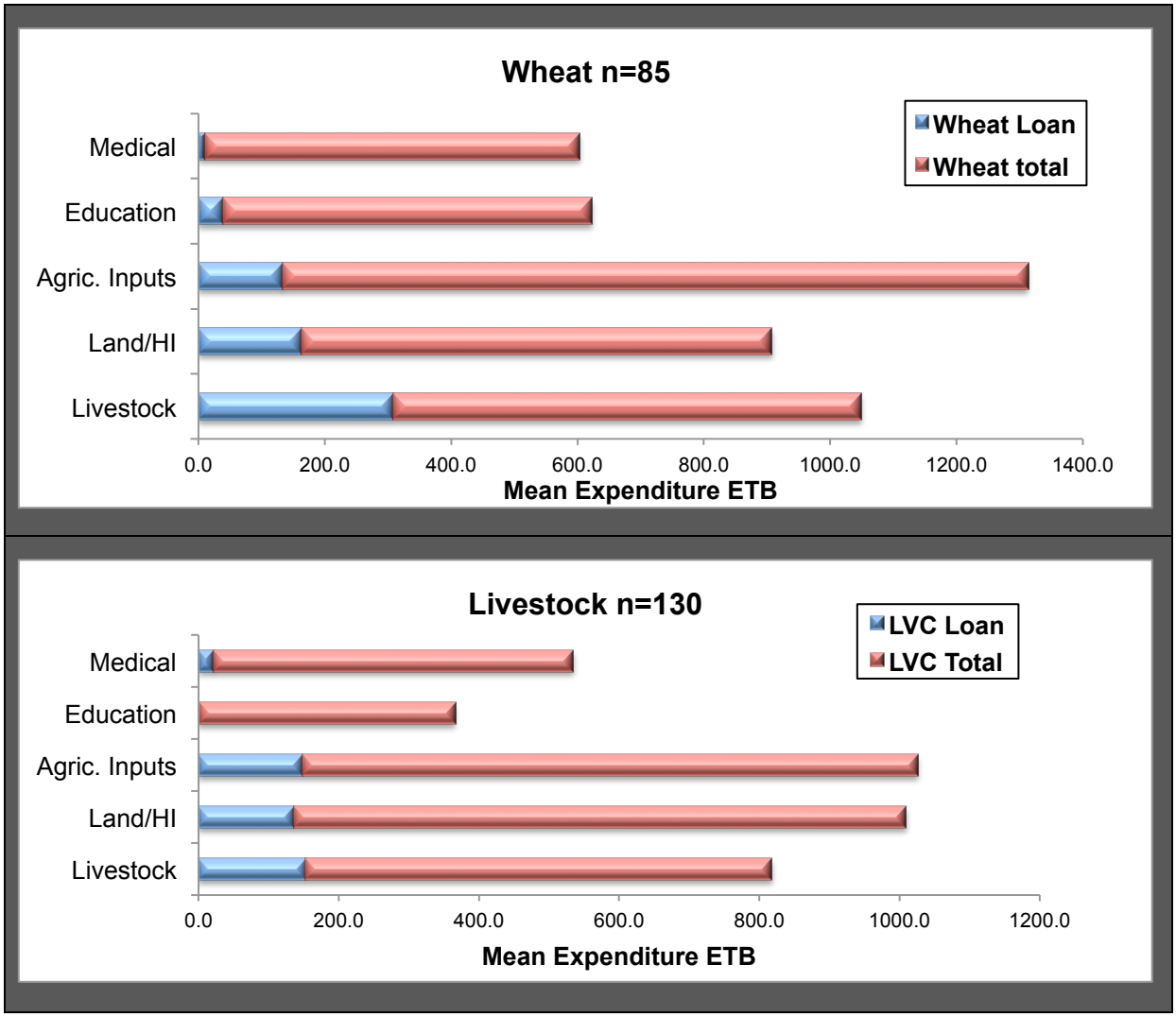
Value of savings and loans by source 2010-2011		Mean	(95% CI)	
			Lower	Upper
LVC n=130	Savings	124.4	84.2	164.7
	SILC Interest	66.8	47.6	85.9
	SILC loan	71.9	45.0	98.7
	MFI loan	164.6	65.2	264.0
	Other/Private loan	278.3	165.6	391.0
	Total	**706.0**	**545.6**	**866.4**
Wheat n=85	Savings	501.8	228.2	775.4
	SILC Interest	33.0	15.9	50.1
	SILC loan	59.0	32.1	85.9
	MFI loan	410.1	187.5	632.8
	Other/Private loan	371.2	211.0	531.3
	Total	**1375.1**	**989.2**	**1761.0**
Control n=98	Savings	214.4	123.3	305.6
	MFI Loan	247.9	84.3	411.4
	Other Loan	283.2	146.2	420.3
	Total	**745.5**	**496.4**	**994.7**

Figure 6: Utilization of savings and credit



Notes on Figure 6
P.Trade/IGA = Petty Trade/Income Generating Activities
Land/HI = Land rent/Home Improvement
Livestock = Animal Purchases only
Agric Inputs = farming Inputs
Social Oblig = Social Obligations

Figure 7 Comparison of loan utilization and total expenditure on key items



3.5 Asset Levels and Changes

3.5.1 Land Holdings

Table 12: Changes in land holdings

Category	Mean Land Holdings *KERT* (95%CI)			
	2009	*Sample 2009*	**2011**	*Sample 2011*
Livestock Value Chain	6.4 (5.6, 7.1)	*166*	7.8 (6.9, 8.6)	*130*
Control Group	5.3 (4.6, 6.0)	*124*	6.8 (6.1, 7.5)	*98*
Wheat Value Chain	7.2 (6.0. 8.5)	*101*	8.1 (7.1, 9.1)	*85*

1 *Kert* = ¼ Hectare

3.5.2 Livestock holdings

Figure 8: Changes in livestock holdings (Wheat)

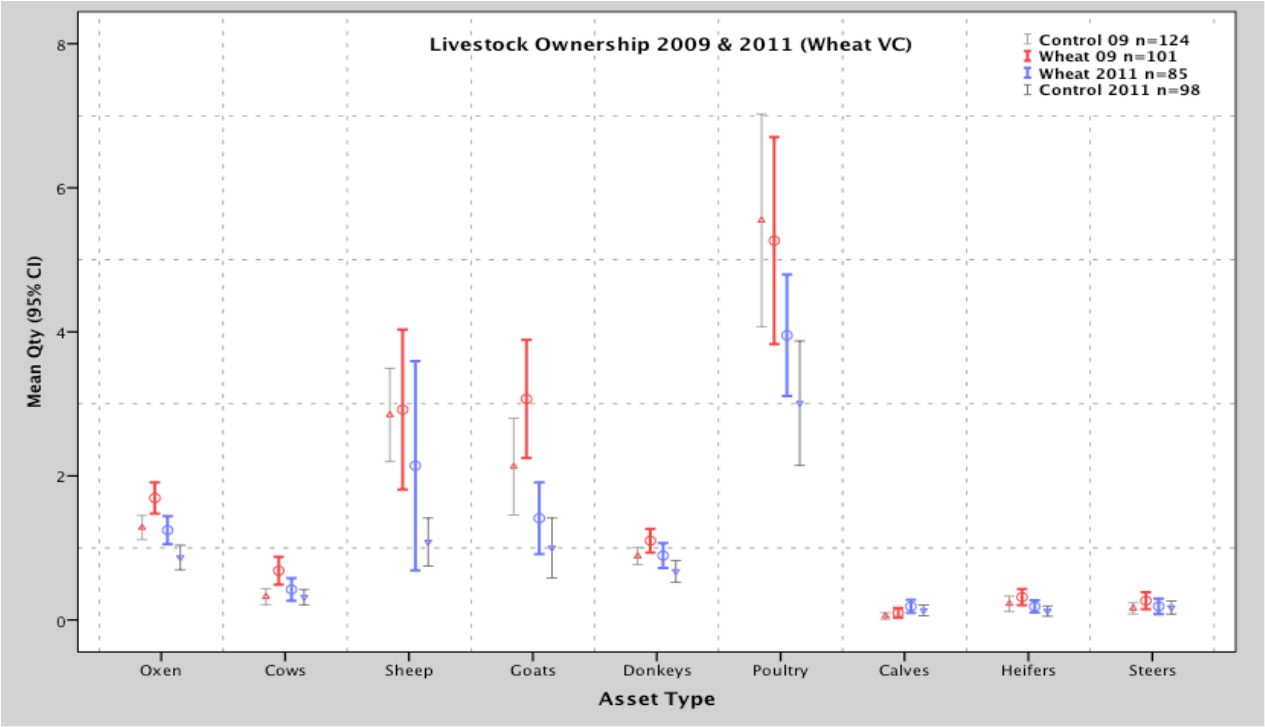
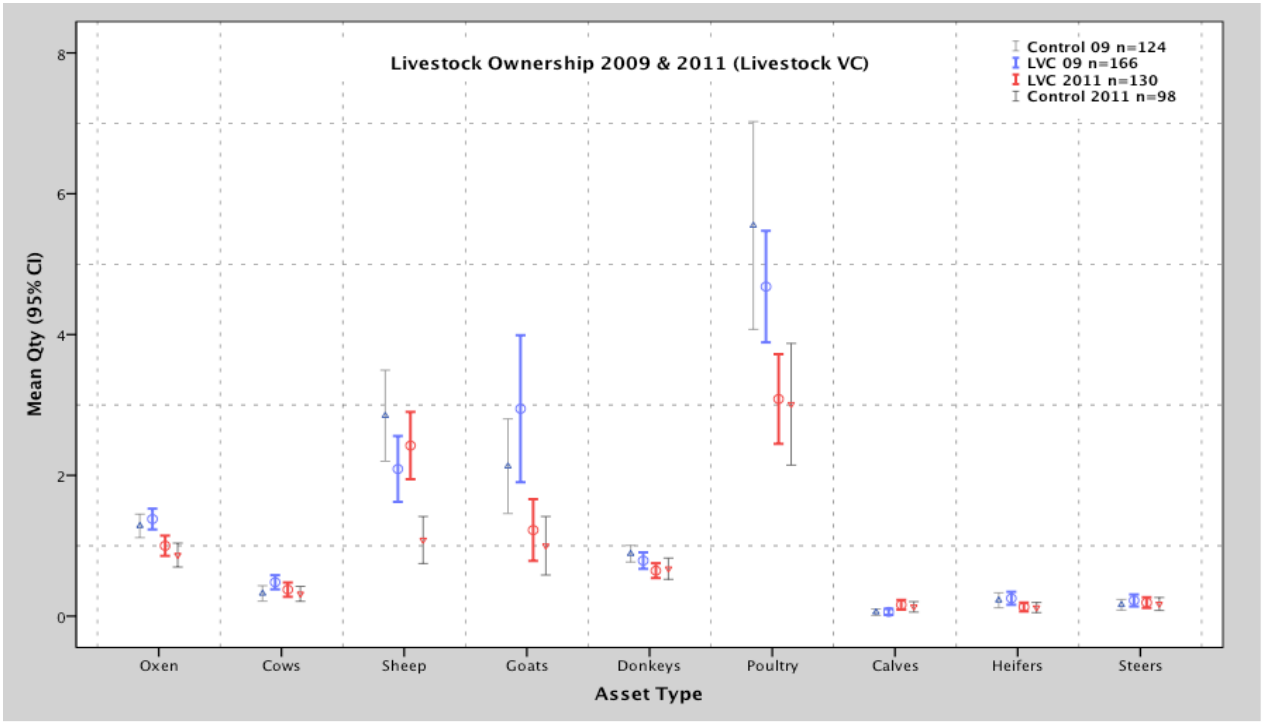


Figure 9: Changes in livestock holdings (LVC)



Figures 8-9 show changes in livestock holdings since the project started. The results indicate that since the project started, both project and non-project (control group) participants have experienced a significant decline in livestock assets. This can largely be attributed to the drought in 2009, as people sold their cattle in order to cope with the loss of food and income from crop production.

3.5.3 Productive Assets/Tools

Figure 10: Changes in productive assets (Wheat)

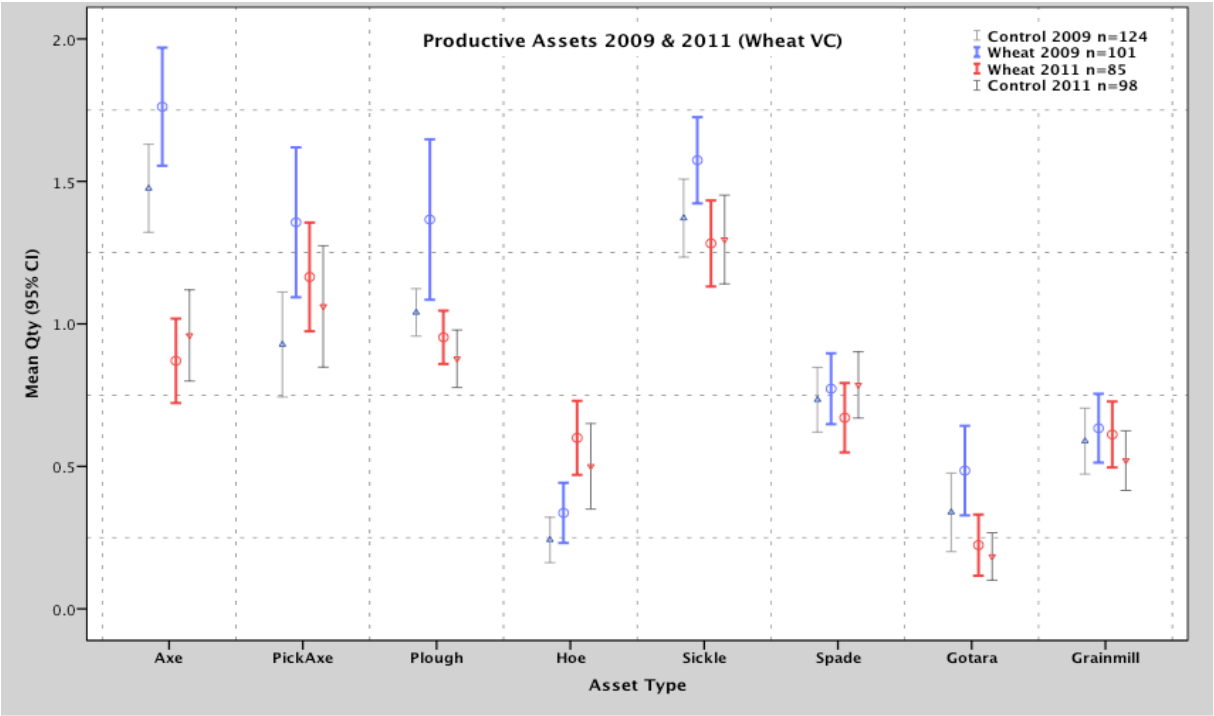
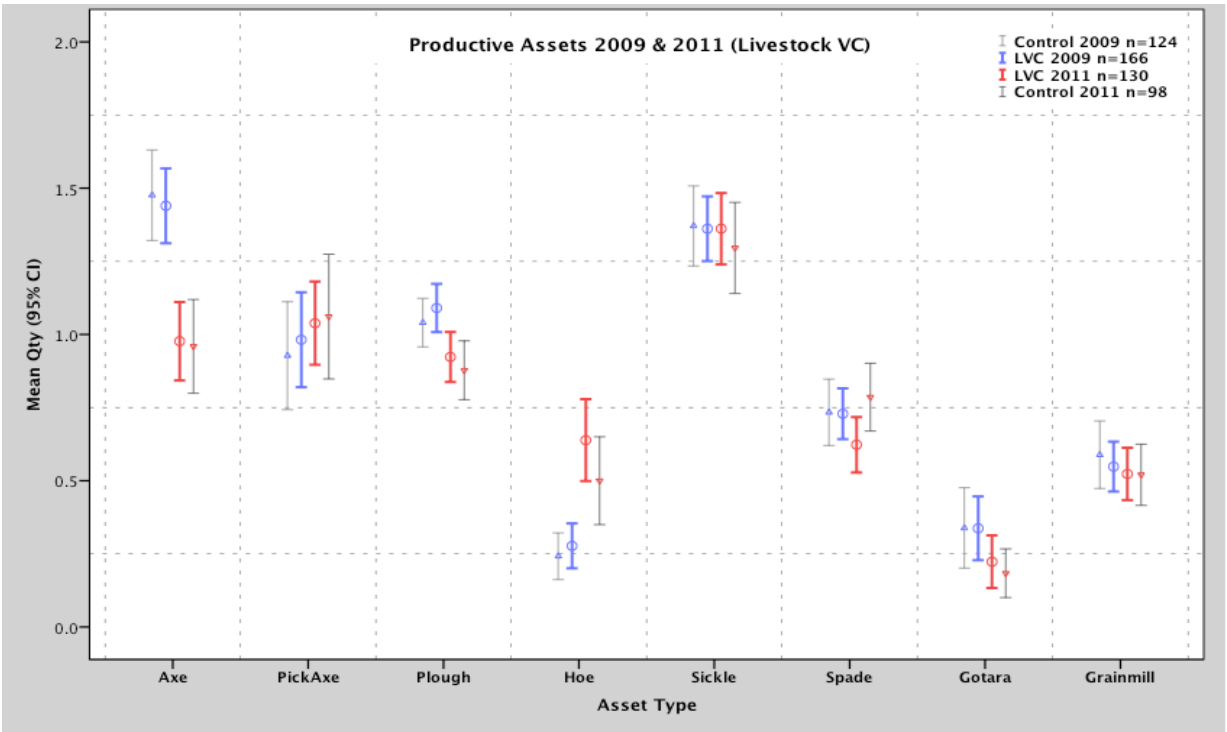


Figure 11: Changes in productive assets (LVC)



3.5.4 Household Items

Figure 12: Changes in household items (Wheat)

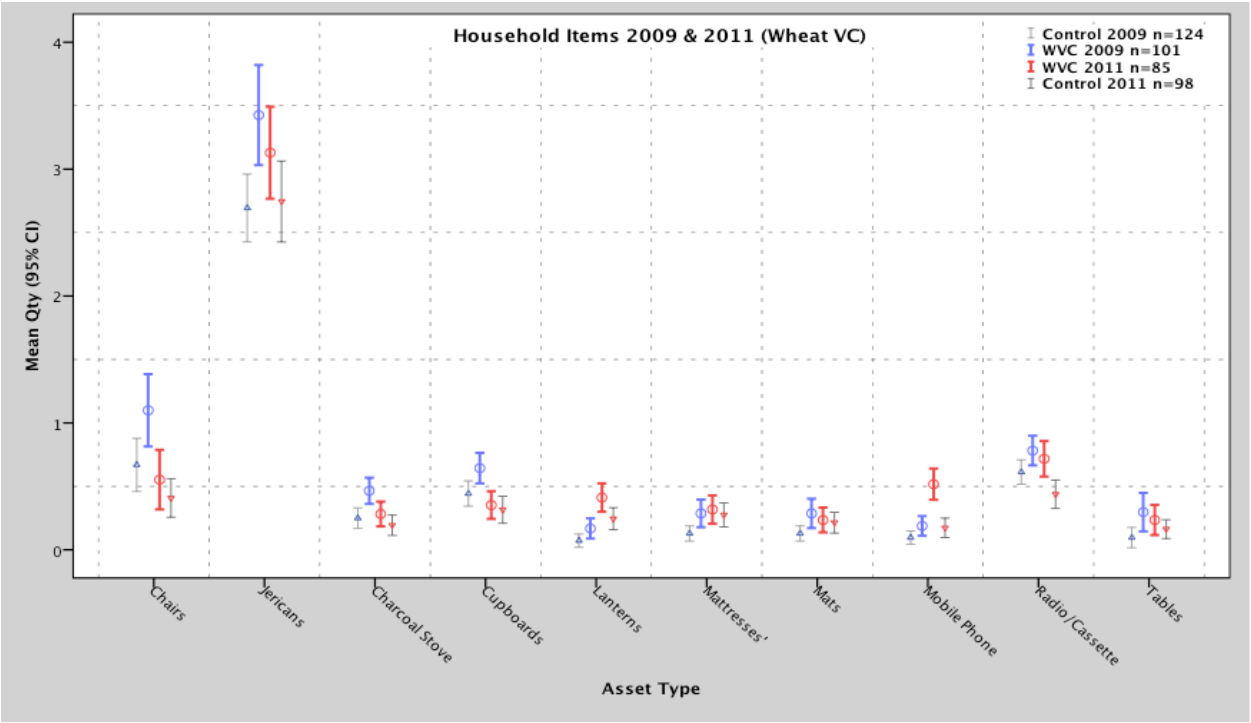
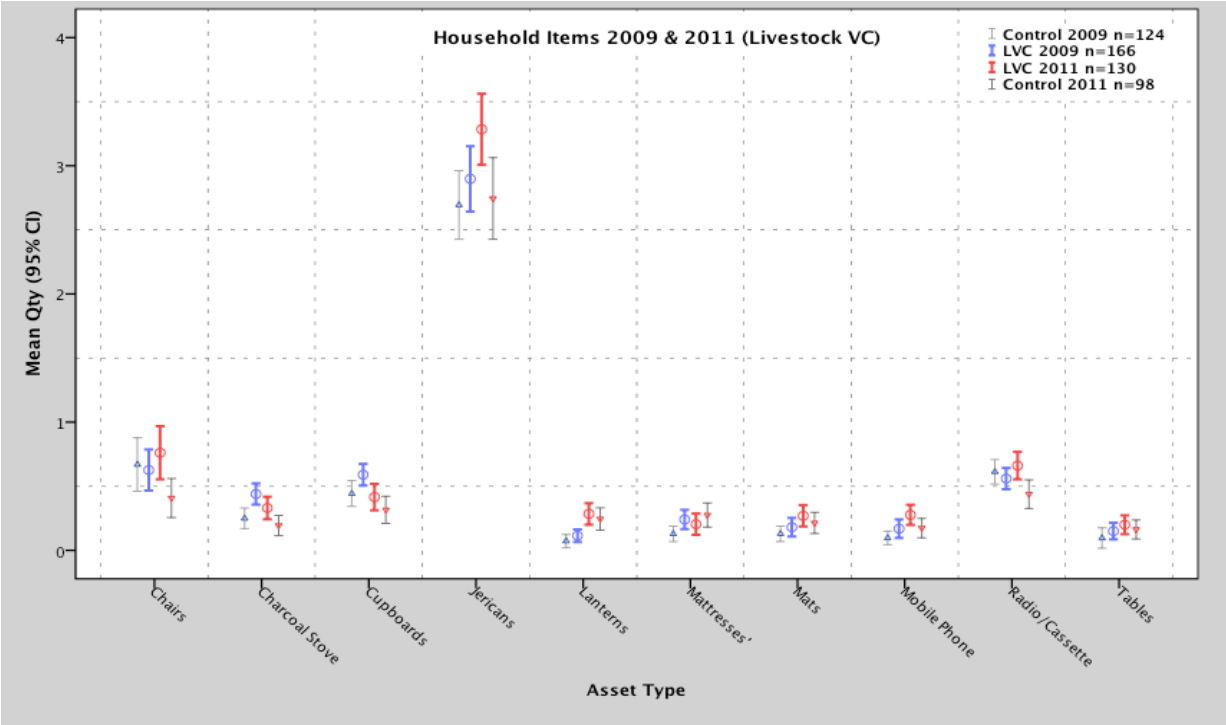


Figure 13: Changes in household items (LVC)



3.6 Changes in Household Food Security

Table 13 Food security calendar (n=18 groups)

Time frame	Average Score												Score/60
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Before PSNP	●●●●	●●●●	●●●●	●●●	●●	●				●	●●●	●●●●	29
2008 – 2009	●●●	●●	●●	●●	●	●	●	●	●	●	●●	●●●	20
2009 – 2010	●●●●	●●●●	●●●●	●●●	●●●	●●	●●	●●	●	●●	●●●	●●●●	38

Data derived from proportional piling exercises using a total of five counters per month (5 counters =Very Food Secure 0 counters =Food Insecure)

Table 14 Factors contributing to improvements in food security

Factor	Summary of Ranks (n=18 groups)				Overall Rank
	1st	2nd	3rd	4th	
PSNP	10	7	1	0	1st
Improved rainfall	7	8	1	0	2nd
Livestock credit	0	3	2	6	3rd
Improved seeds	0	0	10	0	4th
Fertilizer	0	0	0	3	5th
Other reason	1	0	0	1	6th

Method: Simple ranking

3.7 Value Chain Production and Sales

Figure 14: Changes in wheat sales 2008-2011

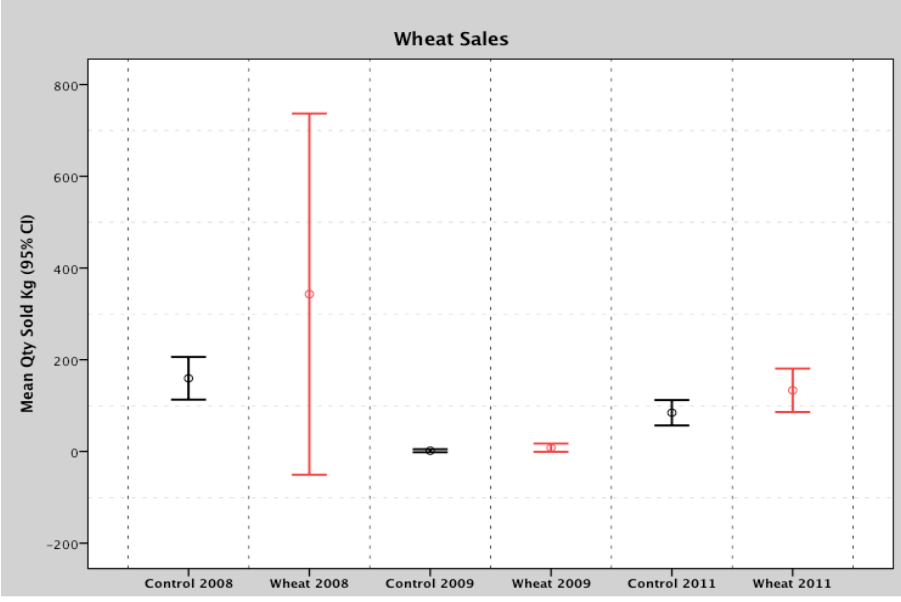
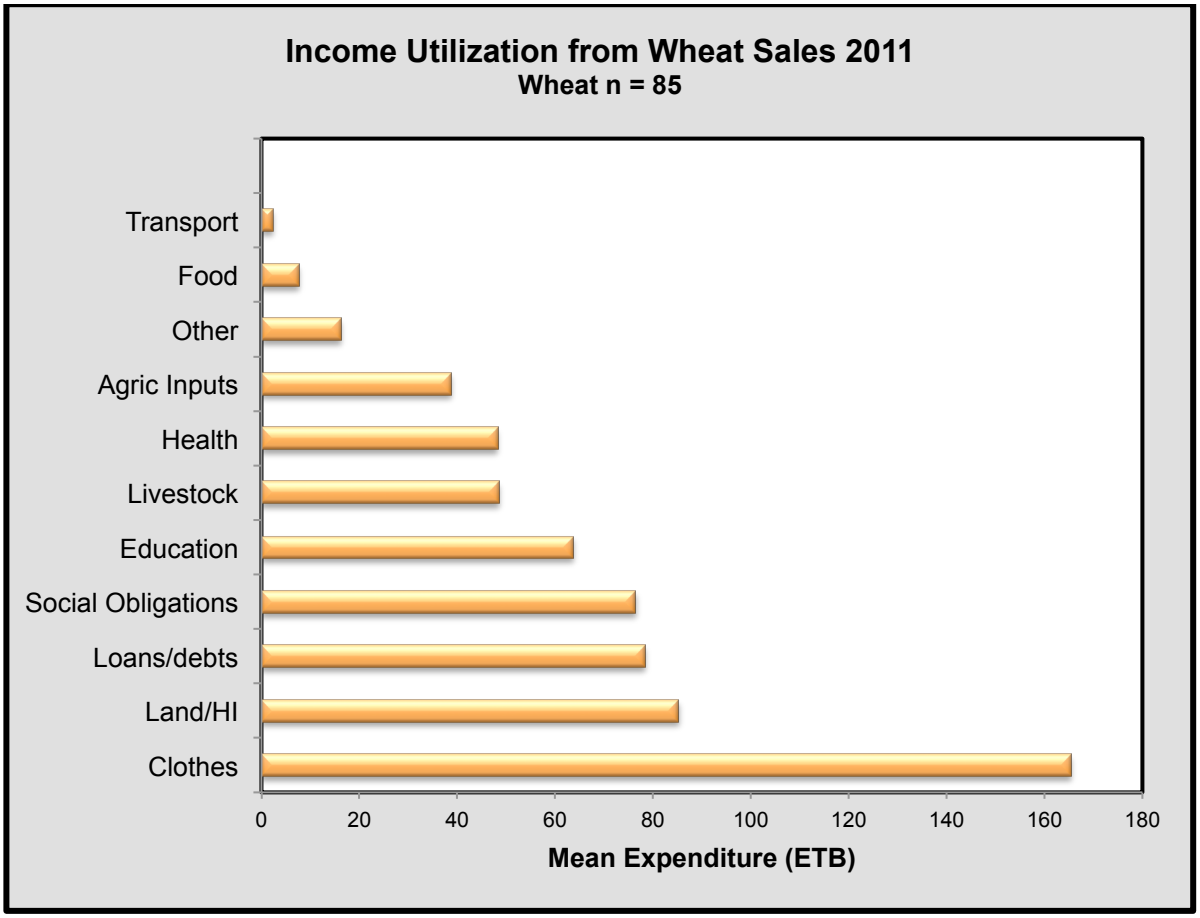


Table 15 Wheat production and sales 2011 (2010 Harvest)

Category	Mean Quantity/Value (95% CI)		
	Produced (Kg)	Sold (Kg)	Income (ETB)
Wheat VC n=85	528 (390, 666)	133 (86, 181)	690 (377, 1002)
Control n=98	375 (303, 448)	84 (57, 112)	427 (275, 578)

Figure 15: Utilization of income from wheat sales (2010 Harvest)

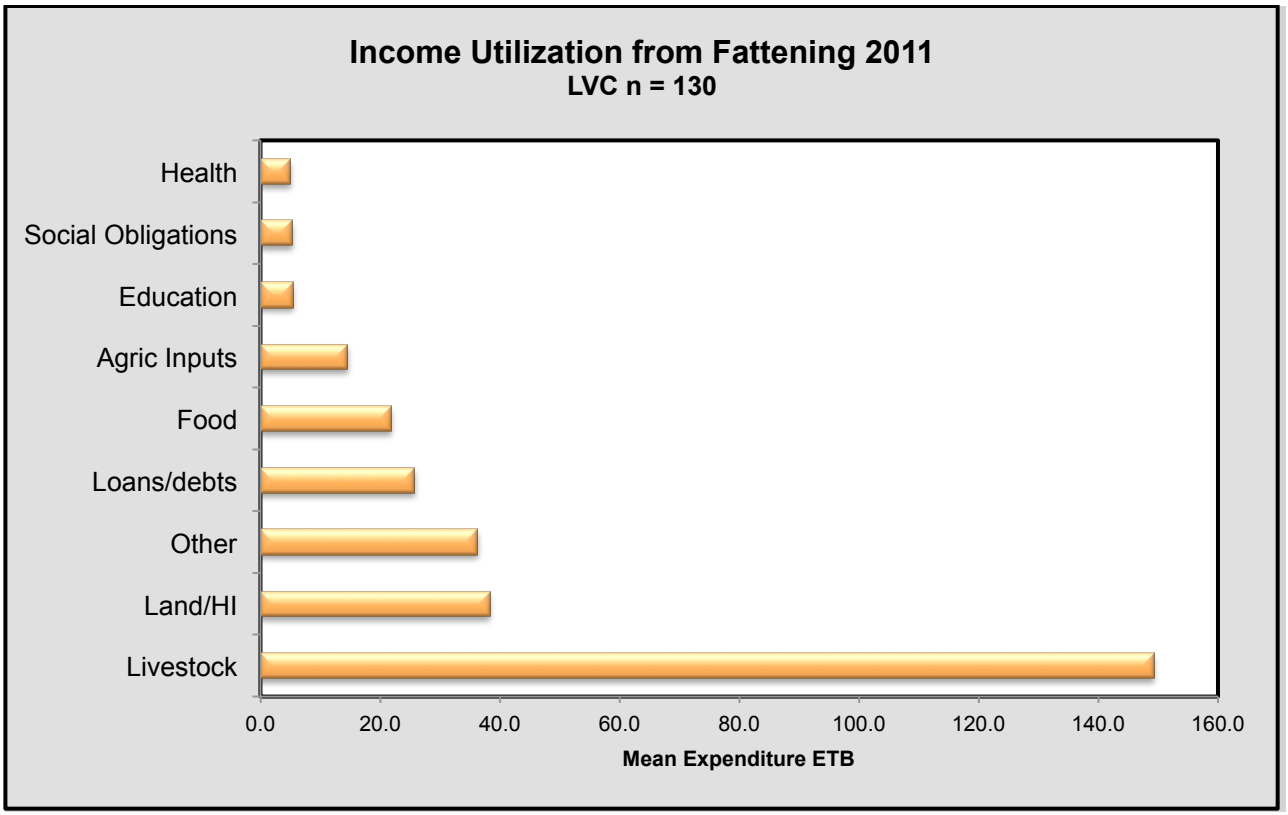


Notes on Figure 15
Agric. Inputs = Farming Inputs (seeds, tools, fertilizer etc.)
Land/HI = Land Rent/Home Improvements
Livestock = Animal Purchases only

Table 16: Livestock value chain transfers and sales

LVC n=130	Mean	Total
Small Ruminants transferred	2.4	316
Number animals died	0.5	70
Number of offspring from VC transfers	1.3	166
Number of offspring died	0.4	46
Number Fattened VC animals	0.5	70
Number Fattened animals sold	0.5	66
Income from sale of fattened animals ETB	306.3	39,820
Number of 'un-fattened' VC offspring sold	0.4	51
Income from sale of 'un-fattened' offspring ETB	91.2	11,851

Figure 16: Utilization of income from livestock fattening



Notes on Figure 16
Agric Inputs = Farming Inputs (seeds, tools, fertilizer etc.)
Land/HI = Land Rent/Home Improvements
Livestock = Animal Purchases only

3.8 Scoring of Project Benefits

Table 17: Scoring of other project outcomes (Wheat)

	Wheat Value Chain n=85	Score
1	Improved our relationship with neighbors and other community members	222
2	Improved our resilience to drought or other livelihood shocks	221
3	Improved our financial decision making in the household	203
4	Helped us cope with the drought in 2009	194
5	Improved our status in the community	192
6	Enabled us to accumulate assets	185
7	Improved our skills/knowledge on wheat production	172
8	Improved our knowledge of savings and finances	170
9	Enabled us to protect our assets	167
10	Contributed to household food security	167
11	Helped us recover from the drought	160
12	Improved our access to inputs for wheat production	152
13	Improved our access to credit	151
14	Improved the quality of wheat produced	139
15	Increased our savings	137
16	Increased the quantity of wheat produced	136
17	Improved our business skills	132
18	Improved our relationship with traders and or the private sector	87
19	Increased our income from wheat sales	83

Table 18: Scoring of other project outcomes (LVC participants)

	Livestock Value Chain n=130	Score
1	Improved our relationship with neighbors and other community members	321
2	Improved our resilience to drought or other livelihood shocks	319
3	Improved our status in the community	294
4	Improved our financial decision making in the household	289
5	Helped us cope with the drought in 2009	280
6	Enabled us to accumulate assets	278
7	Improved our skills/knowledge on livestock fattening	269
8	Contributed to household food security	260
9	Improved our knowledge of savings and finances	249
10	Helped us recover from the drought	243
11	Enabled us to protect our assets	241
12	Improved our business skills	219
13	Improved our access to credit	216
14	Increased our savings	214
15	Improved our access to inputs for livestock fattening	132
16	Improved our relationship with traders and or the private sector	120
17	Improved the quality of fattened animals produced	64
18	Increased the number of fattened animals produced	61
19	Increased our income from livestock sales	55

3.9 Strengths and Weaknesses of Program Interventions

Table 19 SWOT analysis of Savings and Internal Lending Committees'

Strengths	Weakness
▪ Improved savings culture ▪ Improved social cohesion ▪ Provides security (insurance) against food and income loss ▪ Provides an important source of credit for members ▪ Easy and accessible loans (timely & available) in comparison to other sources of credit ▪ Business & literacy training gave members the confidence and incentive to invest in income generating activities ▪ SILC loans allowed members to purchase farming inputs and improve (crop) production ▪ SILC credit enabled members to cover basic needs ▪ SILC activities have encouraged members to diversify their livelihoods[4] ▪ SILC helped participants to gradually build up assets	• Shortage of capital means that loans are small • Savings shared out at the end of every cycle are too small to invest in business opportunities at the individual level • Lack of business opportunities in general • Inflation quickly diminishes group interest on loans
Opportunities	**Threats**
▪ Potential vehicle for disseminating information on improved agricultural technologies and practices ▪ Potential exists for collective (group) investments in income generating activities ▪ SILC members are well positioned to be linked to formal microfinance where they can access larger loans	▪ Frequent drought and failed harvests results in loss of income and undermines members ability to contribute and save ▪ Group members migrating in search of work ▪ Inflation and high food prices limit opportunities for people to invest loans in petty trading ▪ Small loan amounts may encourage members to stop borrowing and seek alternative sources of credit (MFI)

Summary of findings from 16 focus groups

[4] Alternative business opportunities include petty trade, cereal trade, goat and sheep trade

Table 20 SWOT analysis of the Wheat Value Chain

Strengths/Opportunities	Weaknesses/Challenges
• The project helped the poorest households to access improved seeds on credit • Potential to improve production if conditions are suitable (in a good year) • Potential to improve food security (in a good year) • There is a high market demand for wheat • The seed variety provided by the project (Paven-76) is more tolerant to drought and pests	• Late supply of seeds in some *Kebeles* resulted in a reduced yield • Drought or rain in 2009 and rust in 2010 reduced yields • Lack of oxen remains a major constraint, particularly for the poorest households • Cost of fertilizer and pesticides remains a challenge for poor households

Summary of findings from 16 groups

Table 21 SWOT analysis of the Livestock (fattening) Value Chain

Strengths	Weaknesses/Challenges
▪ The project provided excellent training on fattening techniques ▪ Good business and literacy training was provided ▪ Increased income from the sale of fattened animals (for some households) ▪ The intervention has enabled some households to increase their assets ▪ Diversification into animal fattening has strengthened peoples' livelihoods ▪ The project has improved participants social status in the community	▪ Delayed project implementation and asset transfers[5] ▪ Project animals were purchased at an inflated price as livestock traders were aware of, and took advantage of the increase in demand created by the project ▪ Animals poorly adapted to the local environment (such as highland sheep) were provided to participants ▪ During the asset transfers households were grouped and then forced to pay the debt of other failed members to the MFI during the first cycle. ▪ Some households only received training after the animals had been purchased
Opportunities	**Threats/Challenges**
▪ High demand for fattened animals in nearby towns such as Adama ▪ Potential to increase production to two or more fattening cycles per year, if feed availability/cost could be improved	▪ Feed shortage is a major constraint to livestock fattening in the project area ▪ Livestock feed such as agro industrial byproducts are too expensive ▪ Prevalence of livestock disease and absence of veterinary clinics in the area represents a major constraint to livestock production and fattening ▪ Most participants are more interested in livestock production (rearing) than fattening ▪ Unavoidable death of project animals forced people to sell their assets in order to repay their debts (in the absence of livestock insurance) ▪ During dry periods water shortage is a key problem for livestock fattening

Summary of findings from 16 focus groups

[5] Participants suggested that the animals were purchased during an unfavorable period for fattening

4. DISCUSSION

4.1 Methodological Issues

The study faced a considerable number of practical and methodological constraints, including issues around timing and the availability/reliability of project information, with the latter having implications on sampling. The baseline assessment also took place during a drought and a PSNP rescreening exercise creating additional challenges for both the project and the research. A detailed discussion on the assessment constraints is presented in the baseline and mid term assessment report, as well as in two scoping visit reports to the study area.

4.2 Income and Expenditure

4.2.1 Income Sources

Crop and livestock production represent two of the most important sources of income for project participants. For example, baseline data generated by the Livelihoods Integration Unit (LIU) estimates that between 40-80% of household income for the two poorest wealth categories comes from these sources (LIU, 2008). Wheat, barley, *teff* and maize are grown both as a cash crop and for household consumption. Sorghum is also produced but is less common. Faba beans and a variety of dried white pea beans are also grown with the latter being an important cash crop (Hamda, 2008). Other crops include peas, lentils, chickpeas, sesame, flaxseed and vegetables such as onions, tomatoes and peppers. Some households living adjacent to the Awash and Keleta Rivers commonly practice irrigated crop production, this involves the use of both hand and diesel pumps to irrigate maize, vegetables and beans. Although less common, sugar cane, cotton, cabbage and papaya are also grown by some households in the area (Bevan *et al*, 2006).

Livestock production mainly involves rearing cattle and small ruminants, which are sold throughout the year, however for PSNP participants this is mostly limited to sheep and goats, as they have limited cattle holdings. Extensive communal grazing areas exist in both Sire and Dodota, and everyone in the community has free access to this land. Some households practice livestock fattening, for cattle this is limited to areas where water is available and people have access to animal feed. Livestock trading is also fairly common, as is the sale of livestock products such as eggs (LIU, 2008).

Other income sources include informal labor, this mostly involves working on farms for wealthier neighbors, or working on commercial, or in some cases communal irrigation farms. Some informal employment opportunities also exist in nearby towns such as Dhera and Sodere, and young men will migrate to larger urban centers in search of construction jobs or other forms of menial employment. Participants indicated that people expand on this labor options during times of food and cash shortage. The results indicate that informal labor combined with PSNP work represents one of the most important sources of income for project participants (figures 1-2).

The sale of firewood and fuel derived from livestock manure also provide an important source of income for many households in the area. These are either sold on the side of the road, or in nearby towns. Similarly, some people also collect straw from the neighboring highland areas, this is transported using donkeys and horses and sold in Sire and Dodota where it is used as fodder

or for house construction. Participants indicated that poor landless households with few other livelihood opportunities commonly practice this. Some also transport water from rural areas and sell this in nearby urban centers, for example Dhera, where there is a serious water shortage. Petty trade is primarily practiced by women and involves the sale of soft drinks, and locally brewed alcoholic drinks, cigarettes, vegetables and cooked food items. However, many project participants live quite some distance from market centers and are less likely to engage in petty trade. Nonetheless, many households participate in petty trade during periods when they are not involved in on-farm production, and households will expand on this activity during times of food and income shortage (Bogale *et al,* 2010). Other off-season activities include brewing local beverages, knitting traditional clothes, making covers for traditional stoves, and weaving mats. Some households also earn income from renting their land, and in two of the study *Kebeles'* participants rent their land to the Wonji sugar factory (Bogale *et al,* 2010).

The results show a significant increase in the relative contribution of income from PSNP labor activities since 2009 (figures 1-2). This applies to both the intervention and the control samples. The results also show that there has been a significant decrease in income from livestock production (fattening and control samples) and firewood sales (all categories) since the project started (figures 1-2). One possible explanation for this is that the study area was affected by a drought in 2009, and people sold their livestock to compensate for income and production losses associated with this event. As such the relative contribution of income from livestock would have been high during that period. The results from the mid term assessment support this showing livestock sales as the second most important coping strategy employed in response to the drought, particularly for the fattening and control samples. Typically people will also expand on firewood collection and sales during droughts (LIU, 2008), explaining why this source of income was more important in 2009. The results show that there has been no significant change in the relative contribution of income from either fattening sales or wheat sales (figures 1-2). Consistent with this, the results also show a decline in wheat sales since 2008 (figure 14), and participants scored income from either fattening or wheat sales as the lowest scoring project benefits, out of nineteen benefits assessed (tables 17-18).

4.2.2 Actual Income and Expenditure

Assessment participants across all three categories have experienced an overall increase in income since the project started with project participants seeing a greater increase in comparison to the control group. The results show that the fattening and wheat samples experienced a 34-35% 'perceived' increase in income in comparison to the control sample who experienced a 26% increase (table 8). Corresponding with this increase in income, the results show that there has been a significant increase in expenditure on clothes and loan repayments for all categories since 2009 (figures 3-4). The wheat sample has also spent significantly more on clothes, 'other expenses' and invested more in agricultural inputs than the control group in 2011 whereas there was no significant difference in 2009 (figure 3). Similarly the fattening sample spent significantly more on clothes and "other expenses" than the control group in 2011 (figure 4). It is unclear why expenditures on clothes purchases increased so dramatically over the course of the project as this finding only came to light once the data had been analyzed. However, it can be assumed that clothes purchases represent an important expenditure for the participating households, and an overall increase in household income since 2009 may have provided participants with the necessary disposable cash to purchase clothes.

In terms of total expenditure on key items, the livestock sample has seen a significant increase since 2009 both in absolute terms and relative to the control group (table 10). If we consider

expenditure as a proxy for actual income, these results would represent a significant increase in income, particularly for the livestock sample. However, in terms of the projects contribution to this increase in income, participants scored the SILC activities higher than the livestock value chain, and the wheat value chain higher than the SILC activities (table 9).

4.3 Changes in Access to Microfinance

The Oromia Credit and Saving Share Company (OCSSCO) is the main micro-finance service provider in Dodota Sire, However, a number of other savings and credit options exist, including, women's associations farmers cooperatives and youth associations. Some of these also act as intermediaries with local banks and with OCSSCO. There are also private credit providers such as the Meklit Private Loan Company. Traditional and informal savings and loan providers such as *iqub* and *iddir* also exist although these primarily lend money for medical purposes only. There are also a number of traditional moneylenders. However, these moneylenders have a reputation for charging high interest rates, thus discouraging people from borrowing. Since 2008, CRS and partners have been promoting informal Savings and Internal Lending Groups (SILC) in the project area, which provide alternative savings and credit options for poor households.

The results show that there has been an increase in access to formal microfinance since the project started with a significant increase in the (mean) value of loans accessed by project participants (figure 5). There has also been a significant increase in the (mean) value of household savings since the project started (figure 5). Household savings not only represent an important financial asset in terms of future investments, but some analysts argue that savings have been largely undervalued as a risk management tool for the poor (Dercon *et al,* 2008). As such, an increase in household savings can be seen as an indicator for improved resiliency.

The results show no significant change in the value of private loans or SILC loans (figure 5). However, the relative increase in credit from other sources may suggest that people are now less dependent on private loan providers. Overall these results indicate that access to microfinance has improved, and although this also applies to non-project participants it is possible that the project has contributed to this change.

4.4 Changes in Assets

During the baseline assessment, focus group participants identified a number of different wealth indicators in Sire and Dodota, and assigned these to three wealth groups namely, the better-off, the middle, and the poor. According to participants, land and livestock holdings represent the two most important indicators of wealth, with the better-off households typically owning more land and livestock, specifically cattle and draft animals. For the purpose of selecting PSNP participants, local officials also use three wealth categories, however they divide the poor into two sub categories (poor and poorest). Similarly, land and livestock holdings are used as benchmarks to determine which category a household falls into. Annex I gives a breakdown of the indicators and asset levels defining wealth identified by assessment participants, and Annex II gives the wealth indicators used for PSNP screening. The results show some significant changes in assets both positive and negative, although in most cases these correspond with similar changes to the control group. Nonetheless, the results suggest that the project has to some extent helped people accumulate assets, with this being scored as the sixth most important project benefit by participants from both the wheat and fattening sample (tables 17-18).

4.4.1 Land Holdings

Although wealthier households typically own more land, participants indicated that this partly has to do with the capacity of the better off to utilize their land holdings. Constraints to land utilization, such as the lack of household labor the lack of draft animals, and the cost of agricultural inputs largely determines how much land a household can effectively cultivate. As such poorer households will often rent out some of their land to wealthier neighbors. There are also a considerable number of landless households in the area, however many of these households will rent land, and sharecropping is also commonly practiced. In recent years a considerable number of households have also been forced to rent their land to the Wonji sugar factory, particularly in Awash Bishola and Tedecha Guracha *kebele's*. Although they receive income from this land (between 230-250 ETB/month during the sugar production season), they no longer benefit from the food and income they used to acquire through crop production and sales. Although land can be rented, it is against government policy for people to sell their land or purchase land. Therefore, as an indicator of wealth status, land holdings are best understood in terms of how much land a household is able to cultivate either from land they own and or land they rent from others. The local unit for measuring land is *kert* one *kert* converts into roughly a quarter hectare. During the baseline assessment, mean land holdings for the assessed households ranged from 5.2-7.2 *kert* or 1.3-1.8 hectares (table 12), putting the average household in the middle to poor categories based on the PSNP landholdings criteria (Annex II). The results from the final assessment show a slight increase in land holdings for assessment participants although this was not significant (table 12).

4.4.2 Livestock Holdings

Livestock are considered one of the most important wealth indicators in the study area (LIU, 2008: Bevan *et al,* 2006) and an important asset benchmark for PSNP graduation. The results indicate that since the project started, both project and non-project (control group) participants have experienced a significant decline in livestock assets (figures 8-9). This can largely be attributed to the drought in 2009, as people sold their cattle in order to cope with the loss of food and income from crop production. For example, during the mid term assessment the most frequently reported reason given for a decline in livestock was that they were sold in order to purchase food (Bogale *et al,* 2010). Similarly, food purchases were identified as the most important use of income earned from livestock sales in 2009 and livestock mortality was given as the second most frequently mentioned reason for a decline in livestock assets (Bogale *et al*, 2010). Although discouraging, this decline can be mostly be attributed to a combination of drought related factors and livestock disease outbreaks. For example, anthrax, blackleg, sheep pox and PPR (peste des petits ruminants) were reported in 2008 and 2009 resulting in widespread mortality, particularly of small ruminants (Bogale *et al,* 2010).

More specifically the results show a significant reduction in oxen and goat holdings for the wheat value chain sample and the control group and a significant decline in oxen goats and poultry holdings for the fattening value chain sample and the control group (figures 8-9). It is important to note that the reduction in these specific livestock types was also reflected in the mid term results suggesting that recovery to the pre-project asset levels (baseline) would have been unlikely within the study time frame. However, the mid term results also showed a significant decline in sheep holdings for all categories (Bogale *et al,* 2010) but no significant reduction is reflected in the final results for both the intervention samples whereas it is for the control (figures 8-9). Similarly the mid term results showed a significant decline in poultry for the wheat sample (Bogale *et al,* 2010)

and this is no longer reflected in the final results (figure 8). These findings suggest that project participants have been able to accumulate sheep and poultry assets and recover from the drought faster than non-project (control) participants. Nonetheless, the increase in sheep holdings, particularly for the fattening value chain can in part be directly attributed to direct project asset transfers (see table 16).

4.4.3 Productive Assets and Household Items

The results show that there has been a significant increase in hoe's and lanterns, and significant decrease in axes chairs and cupboards for both intervention samples and the control sample (figures 10-13). There has also been a significant increase in mobile phones for the wheat value chain sample (figure 12). However, this probably has more to do with expanding network coverage than project related factors. The results show no significant change either positive or negative for other types of productive assets or tools.

4.5 Changes in Food Security

The results from the focus group discussions show moderate improvements in both temporal and absolute food security since the PSNP was launched (table 13). Prior to the PSNP households would typically face a three months food deficit from June to September (table 13). This deficit now appears to have been eliminated. Even during the drought (2008-2009) no temporal food deficit was reported even though absolute food security was lower than pre-PSNP estimates (table 13). The two most important reasons given for improvements in food security were the PSNP and better rainfall (table 14). These findings suggest that the PSNP has played a major role in addressing chronic food security by mitigating temporal food deficits. Project related factors such as livestock credit and improved seeds were also identified and ranked as reasons contributing to improved food security. Consistent with this, the projects role in contributing to food security was scored as a moderately important benefit relative to other project benefits by household respondents (tables 17-18).

4.6 Utilization of Project Derived Income and Credit

4.6.1 Savings and Loan Utilization

The results show that (mean) household savings and loans combined for 2010-2011 was estimated at 706 Ethiopian *birr* for the fattening sample, and 1,375 *birr* for the wheat sample (table 11). This money was invested in a variety of livelihoods activities including land, livestock, farming inputs, food, education, and investments in other income generating activities (figure 6). There were however differences in the importance of these between the fattening and wheat sample. For example, livestock investments were the most important expenditure for the wheat sample representing roughly 30% of total reported expenditure on livestock for the same period (figure 7). This would suggest that the project microfinance component has contributed to livestock asset accumulation. Investments in land, farming inputs, food and petty trade or other income generating activities were also important for both the wheat and fattening value chain (figure 6). Ultimately these investments may have translated into positive income and food security outcomes.

4.6.2 Utilization of Income from wheat sales and small ruminant fattening

The results show no significant change in the actual quantity of wheat sold between 2008 and 2011 (figure 14). There was also no significant difference between the wheat value chain sample and the control sample (figure 14). Nonetheless, the amount sold in 2011 at the time of the assessment only represents about one quarter of the wheat actually harvested by cereal value chain participants (table 15). For the 2010 harvest, the mean quantity of wheat produced and sold by the cereal value chain participants was greater than the amount produced and sold by control group participants (table 15). However, this was not statistically significant. Nonetheless, wheat sales from the 2010 harvest translated into 690 *birr* (mean value) for the wheat value chain participants (table 15). This income was utilized in a variety of ways, with clothes purchases being the most important (figure 15). Other expenditures included loan repayments, investments in land, livestock and farming inputs, education and health (figure 15).

For the livestock value chain, mean income from the direct sale of fattened project animals amounted to 306 Ethiopian *birr* (table 16). An additional 91 *birr* income was earned from the sale of un-fattened offspring of the animals purchased under the project value chain (table 16). Although this income was invested in similar livelihoods assets and activities as the wheat value chain income, livestock investments were by far the most important use of this income (figure 16). An estimated 149 *birr* (mean value) was reinvested in livestock representing approximately 22% of total expenditure on livestock during the past year for participants in this value chain (figures 16&4).

CONCLUSION

The PSNP Plus project in Dodota Sire has faced considerable challenges and the drought in 2009 has certainly mitigated or at least delayed the potential impact of the project in terms of asset accumulation and PSNP graduation. Assessing the impact of a livelihoods project in the aftermath of a drought can be extremely difficult given that people typically sell their assets in order to cope with the income losses associated with production failure. The results from the mid term assessment confirmed this showing a significant decrease in livestock assets. Aside from the drought, delays in project implementation implied that little impact in terms of asset accumulation could be expected before the end of the project. In light of these considerations, the mid term assessment report suggested that impact be assessed in terms of people's ability to recover from the drought rather than in terms of absolute asset changes.

For future livestock and cereal value chain interventions under the Graduation with Resilience to Achieve Sustainable Development (GRAD) project and HABP a number of lessons can be drawn from this and other case studies carried out under the LIS. In particular, future programs would hope to avoid some of the key challenges faced during implementation. In particular, the timely procurement of project inputs such as seeds and livestock would need to be prioritized in order to maximize the short-term impact on household production and income.

For livestock value chains, the procurement and delivery system for livestock transfers should be reviewed and agreed upon with project participants beforehand. For example, participants in the fattening value chain indicated that project livestock were purchased at inflated prices and in some cases the animals were not well suited to the local environment. If accurate, this highlights

the need to develop specific guidelines for livestock purchases and transfers under future value chain interventions. One option would be to adapt the national guidelines for restocking practices in pastoralist areas (MoARD, 2008) specifically for livestock value chains. Some key and relevant guidelines include:

1. The use of indigenous animals as:
- These are well adapted to local conditions and feed sources
- Recipients are familiar with the required management and care practices
- They are readily available and less expensive than introduced genotypes
- Local purchases can inject cash into the local economy

2. Recipients are present at the time of purchase so that they can select the animals they prefer. Or alternatively, a community representative can be selected to purchase the animals on their behalf.

More generally, livestock purchases should include an animal health inspection by a trained veterinary worker, and in some cases complementary veterinary interventions such as vaccination against common livestock disease should be considered (MoARD, 2008; Pankhurst, 2009). In addition to this, follow up veterinary care should be provided to minimize the risk of livestock morbidity and mortality (MoARD, 2008).

The evidence from other LIS case studies suggest that livestock credit can be a useful and flexible tool to support the livelihoods of poor PSNP households. Despite the challenges faced in Sire and Dodota, the project has had some positive impact on the livelihoods of participants. For example, the results suggest that the project value chains have contributed to an increase in income for project participants with this income being invested in a variety of livelihoods assets such as land, livestock, health, education and other income generating activities. Over time these investments may translate into greater income benefits and an increase in assets, particularly in the event that no major livelihoods shock occurs in the area.

The project also appears to have contributed to improvements in access to microfinance with a significant increase in the value of loans accessed by project participants since 2008. These loans have also been invested in a variety of livelihoods assets such as livestock, land, farming inputs, food and petty trade with potential downstream benefits in terms of income and assets.

There has also been a significant increase in the value of household savings since the project started, not only are savings an important financial asset with regards to future investments, but they may well also represent an important proxy indicator for resiliency in terms of the insurance they provide against different livelihoods shocks.

The project also appears to have contributed to improvements in household food security and more generally the project has helped people cope with and recover from the drought in 2009. Associated with these improvements, the results suggest that the project has improved participants' resiliency to drought and other livelihoods shocks, which is encouraging given that improved resiliency defines the overall goal of the project.

References and Further Reading

Bevan, P., Pankhurst, A., Lavers, T. (2006) Ethiopian Village Studies II; *Korodegaga, Dodota-Sire wereda, Arsi Zone, Oromia Region*: researched by Workneh Abebe and Aster Shibeshi (2005) and Assefa Tolera and Mesfin Tadesse (1996) February 2006, University of Bath: WeD-Ethiopia

Bogale, S., Bekele, G., and Burns, J. (2010) Linking Poor Rural Households to Microfinance and Markets in Ethiopia; Baseline and Mid-Term Assessment of the PSNP Plus project in Sire and Dodota, Feinstein International Center, Medford, MA

Burns, J., and Bogale, S. (2009 a) Tufts University Field Visit to Wonji and Dodota, September 2009. PSNP Plus project report, Addis Ababa, 2009

Burns, J and Bogale S. (2009 b) LIS Field Visit to Dodota October 2009. PSNP Plus project report, Addis Ababa, 2009

CARE (2009) PSNP Plus Project, Linking Poor Rural Households to Microfinance and Markets: Year One Annual Report and 4th Quarter Programmatic Report; July 2009 to September 2009. Addis Ababa.

Dercon, S., Bold, T., and Calvo, C. (2008) Insurance for the Poor Ch. 3 in A. Barrientos and D. Hulme (eds), *Social Protection for the Poor and Poorest; Concepts, Policies and Politics*, London: Palgrave Macmillan

Devereux, S., Sabates-Wheeler, R., Tefera, M and Taye, H. (2006) Ethiopia's Productive Safety Net Programme (PSNP), Trends in PSNP Transfers Within Targeted Households, Final Report. IDS: Brighton UK, Indak, International, Addis Ababa 2006.

Disaster Preparedness and Prevention Agency (2008) *Livelihood Profile Oromiya Region, Ethiopia: Rift Valley Maize and Haricot Beans (RVM) Livelihood Zone.* Report from the Livelihoods Information Unit, Disaster Preparedness and Prevention Agency (DPPA) Addis Ababa, April 2008

Gilligan, D., Hodinott, J., Kumar, N., Taffasse, A, S., Dejene, S., Gezahegn, F., and Yohannes, Y. (2009) Ethiopia Food Security Program: Report on 2008 Survey. International Food Policy Research Institute (IFPRI). Washington, D.C.

Hamda, H. (2008) New Business Model for Sustainable Trading Relationships: Dried Bean Value Chain Project: A baseline Survey: Catholic Relief Services, Ethiopia, Addis Ababa, December, 2008.

Micro Development Training and Consultancy Services (2010) Final Report – Financial Product Development and Linkage Mechanism – PSNP Plus, Addis Ababa.

Ministry of Agriculture and Rural Development (MoARD, 2009), Food Security Programme 2010-2014: *Household Asset Building*. Ministry of Agriculture and Rural Development, Addis Ababa, August 2009

Ministry of Agriculture and Rural Development (2008) National Guidelines for Relief Interventions in Pastoralist Areas of Ethiopia, Ministry of Agriculture and Rural Development, Addis Ababa, Ethiopia. 105 pp.

Ministry of Agriculture and Rural Development (2007), Productive Safety net Programme: Graduation Guidance Note, Food Security Co-ordination Bureau, Ministry of Agriculture and Rural Development, Addis Ababa, December, 2007

Ministry of Agriculture and Rural Development (2006) Productive Safety Net Programme: Programme Implementation Manual. Addis Ababa, Ministry of Agriculture and Rural Development, Government of the

Federal Democratic Republic of Ethiopia.

Oromiya Finance and Economic Development Bureau (2011) *Physical and Socio Economic Profile of Dodota Sire District*. Available at http://www.oromiyaa.com accessed on October 5, 2011

Pankhurst (2009) Rethinking Safetynets and Household Vulnerability in Ethiopia: Implications of Household Cycles, Types and Shocks. Paper presented at the World Conference of Humanitarian Studies, Groningen, Netherlands. 4-7 February 2009

PSNP Plus Project Proposal (2008) Bringing Ultimate Yields through Integrated Networks (BUY IN): Linking Poor Rural Households to Microfinance and Markets

Sabates- Wheeler, R., and Devereux, S. (2010) Cash transfers and high food prices: Explaining outcomes on Ethiopia's Productive Safety Net Programme. Food Policy article in press (2010)

Sharp, K., Brown, T, and Teshome, A. (2006) Targeting Ethiopia's Productive Safety Net Programme (PSNP) Overseas Development Institute (ODI) August 2006.

Slater, R., Adhley, S., Tefera, M., Butta, M, and Esubalew. (2006). PSNP Policy, Programmes and Institutional Linkages, Final Report.

USAID (2008) Linking Poor Rural Households to Microfinance and Markets; RFA No: 663-A-08-015. USAID, Ethiopia, Addis Ababa, March 2008.

ANNEXES

Annex I: Community wealth indicators (n=17 Focus Groups)

Wealth Indicator	Better-Off	Medium	Poor
Proportion population before PSNP started	**28 %**	**33%**	**39%**
Proportion population now	**13%**	**26%**	**61%**
Number of oxen	**3-4**	**1-2**	**0-1**
Number of cows	**5-6**	**1-2**	**0-1**
Number of small ruminants	**9-10**	**4-5**	**2-3**
Number of donkeys	**1-2**	**0-1**	**0-1**
Number of poultry holdings	**5-6**	**3-4**	**2-3**
Number of traditional beehives	**0-1**	**0**	**0**
Overall land holdings *(kert)*	**13-14**	**8-9**	**4-5**
Amount of cultivated land	**12-13**	**7-8**	**3-4**
Number of beds	**0-1**	**0**	**0**
Number of mattresses	**0-1**	**0**	**0**
Number of lanterns	**0-1**	**0**	**0**
Number of grain stores	**0-1**	**0-1**	**0**
Number of radio/cassette players	**0-1**	**0-1**	**0**
Food Security from own production (months)	**11**	**7**	**3**
Food Security from purchases (month)	**1**	**5**	**9**
Number of months food deficit	**0**	**0-1**	**4**
Tends others animals	**No**	**Rare**	**Common**
Engaged in labor for income	**No**	**Yes**	**Yes**
Engaged in labor for oxen *(qoti-qoti)*	**No**	**Common**	**Common**
Engaged in other type of labor	**No**	**No**	**Common**
Corrugated iron roof	**Some**	**Rare**	**No**
Land rented	**0**	**0**	**Common**

1 hectare = 4 *kert*

Annex II: PSNP Screening criteria and indicators

No	Wealth category	Description	Expected resources		
			Average land holding	Average livestock resources	
1	A	Better-off	• >2 hectares	○ ≥ 2 oxen ○ ≥ 2 cows ○ ≥ 5 goats	○ ≥ 5 sheep ○ ≥ 1 donkey
2	B	Middle	• <2 hectares	○ ≤ 2 oxen ○ ≤ 1 cow ○ ≤ 5 goats	○ ≤ 5 sheep ○ ≤ 1 donkey
3	C	Poor	• <1 hectares	○ ≤ 1 oxen ○ ≤ 1 cow ○ ≤ 3 goats	○ ≤ 3 sheep ○ ≤ 1 donkey
	C-	Poorest	• Landless	○ No livestock resources at all	

Source: *Kebele* officials in the study area

Annex III Household Checklist

Household Component Checklist
FINAL IMPACT ASSESSMENT PSNP PLUS LIS/Sire-Dodota

HH Code _____

NAME OF INTERVIEWER_____DAY: _____MONTH: _____

WOREDA	
PEASANT ASSOCIATION/*KEBELE* #	
VILLAGE/CLUSTER	

1. Household and Project Background Information

Household Code #	***Circle the appropriate boxes***			**Gender**		**Fam. size**
Name of respondent				**M**	**F**	
Household roofing material *(circle)*	**Grass**		**Corrugated Sheeting**			
Project Activities that household members are involved	**SILC**	**Fattening**	**Wheat**	**H. Beans**		
Education/grade of Household Head						
Maximum education/grade of any household member						
Types of HH shocks experienced in the past 12 months (Yes/No)						
Rain-failure/drought						
Flood/hail						
Crop pest/disease						
Livestock disease/mortality						
Human illness/death						
Has your household graduated from the PSNP since the project started?	**YES**		**NO**			

1b. If the household has graduated from the PSNP, ask the participant to list the most important factors that enabled them to graduate from the program and rank these in order of importance (5 most important reasons)

Reasons contributing to PSNP graduation	**RANK**
	1st
	2nd
	3rd
	4th
	5th

2. Savings and Loan Information

		Circle the appropriate boxes		
A	How much money has your household managed to save in the past year? (including interest earned from SILC contributions)	**Savings ETB**	**Share ETB**	
B	Has your household taken out a loan in the past year?	**YES**	**NO**	
C	**(If Yes)** - How much money did you borrow?			**ETB**
D	Who did you borrow the money from?	**SILC**	**MFI**	**Other**
E	How much did you borrow (ETB) by source			
F	Have you repaid the loan and interest? (Y)=Yes (N) = No			

2c. How did your household spend your savings and loans? *(in the past year)*

Ask the respondent to specify the amount by source (include SILC savings and dividends for this source)

Savings & Loan Utilization		**Amount ETB**		
		SILC	**MFI**	**Other**
1	Food purchases			
2	Medical costs			
3	Education/schooling *(fees/uniforms/rent)*			
4	Land rent/property or home improvements *(corrugated roofing etc)*			
5	Purchase livestock or poultry			
6	Invested in petty trade/retail or other business			
7	Farming inputs *(animal treatment/seeds/fertilizers/pesticides/tools)*			
8	Social obligations/ceremonies *(weddings/funerals other contributions)*			
9	Pay taxes/debts/loans			
10	Clothes			
11	Transport costs			
12	Other *(specify)*			

3. Asset Inventory

3a. How much of the following do you own - or did you rent or cultivate (this year)?

Land *(kerti)*	

3b. Ask the respondent if they have increased the amount of land cultivated or number of trees since the project started. If the answer is yes, ask them to rank the 3 most important reasons for this increase.

Reason	Rank
	1
	2
	3

3c. Using the following table, ask the participants how many of each of the following assets they currently own? *(For livestock, 1. do not include any animals that you are looking after but belong to someone else 2. For sales indicate normal or Stress sales)*

Livestock Type Sold	**No.**
Oxen/bulls	
Cows	
Steers	
Heifers	
Calves	
Sheep	
Goats	
Donkeys	
Poultry	
Mules	
Horses	
Camels	
Bee colony	

Productive Asset Type	**No**
Plough with accessories	
Sickle	
Pick Axe	
Axe	
Hoe	
Spade	
Seed store (*Gotera*)	
Animal Cart	
Grain mill (hand)	
Grain Mill (diesel)	
Wheelbarrow	
Traditional Beehives	
Modern Beehives	

Household Item Type	**No**
Tables	
Mattresses	
Bed	
Mats	
Chairs	
Cupboards	
Jericans	
Pots/Pans	
Lanterns	
Radio or cassette player	
Bicycles	
Mobile phones	
Charcoal stove	
Kerosene stove	

☐ Stress sale

☐ Normal sale

3d. Ask the participant if there has been an increase in their total **livestock holdings**, or in the value of their livestock holdings since the project started. If the answer is yes ask them to score the factors contributing to this increase against the following indicators:

Method proportional piling using 100 counters *(if the factor did not contribute – put zero)*

Contributing factors	**Score**
Credit from MFI (OCSCO)	
Credit from other source (project credit)	
Purchased with SILC loan or income from SILC investments*	
Purchased with income from fattening	
Purchases with income from wheat sales	
Purchased with income from haricot bean sales	
Purchased with income from the sale of livestock or livestock products	
Purchased with PSNP income	
Purchased with income from any other source (crop sales, petty trade/IGA, labor)**	
We were given this asset *	
Livestock reproduced/matured	
Other reason	
Total	**100**

* In other words not just the credit, but also interest and profit/income derived from loan investments
**Include all other income sources chat trading, remittances, employment etc.

3e. Now repeat the same exercise for any reported increase in **Productive assets (tools)** or **Household items**

Method proportional piling using 100 counters

Contributing factors	**Score**
Credit from MFI – OCSSCO	
Credit from other source	
Purchased with SILC loan or income from SILC investments*	
Purchased with income from fattening	
Purchased with income from wheat sales	
Purchased with income from haricot bean sales	
Purchased with income from the sale of livestock or livestock products	
Purchased with PSNP income	
Purchased with income from any other source (crop sales, petty trade/IGA, labor)**	
We were given this asset	
Other reason	
Total	**100**

4. Income from FATTENING & CROP UTILIZATION

What quantity of the following products from your own (farm) production did you sell from the last harvest?

1	**2**		**3**	**4**
	Commodity	**Produced/finished**	**Sold**	**Income**
A	Fattening	No.	No.	ETB
B	Wheat	Kg	Kg	ETB
C	Haricot beans	Kg	Kg	ETB

4b. Take the amount (ETB) from A4 and B4 *(previous page)* and put it in the Total cell in the following table

Income utilization	Fattening (ETB)	Wheat (ETB)
Food purchases		
Medical costs		
Education/schooling *(fees/uniforms/rent)*		
Land rent/property or home improvements *(corrugated roofing etc.)*		
Purchase livestock or poultry		
Invested in petty trade/retail or other business		
Farming inputs *(animal treatment/seeds/fertilizers/pesticides/tools)*		
Social obligations/ceremonies *(weddings/funerals other contributions)*		
Pay taxes/debts/loans		
Clothes		
Transport		
Other (specify)		
Total	**A4=**	**B4=**

5. TOTAL HOUSEHOLD EXPENDITURE

a) Last year – how much of your household income was spent on the following items? *(if nothing put zero)*

	Expenditures	**ETB**
1	Land rent- property (home improvements)	
2	Farming inputs/tools/fertilizer/seeds/animal treatment	
3	Livestock and poultry investments	
4	Education/schooling (transport/fees/rent/uniforms/supplies)	
5	Medical expenses (transport/medicine/doctors fees)	
6	Clothing	
7	Household items (furniture/bedding/utensils etc.)	
8	Social obligations (weddings/funerals/other contributions)	
9	Debts or loan repayment	
10	Taxes	
11	Transport	
12	Other key expenditures *(specify)*	
TOTAL		

5b. In comparison to all the expenditures mentioned - last year, what proportion of your total household expenditure was spent on the following?

Method: proportional piling with 30 counters

Item	**Score**	*For this exercise, take 30 counters to represent the households' total expenditure last year. Then ask the respondent to sort the counters into three different piles to represent the proportion spent on food and income generating activities (IGA)*
Food and household consumables		
Business, retail, trade, other IGA		
Other		
	30	

6. INCOME

6a. Last year - what proportion of your annual household income came from the following sources?

Method: Proportional Piling with 100 counters - *(if nothing put zero)*

	Income source	Score
1	Wheat sales– *not trade*	
2	Other cereals	
3	Haricot beans	
4	Other cash crops *(from **own farm** production)*	
5	Fattening	
6	Livestock and livestock products (include poultry)	
7	Petty trade	
8	PSNP income	
9	Labor/employment	
10	Firewood or fodder sales	
11	IGAs/cottage industry *(handicrafts/knitting/basket weaving/brewing etc)*	
12	Land rent	
13	Others *(specify)*	
	TOTAL	100

6b. Income Changes

Method: Scoring against a nominal baseline of 10 counters

Before (counters)	Now (counters)	*For this exercise, use 10 counters to represent the participants' total household income before the project started.* *Now ask the respondent to compare this with their current income - by either adding or taking away counters to show an increase or decrease in total household income.*
10		

6c. If there has been an increase in 'cash' income – ask the participant to score the project, non-project and PSNP factors contributing to this improvement:

Method (proportional piling with 50 counters)

Factor	**SCORE**
PSNP	
Fattening	
Wheat	
SILC	
Other	
Total	**50**

6d. Now ask them to specify and rank the **other reasons** in order of importance:

Method: Simple Ranking (top 5 reasons only)

Other reasons for changes in household income	**Rank**
	1st
	2nd
	3rd
	4th
	5th

7. Other Project Benefits

7a. On a scale of zero to three - To what extent has the project:

(0=not at all; 1= a little; 2=medium; 3= plenty)

Method (either simple ranking or proportional scoring depending on literacy level)

	SCORE
Enabled you to accumulate assets?	
Enabled you to protect your assets?	
Contributed to household food security?	
Helped you cope with the drought in 2009?	
Helped you recover from the drought?	
Improved your business skills?	
Improved your knowledge of savings and finances?	
Increased your savings?	
Improved your access to credit?	
Improved your access to inputs for wheat production or fattening?	
Improved your skills/knowledge on wheat production or fattening?	
Increased the quantity of wheat produced or number of finished animals?	
Improved the quality of wheat produced or fattened animals?	
Increased your income from wheat sales or fattening?	
Improved your relationship with traders and or the private sector?	
Improved your financial decision making in the household	
Improved your relationship with neighbors and other community members	
Improved your status in the community	
Improved your resilience to drought or other livelihood shocks	

b. Ask the participants to identify any other important project benefits and give them a score of 1-5

(5 most important other reasons only)

Other project benefits	**Score**

We would like to thank you for your time. Do you have any questions that you would like to ask us, or is there anything else you would like to tell us about the project, and how it might be improved?

Checklist consolidated/translated/summarized and formatted for the report