Baseline Study of the *Ifaa* Resilience Food Security Activity in Ethiopia

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ACRONYMS

ANC	Antenatal Care
BHA	Bureau for Humanitarian Assistance
CAPI	Computer-Assisted Personal Interviews
CMAM	Community-Based Management of Acute Malnutrition
CPR	Contraceptive Prevalence Rate
CRS	Catholic Relief Services
DFSA1	Development Food Security Activity 1
DS	Direct Support
ESMF	Environment and Social Management Framework
FAO	Food and Agriculture Organization of the United Nations
FCS	Food Consumption Score
FDP	Food Distribution Points
FIES	Food Insecurity Experience Scale
FMNR	Farmer Managed Natural Regeneration
FSTF	Food Security Task Force
GBV	Gender-Based Violence
GoE	Government of Ethiopia
GWRA	Girls and Women of Reproductive Age (15-49)
HEW	Health Extension Workers
HH	Household Head
IE	Impact Evaluation
IGA	Income Generation Activities
IMPEL	Implementer-Led Evaluation and Learning Associate Award
IYCF	Infant and Young Child Feeding
LF	Lead Farmer
MAD	Minimum Acceptable Diet
MDD	Minimum Dietary Diversity
NGO	Non-Governmental Organization
NRM	Natural Resource Management
ORT	Oral Rehydration Therapy
PIM	Program Implementation Manual
PLW	Pregnant and Lactating Women
PPP	Purchasing Power Parity
PSNP	Productive Safety Net Programme
PSNP5	Productive Safety Net Programme Phase 5

PW	Public Work
RCT	Randomized Controlled Trial
RFSA	Resilience Food Security Activity
RL	Religious Leader
SBC	Social and Behavioral Change
SPIR	Strengthen PSNP Institutions and Resilience
TDS	Temporary Direct Support
USAID	United States Agency for International Development
USD	United States Dollar
WASH	Water, Sanitation, and Hygiene
WASHCO	WASH Community Organization
WRA	Woman of Reproductive Age

EXECUTIVE SUMMARY

This report captures baseline round data collected from May to July 2022 of the *Ifaa* resilience food security activity (RFSA) implemented by Catholic Relief Services (CRS) in the region of Oromia in Ethiopia. Oromia is Ethiopia's largest, most populous region and one of its poorest, with complex and interlinked causes of poverty and food insecurity. The goal of the *Ifaa* RFSA is to improve the food security of vulnerable households in targeted Productive Safety Net Programme (PSNP) communities, contributing to a sustained reduction in rural poverty in Oromia. Per the goals and objectives of reducing food insecurity and poverty, *Ifaa* aims to provide a range of support interventions to more than 60,000 households. These interventions aim to strengthen and improve government services; agriculture and livelihood opportunities; health and nutrition; water, sanitation, and hygiene (WASH); gender and youth empowerment; and natural resource management and the environment.

Under the Implementer-Led Evaluation and Learning (IMPEL) Associate Award funded by the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance (BHA), Causal Design is conducting an Impact Evaluation (IE) of the *Ifaa* RFSA using baseline and endline survey data in the target areas in Oromia, Ethiopia. The IE relies on a clustered randomized controlled trial (RCT) design to estimate its impact on study indicators that include food security, child nutrition, and health; women's maternal nutrition; WASH practice; agricultural practice and production; poverty measurement; gender dynamics; and resilience. In the case of the *Ifaa* RFSA IE, the interventions allowed for randomization at the kebele level (the smallest administrative unit in Ethiopia) to create a set of treatment and control kebeles. The treatment kebeles will receive the *Ifaa* Enhanced Package of interventions, while the control kebeles will receive the Basic PSNP package of interventions. As a result, the analysis will focus on the effect of the *Ifaa* Enhanced Package for PSNP Phase 5 (PSNP5) households on food security and other development outcomes. Overall, analysis at the baseline suggests that the IE is well-placed to estimate these differences at the endline, and treatment and control groups have similar key characteristics.

Baseline Survey Sample

Baseline data were collected in 120 study kebeles across eight woredas in Oromia. Households included in the sample were PSNP5 households with a girl or woman 15–49 years old. The findings presented in this report are representative of this study population, which is the target population for *Ifaa* activities, but poorer than the general population. By the end of data collection efforts, 4,683 households were surveyed, 1,950 were in control kebeles, and 2,733 were in treatment kebeles.

Key Findings

Demographic Profiles

The average household size in the sample is six. On average, a household has 0.83 children under the age of 5. The level of schooling in the sample is low: around 26% of the adult population has at least some schooling, and this share drops to 13.7% among household heads. Regarding work-related activities, around 66% of adults are farmers, and 31.4% of people 10 years or older did any work and were paid in cash in the last 12 months.

Food Security

Food security was estimated using two standard measurement approaches, the Food Insecurity Experience Scale (FIES) and the Food Consumption Score (FCS) index. Based on the FIES, 77.6% of the population faces severe food insecurity, and over 96% are at least moderately food insecure. The FCS, which calculates overall consumption levels across food groups while accounting for cultural and regional weights for food preference and importance, finds that fewer than 7.8% of all households have an acceptable FCS, and almost 70% of households are considered to have a poor FCS. This reflects that households mainly consume staples daily and rarely consume meat, fish, milk, and dairy. Disaggregation by woreda (the third level of the administrative divisions of Ethiopia) shows large variability: while less than 40% of the households have a poor consumption score in Jarso, the share is more than 90% for Melka Belo.

Child Nutrition and Health

The overall diet quality for children 6 to 23 months appears to be poor across the survey population. Less than 2% of all children 6 to 23 months met minimum dietary diversity (MDD) criteria or minimum acceptable diet (MAD) standards. The low rates of dietary diversity drive the low rates of MAD. Most children consume either breastmilk or grains, roots, and tubers. Very few consume other food groups. Approximately 11% of children under 5 are reported to have experienced diarrhea within 2 weeks of the survey. Most children who experienced diarrhea were treated with oral rehydration therapy (ORT).

Women's Health, Maternal Nutrition, and Reproductive Health

Observations around the health and reproductive decisions of girls and women of reproductive age (GWRA) among surveyed households suggest very poor food consumption diversity and low levels of access to health personnel during pregnancy. Altogether, less than 1% of women consume a diet that meets the MDD criteria. More than 80% of women consume two or fewer food groups, and the most common food groups are grain, roots, and other vitamin-A-rich fruits and vegetables. On average, only 15.7% of women receive the recommended number of antenatal care (ANC) visits—at least four— during their most recent pregnancies, with more than 64% of these ANC visits being with nurses or midwives. Additionally, less than 10% of women in a union report using a modern method of birth control.

Water, Sanitation, and Hygiene Practices

Based on indicator criteria, 13% of all households have access to basic drinking water services. While 67.5% of households have water sources available all year round, only 30% have water sources within 30 minutes of their residence. Regarding treatment, sanitation, and hygiene practice, less than 3% of households were observed to have handwashing facilities available in the home, and less than 8% use at least one form of evidence-based household water treatment technologies. Most households (59%) practice open defecation, and 16% have household-level improved sanitation facilities.

Agriculture

More than 90% of households with an available plot of land engage in raising crops. Very few households grow haricot beans, groundnuts, or potatoes—the reported crops of focus. The most common crops are maize and sorghum, each cultivated by 73% and 56% of households growing at least

one crop. Regarding other support practices, nearly 90% of households use at least one natural resource management (NRM) practice. A high share of households (76%) reported using at least one value chain activity. The most common one was purchasing inputs for crops (used by 65% of households). Less than 19% of households used financial services.

The baseline livestock focus included goats, poultry, and oxen. 23.5% of households raised goats, 19.6% raised poultry, and 6.4% raised oxen. On average, around 83% of the households raising these animals reported them in good or normal condition. In addition, most households raising these animals reported having used at least one improvement or NRM practice.

Poverty Measurement

Based on the daily per-adult equivalent expenditure of less than $1.90 per day (2011 purchasing power parity (PPP)), more than 92% of the surveyed households are considered *poor*. The depth of poverty of the poor is 54%, which means that the average poor person is 54% below the poverty line. In monetary terms, it would require an additional $1 per person per day to bring every poor person out of poverty.

Gender Dynamics

Around 23% of men and women in a union reported earning cash in the past 12 months. Among women earning cash, a majority (70%) reported that they participate in decisions about how to use self-earned cash, while 44% reported they participate in decisions about how to use their partner's self-earned cash. Around 59% of people in a union are members of a community group, with more men (66%) than women (51%) belonging to a community group. In terms of access to credit, around 29% of men have access to credit, while the share of women with access to credit is slightly lower (26%). Of those with access to credit, around 30% make decisions about credit, with very similar rates for men and women.

Resilience

Researchers captured resilience indicators through several questions, including indices constructed to assess overall resilience capacities. Generally, households perceive their ability to meet their current needs as worse than the previous year and suspect that their future ability to meet these needs will deteriorate. The most common shock reported by households was drought or little rain (89%). The second most common shock was increased food prices (71%). Out of the average 3.6 shocks experienced across the sample, households perceived them to be severe, likely impacting the perceived ability to recover. Regarding the capacity to absorb shocks, very few households (less than 2%) have access to financial resources or crop insurance to absorb shocks. Another way to mitigate the impact of shocks is to draw on social networks. In this case, the social capacity index for the sample was 50 (out of 100), which means that the average household could give and receive help from 1.5 out of three groups of people.

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1.   INTRODUCTION

Since its inception in 2005, the Productive Safety Net Program (PSNP) has been a cornerstone of the Ethiopian government's strategy for poverty alleviation, disaster risk management, and rural development. The PSNP provides food or cash transfers targeted to poor households in the form of payments for seasonal labor on public works (PW) or as direct support (DS) to households whose primary income earners are elderly or disabled. The PSNP has played an important role in improving the lives of poor Ethiopian households by reducing household food insecurity, increasing asset holdings, and improving agricultural productivity (Berhane et al. 2014; Hoddinott et al. 2017). PSNP has evolved through several phases, the fifth phase of the Productive Safety Net Program (PSNP5) began operating in 2021.

Under the Implementer-Led Evaluation and Learning (IMPEL) Associate Award funded by the United States Agency for International Development (USAID) Bureau for Humanitarian Assistance (BHA), Causal Design is conducting an impact evaluation (IE) of the *Ifaa* resilience food security activity (RFSA) in the region of Oromia in Ethiopia. Catholic Relief Services (CRS) implements Ifaa with the main goal of *Ifaa* of improving the food security of vulnerable households in targeted PSNP communities to contribute to a sustained reduction in rural poverty. *Ifaa* aims to provide a range of support interventions to more than 60,000 households. The IE uses a cluster randomized control trial (RCT) design that randomly selects the kebeles that will receive the *Ifaa* Enhanced Package of interventions and the kebeles that will receive the PSNP Basic Package of interventions. This design allows the IE to answer the following research question:

> *What is the impact of the Ifaa Enhanced Package of interventions for PSNP5 households compared to the PSNP Basic Package on reducing food insecurity, nutrition, and other related outcomes?*[1]

This is an important research result since CRS considers the Enhanced Package's interventions to lead to significant improvements for the PSNP households. The evaluation seeks to inform the larger conversation around the efficacy of RFSA interventions among vulnerable populations.

This report summarizes the results of the baseline study conducted in May–July 2022. The baseline data were collected in 120 IE study kebeles across eight woredas in Oromia. Households included in the sample were PSNP5 households with a girl or woman[2] aged 15–49 years. Given that the sample was selected from such a specific target population, neither the study nor its conclusions can be considered representative of all RFSA households. Therefore, estimates represent PSNP households with a girl or woman aged 15–49 years. However, as a Strengthen PSNP Institutions and Resilience (SPIR) baseline study found, more than 80% of PSNP households have a woman of reproductive age (WRA). Thus, it is

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[1] The reader can consult the pre-analysis plan of the impact evaluation (IMPEL 2022) for more details.
[2] Because of the focus on households with a girl or WRA, throughout the text, we will use the term women to refer to girls and women aged 15–49 years. It is important to highlight that under Ethiopian law, any individual under 18 cannot be considered an adult or defined as a "woman" or "man."

likely that the study is largely representative of PSNP households. In addition, Causal Design has worked closely with BHA and relevant stakeholders to identify key learning objectives and ensure that the baseline survey and study can contribute to this learning where possible.

The baseline report is organized as follows: Section 2 presents an overall description of the *Ifaa* interventions and discusses the characteristics of the two packages that will be the subject of the IE study. Section 3 provides an overview of the evaluation design and the baseline report and discusses some of the challenges and limitations of the study. Section 4 summarizes the baseline survey data and the balance test comparing the RCT's two arms. Section 5 includes a similar exercise comparing livelihood and non-livelihood kebeles. Finally, Section 6 presents the conclusions of the report.

2. *IFAA* ACTIVITIES AND SERVICES

Per the goals and objectives of reducing food insecurity and promoting wellbeing and welfare among participant kebeles, the *Ifaa* RFSA aims to provide a range of support interventions to more than 60,000 households. These interventions aim to strengthen and improve government services; agriculture and livelihood opportunities; health and nutrition; water, sanitation, and hygiene (WASH); gender and youth empowerment; and natural resource management (NRM) and the environment.

To improve the food security of vulnerable households in targeted PSNP communities and contribute to a sustained reduction in rural poverty in Oromia, *Ifaa* interventions are organized around three main purposes:

1. Vulnerable households and individuals have sufficient quantity, quality, and diversity of food at all times.
2. Vulnerable community members' livelihoods are transformed.
3. PSNP Systems deliver accountable, effective, and shock-responsive services.

Ifaa will target nine woredas in the region of Oromia. These woredas were selected based on poverty level, the potential for scaling up the PSNP, the potential for the continuum of the response with other programs, the presence of partners, and the opportunity for impact. The nine woredas include four that were part of the previous Development Food Security Activity 1 (DFSA1) program implemented by CRS and five newly added woredas. The *Ifaa* activities and services will prioritize pregnant and lactating women (PLW) to increase the likelihood that children under 5 receive appropriate nutrition, the activity reaches vulnerable community members, and behavioral changes lead to a lasting change.

2.1 Activities Under the Impact Evaluation

Of the nine woredas and 241 kebeles in which CRS has implemented *Ifaa*, the IE will take place in a subset of 120 kebeles in eight woredas.[3] These kebeles were randomly allocated to one of two packages:[4] PSNP Basic (control) and *Ifaa* Enhanced (treatment). Table 1 shows a subset of the interventions and how they are mapped to these two evaluation packages.[5] The Basic PSNP package is a set of interventions selected and implemented by the Government of Ethiopia (GoE) to support its most vulnerable populations. The *Ifaa* Enhanced Package is the most comprehensive and contains all the interventions in the PSNP Basic Package, plus additional interventions under each domain. Each kebele that is part of the evaluation study will receive the interventions associated with only one of the two evaluation packages. The interventions under livelihoods are special because only a subset of the kebeles is eligible[6] to receive those interventions. To account for this, the IE study will include two groups of kebeles: (i) those eligible to receive livelihood interventions and (ii) those that are ineligible.

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[3] Section 3.1.2.1 discusses in more detail the selection of the 120 kebeles, and Table 71 in Annex C contains a list of the 120 kebeles with their treatment and livelihood status.

[4] Section 3.1 provides more detail on the randomization and sampling strategy.

[5] Table 60 in Annex B contains the complete list of interventions.

[6] The criteria used by CRS to target livelihood kebeles included the following factors: (i) access to markets, (ii) road access, (iii) access to financial service providers, (iv) access to agricultural extension services (public and private), (v) access to functional small-scale irrigation, (vi) potential for crop and livestock production, (vii) access to other services (public work, university, and agricultural research demonstration plots), (viii) kebele potential for *Ifaa* sectoral integration and (ix) PSNP caseload.

Causal Design will take advantage of the layering approach and compare kebeles receiving the *Ifaa* Enhanced Package against kebeles receiving the PSNP Basic Package. Because of the differentiation between livelihood-eligible and livelihood-non-eligible kebeles, we are effectively making two comparisons. Comparison 1 is livelihood kebeles receiving PSNP Basic (including livelihood interventions) against livelihood kebeles receiving the *Ifaa* Enhanced Package. Comparison 2 is non-livelihood kebeles receiving PSNP Basic (excluding livelihood interventions) against non-livelihood kebeles receiving the *Ifaa* Enhanced Package without livelihood interventions.

Table 1. List of interventions across the two evaluation packages[7]

Interventions	Basic PSNP	*Ifaa* Enhanced
Livelihoods		
Saving group	*X*	*X*
Financial literacy training	*X*	*X*
Support and training in business plan development	*X*	*X*
Credit guarantee fund (conditional capacity building)		*X*
Value chain financing co-investment		*X*
Youth fund ($250)		*X*
Gender youth and social dynamics		
Implementation of Program Implementation Manual (PIM) gender provisions: Monitoring implementation of PIM gender provisions (e.g., exemption of PLW) until the child is 2 years)	X	X
Monitoring implementation of gender-based violence (GBV) action plan included in the PSNP5 (e.g., the program grievance redress mechanism supporting to accept appeals related to GBV and refer to locally available GBV response services)	X	X
Leadership training for women and youth in leadership positions		X
Community conversations for adults and youth		X
PSNP systems		
Provision of three food components (wheat, oil, and pulse) to Permanent Direct Support and Public Work (PW) clients to meet the daily food kilo/calorie requirement	X	X
Food security task force (FSTF) capacity building (woreda, kebele, community levels)	X	X
FSTF capacity building, specifically focusing on leadership & communication essential training, in addition to the basic FSTF capacity building		X

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[7] Readers interested in the complete list of interventions, as well as a short description summary of each one of them, can consult Annex B.

Interventions	Basic PSNP	*Ifaa* Enhanced
Private sector engagement: transportation of food from Primary Distribution Points to Food Distribution Points (FDP), construction of SEIs (same as PSNP Basic)		X
Health and nutrition		
Linkage to services (ensuring transfers for temporary direct support (TDS), supporting TDS PW clients to attend PW Social and Behavioral Change (SBC) sessions, and other health and nutrition services like antenatal care (ANC), growth monitoring, immunizations, etc.)	X	X
Capacity building training for government and partner staffs: adolescent nutrition, Community-based management of Acute Malnutrition (CMAM), Religious Leaders (RLs) materials.	X	X
GoE basic health extension program	X	X
Additional health extension programs (includes remote trainings, lead parents, motivation of health development armies)		X
System strengthening through the capacity building and provision of materials (referral pads, formats, reg. books, SBC materials, etc.)		X
Environment and natural resource management		
Training woreda GoE on equitable allocation and disbursement of resources for PSNP plan implementation	X	X
Watershed management planning	X	X
Implementation of the Environment and Social Management Framework (ESMF)	X	X
Integrated Water Resources Management: water supply, risk management, and water benefits calculator		X
Farmer Managed Natural Regeneration (FMNR): land restoration technique—introducing FMNR approach, organizing user groups, and leveraging with agroforestry practices		X
WASH		
Water development, monitoring, and governance	X	X
Community-led total sanitation and hygiene		X
Market-based sanitation and hygiene		X

3. METHODOLOGY AND LIMITATIONS

The IE of the *Ifaa* activity uses a cluster RCT design at the kebele level, a small administrative unit in Ethiopia. Causal Design conducted a baseline survey of households in May–July 2022. The endline survey is planned for the second quarter of 2025. Below we present an overview of the evaluation design, a description of the baseline data collection activities, and the challenges and limitations of the study. A more detailed description of the methodology can be found in the Pre-Analysis Plan.

3.1 Evaluation Design

The evaluation will use a clustered RCT design, which randomizes the selection of kebeles that receive the *Ifaa* Enhanced Package and the kebeles that receive the PSNP Basic Package in the Oromia region of Ethiopia. The group of kebeles receiving the *Ifaa* Enhanced Package will be referred to as the "treatment group," while the set receiving the PSNP Basic Package will be referred to as the "control group." The two evaluation packages were proposed by the implementing partner.

3.1.1 Randomization Strategy

The research team worked with CRS to randomize the *Ifaa* Enhanced and PSNP Basic interventions rollout across 120 kebeles. Based on power-level calculations and implementor-specified targets, the research team randomly allocated 50 kebeles to the control group and the remaining 70 to the treatment group. Half of the control kebeles (25) are eligible to receive livelihood interventions, while the other half are not eligible to receive those interventions. Something similar happens for the treatment kebeles: half (35) are eligible to receive livelihood interventions, while the other half are not.

The research team used a stratified randomization approach to guarantee a better balance. This technique involves dividing the sample of kebeles into groups sharing similar characteristics. Based on the information provided by CRS, the evaluation team used two strata: woredas[8] and livelihood eligibility. Kebeles within a given woreda and livelihood eligibility status were randomly allocated to treatment and control. This approach ensures that treatment and control groups are balanced by the strata used. To conduct the randomization, pseudo-random numbers generated by Stata[9] were used.

3.1.2 Sampling Strategy

3.1.2.1 Kebele Level

Ifaa will implement interventions in nine woredas (Ethiopian districts), made up of 241 kebeles. CRS identified Meta, one of the nine woredas selected, as a "big push plus" woreda, which will receive additional interventions. As these additional interventions could not be randomized, Meta was not selected to be a part of the IE study. Thus, only eight of the nine woredas are participating in the IE. Eleven kebeles within these eight woredas were also not selected to be a part of the (IE) study due to

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[8] The woreda was used as the stratum of randomization for two main reasons: (i) it will allow providing a balance of treatment assignment geographically, and (2) the woreda is the main administrative structure for local government which shapes local public expenditure and public service delivery.

[9] The command used in Stata was runiform.

persistent security issues, making it difficult for CRS to implement interventions effectively. Additionally, 11 kebeles were purposefully selected to receive integrated watershed management+[10] and thus were not included in the IE study. Out of the remaining 196 kebeles, 120 were randomly selected for the study.

Figure 1 presents a diagram illustrating the selection of the 120 kebeles for the IE study, while Figure 2 shows a map with the location of these kebeles and their respective woredas.[11] As was discussed in previous sections, only half of the 120 kebeles in the IE study are eligible to receive livelihood interventions. Within each group, kebeles will be randomly assigned to control or treatment (resulting in four groups of kebeles). Twenty-five livelihood kebeles assigned to the control group will receive all the Basic PSNP interventions (including the livelihood ones), while the remaining 35 livelihood kebeles in the treatment group will receive the *Ifaa* Enhanced Package. For the kebeles not eligible to receive livelihood interventions, 25 control kebeles will receive the Basic PSNP interventions but without livelihood interventions, while the remaining 35 treatment kebeles will receive all the *Ifaa* Enhanced Package but without livelihood interventions.

Figure 1. Selection of 120 kebeles part of the IE

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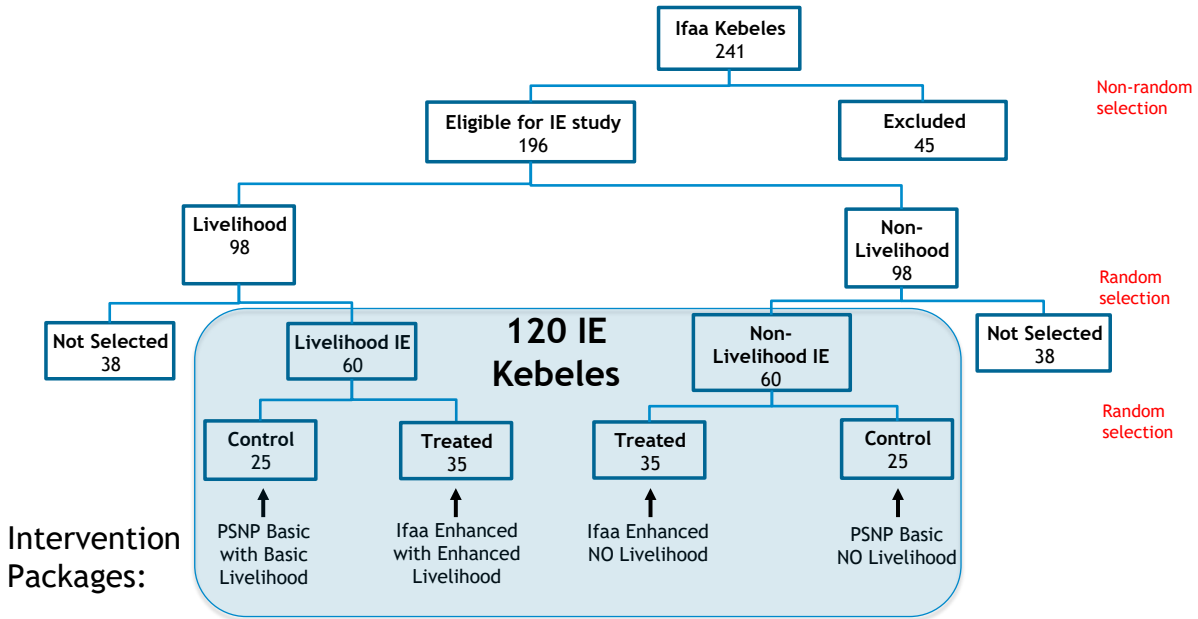
[10] Since these kebeles were selected based on specific characteristics and not randomly selected, it is impossible to construct a valid control group.

[11] Babile, Deder, Melka Belo, Gursum, Fedis, Midgega Tola, Chinaksen, and Jarso. All 120 kebeles can be found in Table 23 in Annex C.

Figure 2. Map of the *Ifaa* woredas and kebeles participating in the Impact Evaluation
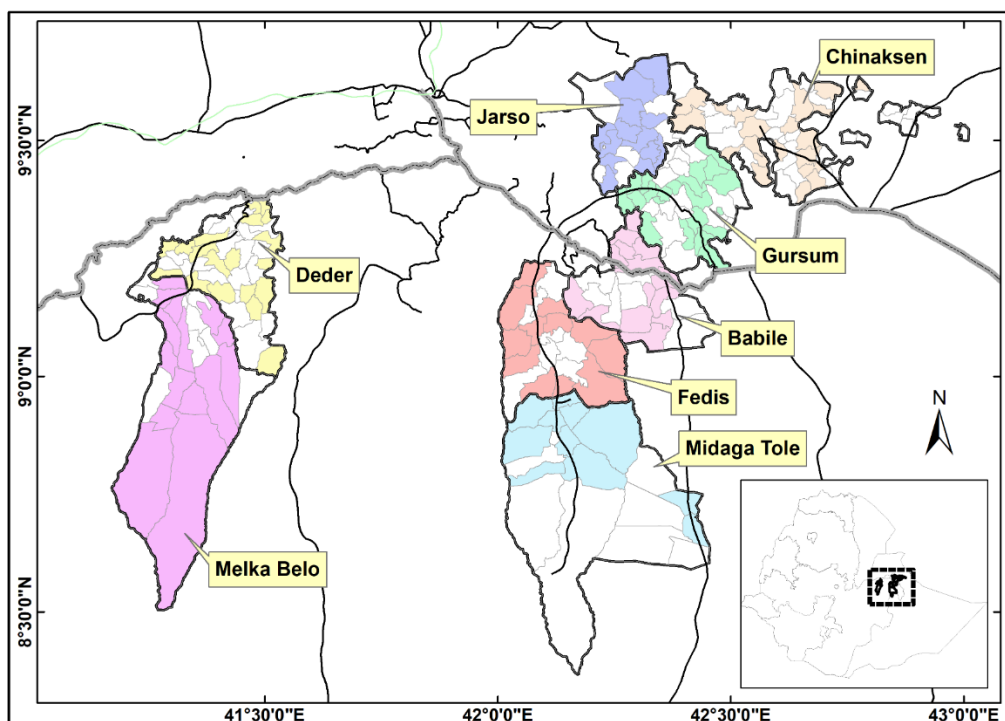
3.1.2.2 Household Level

Based on power calculations,[12] the research team decided to survey 39 households per kebele in each of the 120 kebeles, for a total of 4,683 households. Out of these, 1,950 households are located in control kebeles, while the remaining 2,730 are in treatment kebeles.

Household inclusion criteria. To select the sample of households for their inclusion in the survey, we used two inclusion criteria: households must be PSNP participants and must have at least one girl or woman of reproductive age (GWRA), which is defined as girls and women 15–49 years old.[13] The first criterion was used because CRS targets their package of interventions to PSNP households. The second criterion was motivated by the fact that adolescent girls and GWRA are also targets of many *Ifaa* activities, in particular, those related to nutrition and gender, and thus we expect to benefit the most from these activities. Moreover, many BHA indicators are specific to GWRA and their young children, so by sampling GWRA, we increase the likelihood that the household will have a child under 5.

This strategy primarily excludes elderly households and is justified by the following reasons: (i) most PSNP households have at least one WRA,[14] and (ii) because of the nature of the *Ifaa* Enhanced Package, elderly households are not likely to be substantially affected by the Enhanced Package. Most interventions, such as those related to nutrition, youth, and livelihoods, target households with children, youth, or working-age members. In addition, many nutrition and health outcomes are specific to young

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[12] The power calculation exercises can be found in Vol. II Section 2.3.1 "Power Calculations" of this baseline report.

[13] While the term GWRA is used to define girls and women aged 15–49, under Ethiopian law, any individual under the age of 18 cannot be considered an adult nor defined as a "woman" or "man."

[14] Based on authors' calculations from a PSNP4 dataset, 82.5% of PSNP households had a woman of reproductive age.

children or GWRA. Accordingly, the sample selected will represent the households predominantly targeted by the PSNP and RFSA interventions.

Individual selection within the household. The research team selected randomly or purposively[15] one target individual for each outcome[16] instead of interviewing every eligible individual. The primary reason for this choice is that interviewing every eligible individual in the household is very time-consuming and costly for the household and for data collection. In addition, we do not need more than one individual per household for power reasons, and outcomes would generally be highly correlated within households. Thus, the additional information provided is limited. Typically, interviewing multiple individuals per household is useful if the objective is to compare outcomes across individuals in the same household: for example, in polygamous households comparing outcomes between first and second wives.[17] However, this is not part of the IE design, and thus it is not worth the additional costs. Given the previous considerations, Table 2 provides more detail about the sampling strategy.

Table 2. Sampling strategy

Module	Sampling choice
D: Children's nutritional status and feeding practices[18]	Prevalence of exclusive breastfeeding (children 0–5 months): randomly sample one child in this age range. Children's feeding practices and diets (children 6–23 months): randomly sample one child in this age range. Children's diarrhea (children 0–59 months): randomly sample one child in this age range.
E: Women's health, nutritional status, dietary diversity, and family planning	Randomly sample one woman 15–49 years old
G: Agriculture	Select the person most informed about agriculture production in the household[19]
J: Gender (cash)	Select adult most knowledgeable about household affairs and spouse[20]
K: Gender access to credit and group participation	Select adult most knowledgeable about household affairs and spouse[21]

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[15] This selection was used when we wanted to target one person more knowledgeable about the set of questions.

[16] The random household selection processes were embedded in the survey tool. When a random member of the household needs to be selected, the survey tool runs a randomization algorithm using the household roster.

[17] For polygamous households, we randomly selected one wife from available wives.

[18] Causal Design randomly selected children 0–5 months, 0–23 months and 0–59. This selection will be done independently, so that the same child could be selected twice (e.g., a child 8 months old could be selected for age bracket 6–23 months and age bracket 0–59 months).

[19] This selection was done by asking the HH. To address issues around ownership and control, the survey contains follow-up questions on specific individuals involved in different activities.

[20] In the case that the HH is not married or in a union, we did not ask the questions related to a couple. In the case of polygamous households, we randomly selected from available wives.

[21] In the case that the HH is not married or in a union, we did not ask the questions related to a couple. In the case of polygamous households, we randomly selected from available wives.

Sampling Frame

To sample the households, we used a sample frame of PSNP households provided by CRS. The limitation of this dataset is that no information on the age of the household members was provided. For each kebele, PSNP households were randomly ranked,[22] and the first 39 households were selected to be surveyed. Enumerators went to these households, and if a household did not have a woman of reproductive age, the survey was immediately terminated. Then, the next ranked household was included in the list to be surveyed. This happened with 38 out of the 4,683 households.

3.1.3   Questionnaire Development

The baseline survey was developed with previous baseline surveys used by BHA and refined in consultation with BHA and the implementing partners.

The following survey modules were included:

- Module A: Household identification
- Module B: Roster
- Module C: Food access
- Module D: Child nutrition and health
- Module E: Women's nutrition and health
- Module F: Water, sanitation, and hygiene
- Module G: Agriculture
- Module H: Household expenditure
- Module J: Gender and cash use
- Module K: Gender and credit
- Module R: Resilience

3.2   Baseline Data Collection

The data collection activities occurred during May and June 2022, coinciding with the lean season. Researchers conducted the training during the first 6 days of the data collection activities, and a 2-day practical piloting at the field level followed the training. Teams conducted the pilot testing in Woreda Kimbibit in the North Shewa zone of the Oromia region.

For the data collection activities, 30 enumerators (eight women and 22 men) and six supervisors were deployed. The enumerators were divided into six teams. Each team was assigned a supervisor and was assigned to survey 1–2 woredas. To ensure quality data, the teams performed a series of activities during and after data collection. The data quality assurance undertaken during the data collection included: office-level phone call-backs and a 10% back-check on the interviewed households. Additionally, the research team undertook high-frequency checks regularly.

Sample Surveyed

The field data collection was expected to cover 4,683 households in 120 kebeles in eight woredas. Table 3 shows the number of households surveyed in each woreda.

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[22] Within a kebele each household will be assigned a random number. Households will be ranked by this number.

Table 3. Number of households per woreda

Woreda	Number of households
Babile	546
Chinaksan	819
Deder	706
Fedis	429
Gursum	740
Jarso	507
Melka Belo	507
Midega Tola	429
Total	**4,683**

During the survey activities, the enumerators faced issues surveying individual households and whole kebeles. In the first case, there were 126 households from the initial list that could not be surveyed. All 126 households with issues were successfully replaced with valid households.[23] Table 2 groups these households according to the reason for replacement. More than half of the replaced households had either migrated from the area or did not satisfy the inclusion criterion of having a woman of reproductive age.

Table 4. Household replacement cases

Reason for replacement	Number of households replaced
Migration	45
No eligible woman 15–49	39
Unknown in kebele	17
Not available after different visits	12
Duplicated household	9
Death of household member	4
Total	**126**

In the second case, the field team experienced issues accessing some kebeles because of the topographical characteristics of the area and poor road infrastructure. The field team used different strategies (e.g., traveling by foot or spending the night in the area of study) to overcome these problems with the result that only two kebeles (listed in Table 5) needed to be replaced.

Both kebeles used as replacements were assigned the same treatment status as the initial kebeles. Ibbsa (Gursum) was replaced by a livelihood kebele in Deder. This kebele was selected because it was located in one of two woredas where data collection was still happening. In addition, we used the random

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[23] The replacement was done following the random rank assigned to the households in the sample frame.

number generated initially to select the livelihood kebeles that would be part of the study. In the case of the second kebele, Hosale (Chinaksan), we chose one of the three kebeles that had been initially surveyed but randomly excluded when the design had to be adjusted.

Table 5. Kebele replacement cases

Initial kebele	Replacement kebele	Reason
Ibbsa, Gursum	Hake Bas, Deder	No sample frame available
Hosale, Chinaksan	Buyo Negeya, Gursum	Security Issues

3.3   Challenges and Limitations

3.3.1   Survey Challenges

The data collection activities took more time than initially expected because of the topographical conditions and the poor quality of the roads. In addition, some changes to the IE design were introduced at the beginning of the data collection activities,[24] which required excluding some of the kebeles initially selected and including new ones.

The characteristics of the sample frame also led to survey challenges. The sample frame provided by CRS did not have information about household members' ages, household location information was imprecise in many cases, and there were duplicated households. We addressed these issues by working with local authorities and using replacement households.

The final set of challenges related to the data collection tool. During data collection activities, we identified several issues related to the Computer-Assisted Personal Interviews (CAPI). These issues were promptly corrected but led to a loss of information in some modules.[25] In future survey rounds, we will allocate additional time for the survey company and Causal Design staff to quality-check the CAPI and make plans for a more extensive field pilot.

3.3.2   Limitations

The IE is characterized by several limitations, including:

- There are several large development organizations working in the region. Randomization of kebeles should ensure that kebeles are balanced in terms of other activities in the area. However, this could present challenges in identifying the effects of the *Ifaa* activity if interventions are concentrated in a certain part of the region. Therefore, during the study, CRS will collect information at the kebele level about the activities of other development organizations.
- An additional challenge is related to the permanence of the program beneficiaries. Because of the characteristics of the PSNP program, households might graduate from the program, and new

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[24] These changes were introduced after CRS specified that only some of the *Ifaa* kebeles would be receiving any type of livelihood activities. Therefore, to guarantee the validity of the IE study, the research team excluded some of the kebeles initially selected and included new ones to have the same number of kebeles receiving and not receiving livelihood activities.
[25] Most of the issues were associated with coding errors that led to questions being skipped. Section 4 discusses these issues and their implications in terms of sample size.

households might enter the program. To account for this, the sample calculations accounted for the possibility of attrition.

- An additional challenge is tracking households over time for the impact evaluation. In general, household migration rates are not expected to be high, and therefore the evaluation team anticipates that the majority of baseline households can be surveyed during the endline. In addition, the evaluation design has accounted for attrition, a pattern in which households observed at baseline are not observed at the endline.
- The survey was conducted during the COVID-19 pandemic, and anthropometric measures were not collected at baseline to maintain distance between enumerators and respondents and to minimize contact. Pending the improvement of the COVID-19 pandemic, these measures will be collected at the endline.

This section summarizes the characteristics of the sample and the main outcome variables. The section comprises nine subsections, each corresponding to a module in the baseline survey. Each subsection will present the main variables for the entire sample and discuss the main differences across woredas.[26] Balance test comparing treatment and control, as well as livelihood and non-livelihood kebeles, will be presented in Sections 5 and 6. In each table, the mean is presented in the "All" column, with the standard deviation represented by the figure in parentheses found below. Column "N" shows the total number of each group.

3.4 Characteristics of the Study Population

This section provides basic demographic information for the baseline sample. In each household, a roster was administered to collect information on each household member. Across the 4,683 households, there were 27,869 individuals. Table 6 presents some of the individual-level characteristics. Roughly 50% of the household members were female, and around 23% were GWRA. Figure 3 shows the sample population by age and gender. The average age is 19, and about 14% of the sample are children under 5. Among those 15 years old and older, 26% have at least some schooling, and 66% engage in some type of farming or livestock activity. For those over 10 years old, 31% worked for cash in the previous year.

Table 6. Individual-level sample characteristics

Outcome	N	All
Average age	27,869	19.16
		(16.13)
Percent of children under 5 years old	27,869	14.03
		(34.73)
Percent of children 5–14 years old	27,869	38.96
		(48.77)
Percent of adults (over 15 years old)	27,869	47.01

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[26] In the interest of space, we present the main indicators for the entire sample and focus on the most important differences across woredas. Annex B contains the complete list of indicators for the entire sample.

Outcome	N	All
		(49.91)
Percent of females	27,869	49.96
		(50.00)
Percent of GWRA	27,869	22.77
		(41.94)
Percent of adults who are married or in a union	13,102	57.2
		(49.48)
Percent of adults with any schooling	13,102	26.35
		(44.05)
Percent of adults who are farmers	13,098	66.19
		(47.31)
Percent of people older than 10 years who did any work and were paid in cash	13,478	31.45
		(46.43)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Figure 3. Age and gender composition of the sample
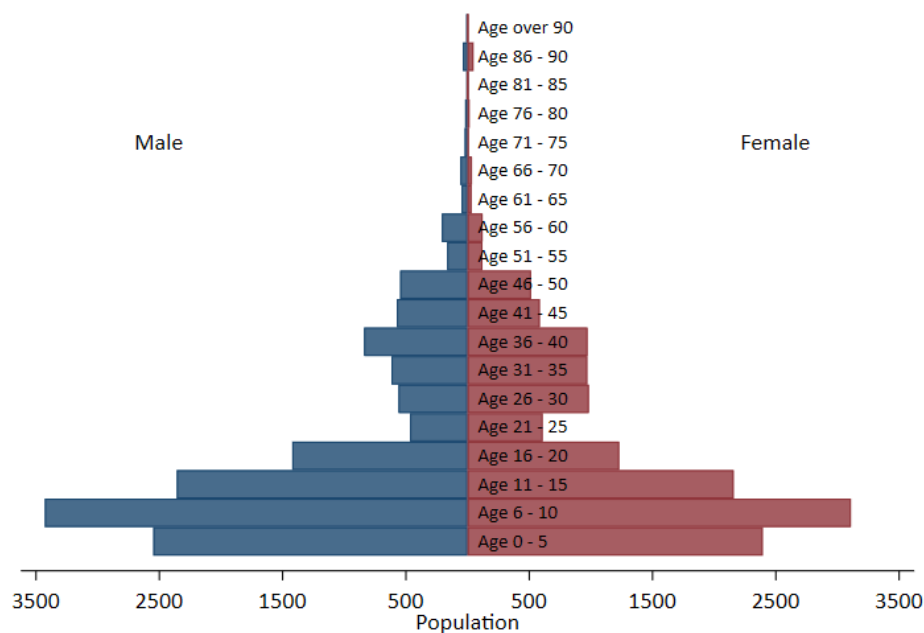
Table 7 provides basic household-level information about the sample. The average household size is close to six individuals, and the average number of children under 5 is 0.83. A large share (77%) of the household heads (HHs) is married or in a union, and close to 25% are female. Interestingly, the share of HHs with schooling (13.5%) is low compared to the overall sample of adults (26.35%). Furthermore, the difference in schooling between male and female HHs is substantial; while around 17% of male HHs have some schooling, only 2.7% of female HHs do.

Table 7. Household-level sample characteristics

Outcome	N	All
Average household size	4,683	5.95
		(2.16)
Average number of children under the age of 5 in the household	4,683	0.83
		(0.94)
Average age of HH	4,683	41.77
		(10.97)
Percent of HHs who are married or in a union	4,683	77.19
		(41.96)
Percent of female headed households	4,683	25.43
		(43.55)
Percent of HH with some schooling	4,683	13.5
		(34.17)
Percent of female HHs with some schooling	1,191	2.69
		(16.18)
Percent of male HHs with some schooling	3,492	17.18
		(37.73)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Figure 3 presents some variables disaggregated at the woreda level to show the variability across woreda. There is some variability in the share of adults with any schooling. For example, in Chinaksen and Fedis, the share hovers around 19%, while in woredas like Jarso or Gursum, the share is over 30%. A similar variability can be observed when we look at the schooling of HHs, even though, in this case Gursum, stands out with over 20% of HHs with schooling.

The graphs below examine work-related variables. There is a very large variability in the share of people older than 10 who worked and were paid in cash. The difference between the woreda with the lowest share (Gursum, 20%) and the highest (Melka Belo, 57%) is almost 37 percentage points, which is very close to the average share in the whole sample (31%). There is not a clear correlation between this variable and the share of workers that are farmers. There are woredas like Melka Belo, which has both a high share of people working for cash and a high share of farmers. There are also woredas like Fedis, which has one of the lowest shares of people working for cash and the highest share of farmers.

Figure 4. Selected household- and individual-level sample characteristics, by woreda

Household heads with any schooling

Adults with any schooling

Work and paid in cash

Farmers
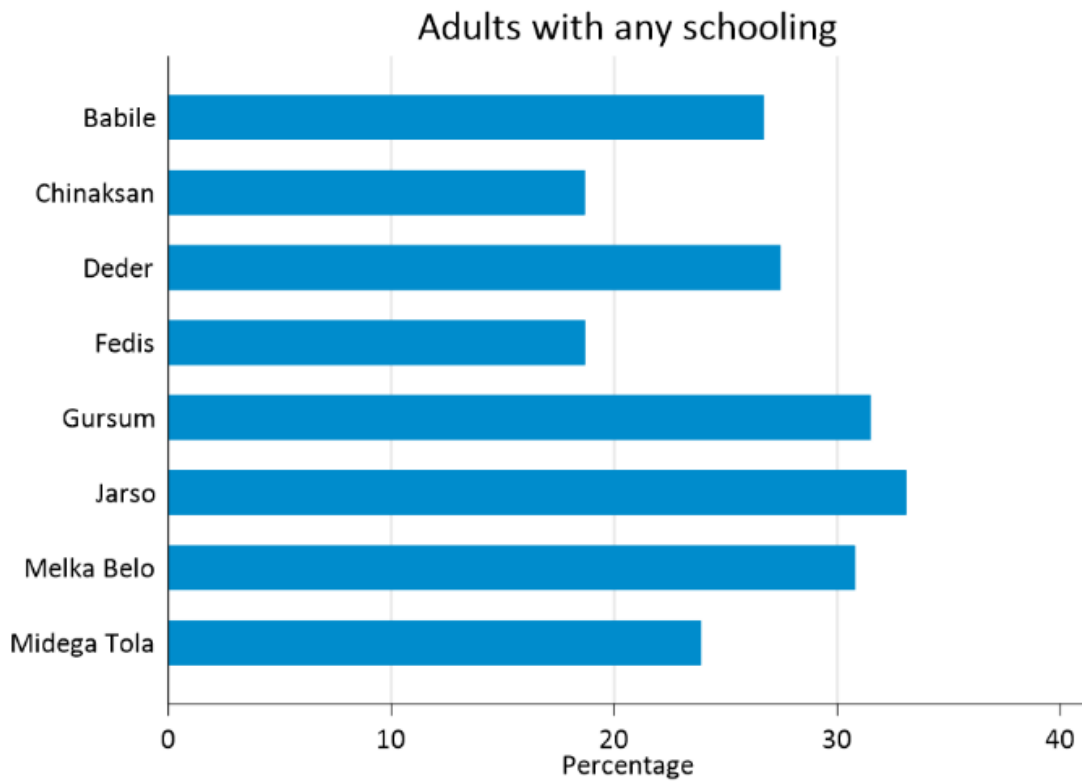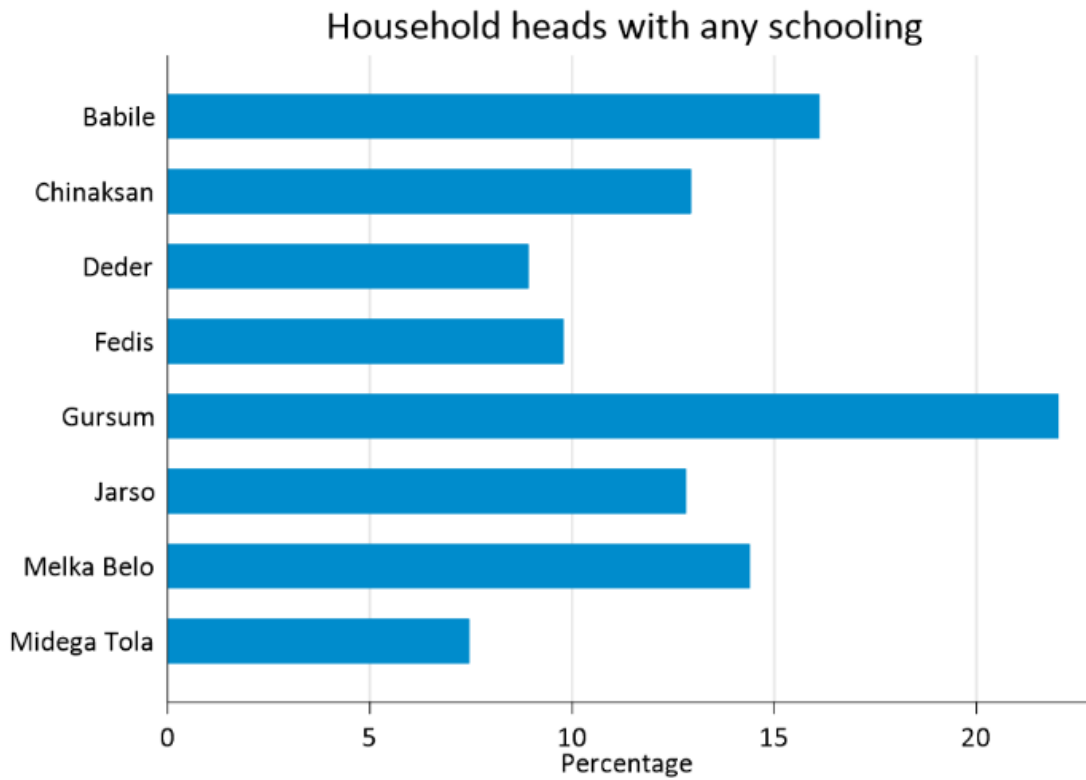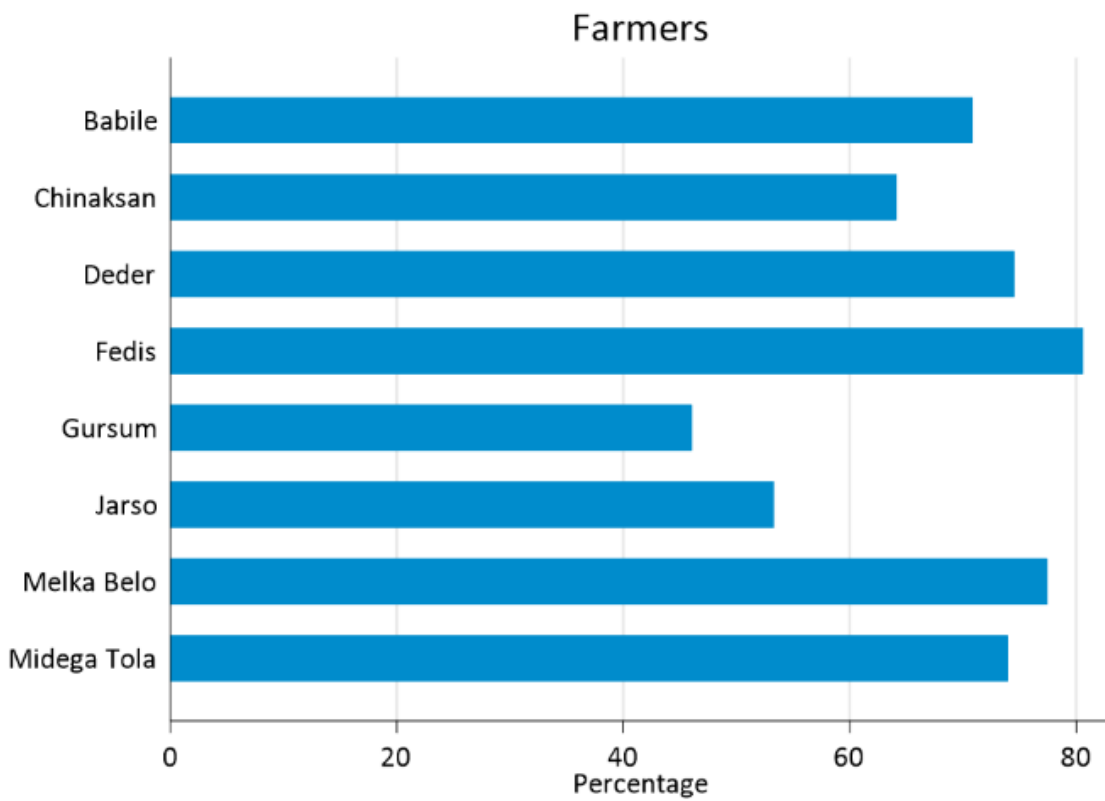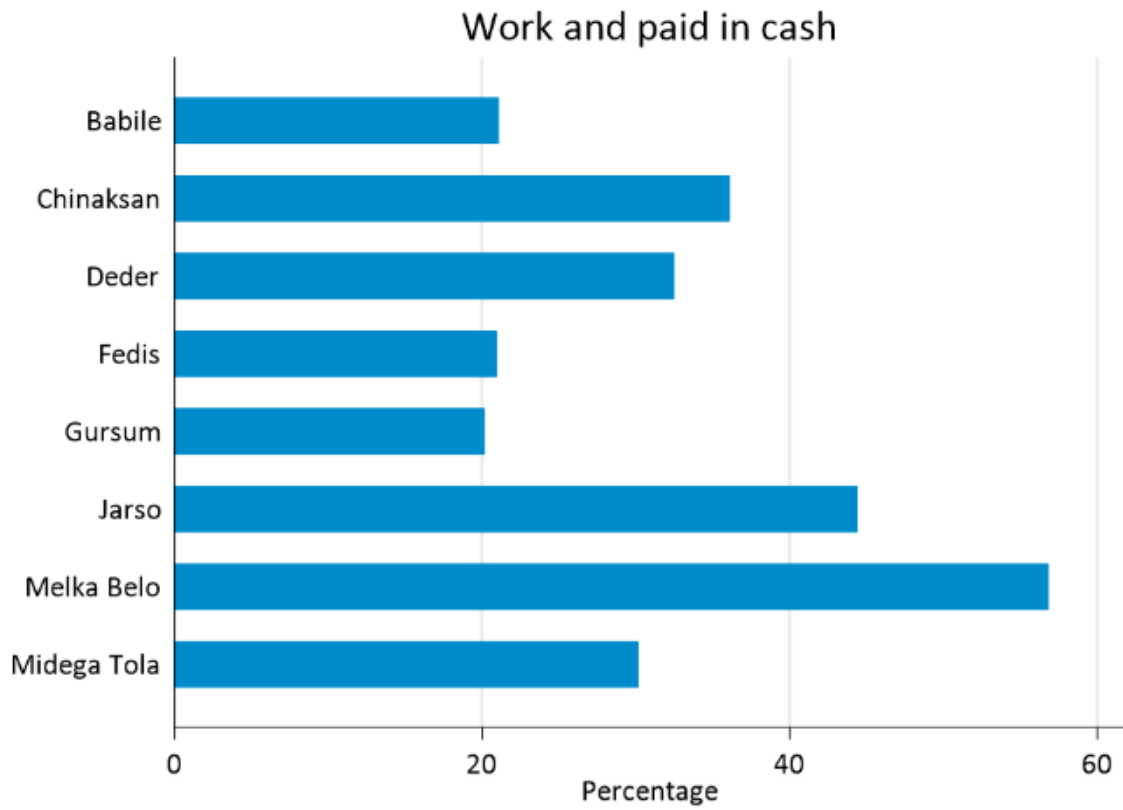
3.5   Food Security

Researchers assessed household food insecurity using the Food Insecurity Experience Scale (FIES) created by the Food and Agriculture Organization of the United Nations (FAO). The scale consists of eight questions on a household's difficulty accessing food due to a lack of money or other resources in the last 30 days[27] (FAO, 2016). There are binary indicators for each question. If a respondent answered "yes," the question would be allocated 1, and then questions would be summed up to create a raw score on a scale of 0–8. To assess the quality of the data collected, Causal Design used the FAO's Rasch model.[28] After applying the model, researchers obtained infit statistics for each question and a reliability score for the model. Infit statistics compare the misfit of each item with the extent of misfit expected if the assumptions of the Rasch model are valid (FAO, 2017). Acceptable infit statistics are in the range of 0.7–1.3. Two questions[29] had infit values below 0.7 (0.55 and 0.65), while one question[30] had a value of 1.8. The low infit of the first two questions suggests that these questions may be redundant with other items. The high infit of the last question suggests that the question performs poorly.[31] The reliability score measures the degree to which observed results can be replicated by the Rasch model. The Rasch reliability score for this survey was 0.77, which suggests a good model fit.

Researchers calculated the prevalence of food insecurity using the sum of the binary answers to the eight questions, which we will refer to as the raw FIES score. Two indicators are created for the proportion of households experiencing moderate to severe food insecurity, categorized as households with a raw FIES score of 4 or more, and the proportion experiencing severe food insecurity, which is considered households with a raw FIES score of 7 or 8. People experiencing moderate levels of food insecurity will typically eat low-quality diets and might have been forced, at times, to also reduce the quantity of food they would normally eat, while those experiencing severe levels would have gone for entire days without eating due to lack of money or other resources.

Figure 4 reveals that households in the sample are very food insecure. Nearly all households show some indication of food insecurity, with 96.2% having experienced moderate-to-severe food insecurity and 77.7% experiencing severe food insecurity. These estimates are higher than the average for East Africa, where the prevalence of moderate-to-severe food insecurity is 66.9% (FAO, 2022) and reflects that households are PSNP clients. Figure 5 displays the data by woreda and reveals that Melka Belo has the highest rates of severe food insecurity at almost 100%, while Jarso has the lowest at 60%.

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[27] As stated in FAO (2016), the reference period is flexible, and thus we used the last 30 days, which is easier for households to remember than the last 12 months.

[28] The Rasch Model is a logit function that assumes that it gets progressively more difficult to answer "yes" to a subsequent question (e.g., it is more likely to answer yes to question 2 than to question 3). Furthermore, respondents answering "yes" to more questions will have a more severe trait of food insecurity. (FAO, 2022)

[29] The two questions were: question 6, "During the past 30 days, was there a time when your household did not have food because of a lack of money or other resources?" and question 7, "During the past 30 days, was there a time when you or others in your household were hungry but did not eat because there was not enough money or other resources for food?".

[30] The question was number 2, "During the past 30 days, was there a time when you or others in your household were unable to eat healthy and nutritious food because of a lack of money or other resources?"

[31] FAO suggests that questions with an infit above 1.3 could be dropped and that work should be done to improve this question for future surveys. Here we decided not to drop the questions and to improve them for the endline survey. The survey will include additional probes to ensure the respondent has a proper understanding of the question.

Table 8. Food insecurity experience scale

Outcome	N	All
Raw FIES score (scale 0–8)	4,678	6.88
		(1.39)
Percent of households with some indication of food insecurity	4,678	99.49
		(7.15)
Percent of households that experienced approx. moderate-to-severe food insecurity	4,678	96.15
		(19.24)
Percent of households that experienced approx. severe food insecurity	4,678	77.66
		(41.66)
Percent of households that answered yes to all eight questions	4,678	37.77
		(48.49)
Percent of households that answered no to all eight questions	4,678	0.51
		(7.15)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Figure 5. Severe food insecurity, by woreda
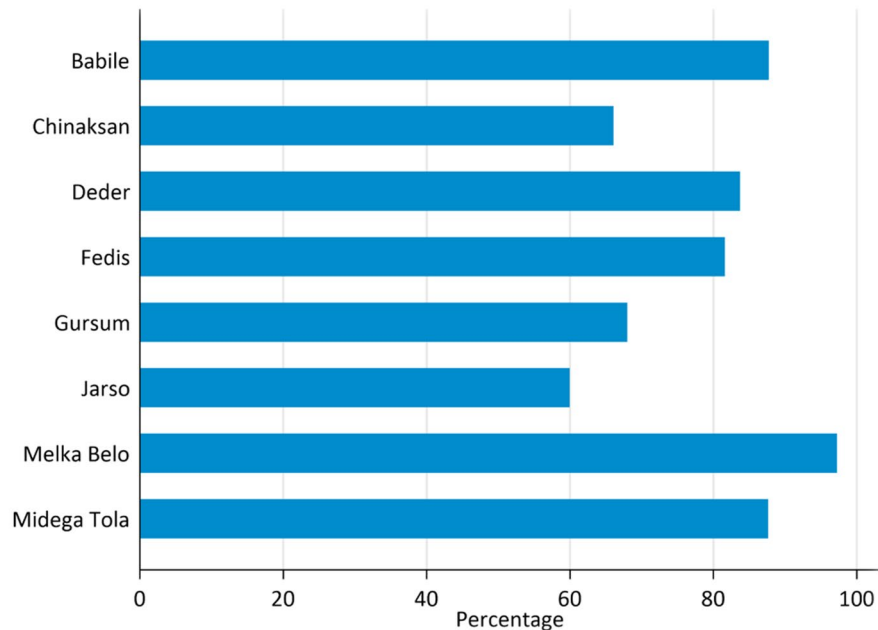
The second indicator under household food access is the Food Consumption Score (FCS). It is a measure that reflects food intake in frequency, dietary diversity, and nutritional importance. For each food item, enumerators asked households how many days out of the past week they consumed it. Then, enumerators group the food items into nine groups: staples, pulses, vegetables, fruit, meat/fish,

milk/dairies, sugar/honey, oils/fats, and condiments. The number of days the household consumes each food group is weighted based on the nutritional value of the food group and then summed up. The FCS has a range of 0–112, and researchers separate households into those with poor food consumption (values of 0–21), borderline food consumption (values of 22–35), and acceptable food consumption (values of 35 or more) (WFP, 2008). The FCS has been found to correlate well with caloric availability at the household level (Wiesmann et al., 2009).

Table 9 reveals that the mean FCS is low at 20.5. Only 7.8% of households have an acceptable score, while the majority (69.85%) have a poor score. This reflects that households mainly consume staples daily and rarely consume meat, fish, milk, and dairy (Table 10). Melka Belo is the woreda with the highest percentage of households with poor consumption, while Jarso has the lowest percentage, which is consistent with the FIES score (Figure 6).

Table 9. Food consumption score

Outcome	N	All
FCS (0–112)	4,601	20.5
		(9.60)
Percent of households with poor consumption score (< 22)	4,601	69.85
		(45.89)
Percent of households with borderline consumption score (22–35)	4,601	22.34
		(41.66)
Percent of households with acceptable consumption score (> 35)	4,601	7.8
		(26.82)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Table 10. Number of days a household consumed food groups

	N	All
Staples	4,601	6.79
		(0.92)
Pulses	4,601	0.32
		(1.21)
Vegetables	4,601	1.62
		(2.50)
Fruit	4,601	0.17
		(0.82)
Meat and fish	4,601	0.15
		(0.84)

	N	All
Milk and dairy	4,601	0.26
		(1.18)
Sugar	4,601	1.81
		(2.70)
Oil	4,601	3.21
		(3.21)
Condiments	4,601	6.25
		(1.93)

Notes: Estimates from the RFSA Ifaa baseline survey sample.

Figure 6. Poor food consumption score, by woreda
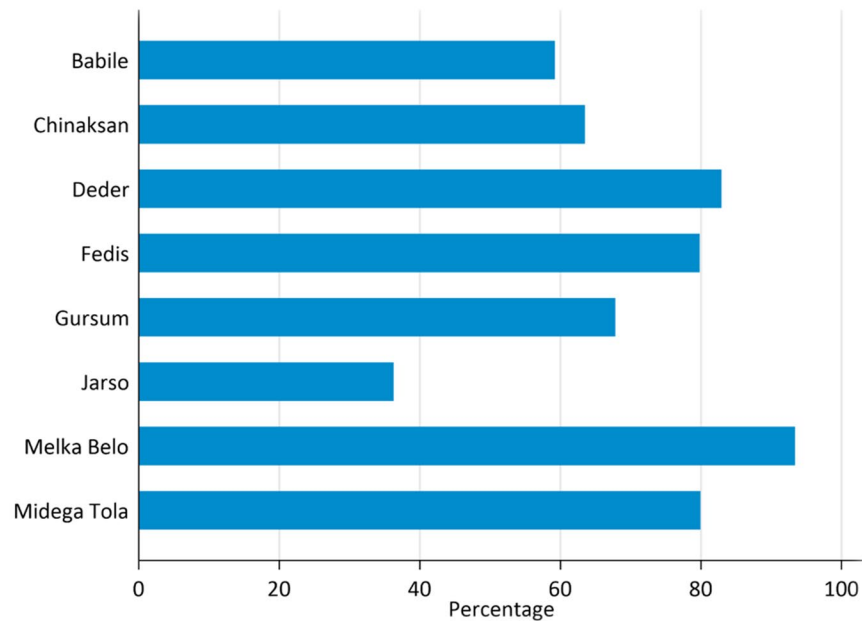
3.6   Child Nutrition and Feeding Practices

Infant and young child feeding (IYCF) practices are important determinants of children's nutritional status under 2 years of age. We analyze four core IYCF indicators: (i) the percentage of infants 0–5 months who are fed exclusively with breast milk the day preceding the survey; (ii) the percentage of children 6–23 months who receive a minimum dietary diversity (MDD), defined as consuming foods from five or more food groups; (iii) percentage of children 6–23 months who receive minimal meal frequency defined as receiving solid, semi-solid, or soft foods the minimum number of times; and (iv) the percentage of children 6–23 months who receive a minimum acceptable diet (MAD) which combines the MDD and minimum meal food frequency (WHO 2021).

Table 11 reveals low levels of IYCF practices among children less than 2 years old. Less than half (39.77%) of children 0–5 months old are exclusively breastfed, and only 1.92% of children 0–23 months consume a diet of minimum diversity. While 64.82% of children consumed solid, semi-solid, or soft foods the minimum number of times, only 1.65% of children 6–23 months have a MAD. The low rates of dietary diversity drive low rates of MAD. Table 12 reveals that most children consume breastmilk[32] or grains, roots, and tubers; very few consume other food groups. For the MDD to improve, children need to increase their consumption of other food groups such as meats, eggs, legumes, nuts, vegetables, and fruits. These low rates of MDD and MAD mirror those found in other reports on PSNP clients in Ethiopia at 3.2% and 1.2%, respectively (Alderman et al., 2019). Figure 7 reveals that no children receive a MAD in four woredas (Fedis, Gursum, Melka Belo, and Midega Tola).

Table 11. Infant and young children feeding practices

Outcome	N	All
Percent of children under 6 months who are exclusively breastfed	88[33]	39.77
		(49.22)
Percent of children 6–23 months receiving a minimum acceptable diet	725[34]	1.54
		(12.31)
Percent of children 6–23 months receiving a minimum meal frequency	725	64.82
		(47.78)
Percent of children 6–23 months consuming a diet of a minimum diversity	726	1.92
		(13.76)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Table 12. Food groups consumed by children 6–23 months in the last 24 hours

Outcome	N	Breastfed	N	Non-Breastfed
Percent consuming breastmilk	582	100	144	0
		(0.00)		(0.00)
Percent consuming grains, roots, tubers	582	73.02	144	67.36
		(44.42)		(47.05)
Percent consuming legumes and nuts	582	2.75	144	4.17
		(16.37)		(20.05)
Percent consuming dairy products	582	14.26	144	11.81
		(35.00)		(32.38)

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[32] 582 out of 726 children 6–23 months old consume breastmilk.

[33] Due to a coding error in the Computer-Assisted Personal Interviews (CAPI), not every child under 6 months answered this question. Out of 241 children under 6 months, about 37% (88 children) answered the question.

[34] There were 901 selected children 6–23 months of age. Due to a CAPI error, 175 of these children were not interviewed. In addition, one child in the age range didn't answer the questions related to the consumption of solid, semi-solid, or soft foods. We excluded this child from the minimum acceptable diet and minimum meal frequency indicators.

Outcome	N	Breastfed	N	Non-Breastfed
Percent consuming meats	582	0.52	144	0.69
		(7.17)		(8.33)
Percent consuming eggs	582	2.06	144	3.47
		(14.22)		(18.37)
Percent consuming vitamin-A-rich vegetables and fruits	582	8.76	144	10.42
		(28.30)		(30.65)
Percent consuming other vegetable and fruits	582	6.36	144	7.64
		(24.42)		(26.65)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Figure 7. Minimum acceptable diet, by woreda
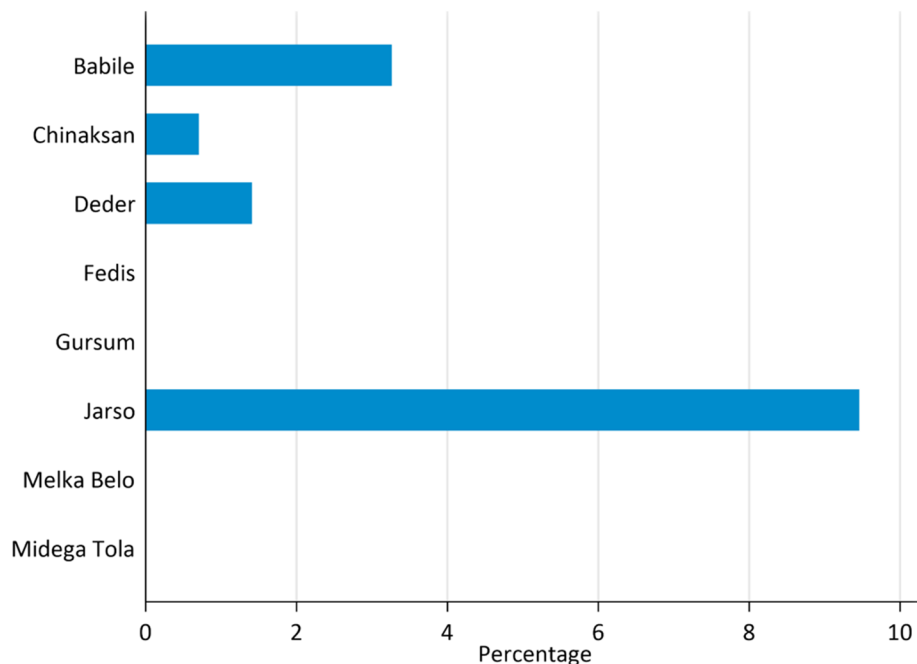
In addition to the IYCF indicators, the percentage of children 0–5 years with diarrhea and the percentage of children treated with oral rehydration therapy (ORT) are analyzed in the 2 weeks preceding the survey. Table 13 reveals that 11.26% of children reported having diarrhea in the prior 2 weeks, and nearly all these children (93.3%) were treated with ORT. Between woredas, there are large differences in the percentage of children with diarrhea, with about one in four children in the woredas of Fedis and Midega Tola having diarrhea compared to less than 5% in the woreda of Deder (Figure 8).

Table 13. Young children (0–59 months) diarrhea incidence and treatment

Outcome	N	All
Percent of children under 5 who had diarrhea in the prior 2 weeks	2,167	11.26

Outcome	N	All
		(31.62)
Percent of children under 5 who had diarrhea treated with ORT	244	93.03
		(25.51)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Figure 8. Percentage of children under 5 who had diarrhea in the prior 2 weeks, by woreda
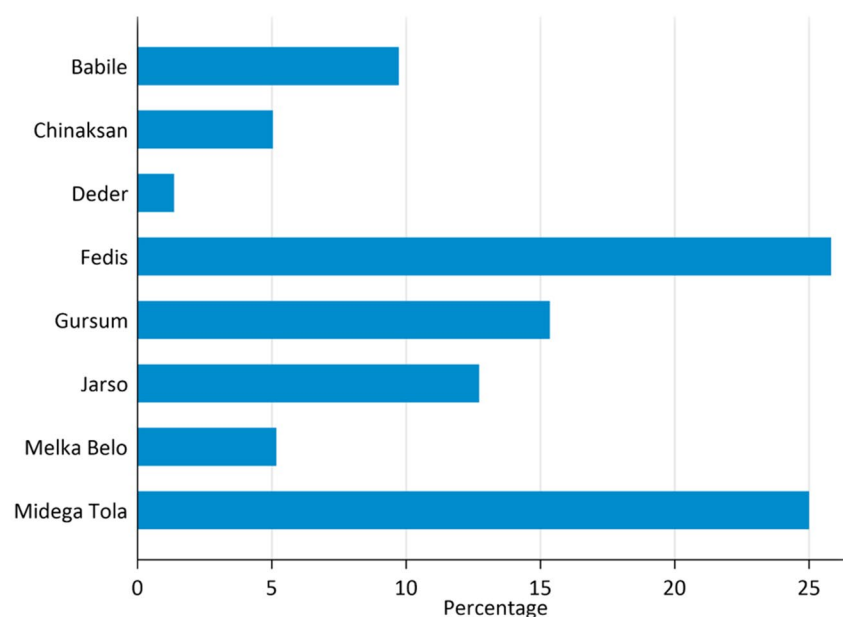
3.7 Women's Health, Maternal Nutrition, and Reproductive Health

This section focuses on the health and reproductive decisions of women of childbearing age. Table 14 includes the dietary diversity and the percentage of GWRA consuming a diet of MDD. The dietary diversity score is constructed by counting the number of food groups a woman consumes. The 10 food groups are grains (i.e., bread, rice, *enjera*), white roots, and tubers; pulses (i.e., beans, peas, lentils); nuts and seeds; dairy; meat, poultry, and fish; eggs; dark leafy greens (i.e., kale, pumpkin leaves, spinach); other vitamin-A-rich fruits and vegetables (i.e., mangos, red palm nut, pumpkin); other vegetables; and other fruits. A woman is said to consume a diet of MDD if she consumed during the previous day and night at least five of the 10 food groups specified.

Table 14. Indicators for women's nutrition

Outcome	N	All
Dietary diversity score	4,635[35]	1.69

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[35] Forty-five women didn't answer at least one of the questions related with this indicator.

Outcome	N	All
		(1.01)
BL11: Percent of GWRA consuming a diet of MDD	4,635	0.86
		(9.25)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Table 15 shows that only about 0.86% of women consumed a diet that met the MDD requirements.

Figure 9 illustrates the distribution of the MDD score.[36] Over 70% of the women ate only one or two food groups. The high level of food insecurity in the population of interest is additionally evidenced by the large number of women (420 or approximately 10% of the sample) who did not consume any of the food groups the day before the survey.[37] Table 15 shows GWRA's consumption per food group. The most common food group consumed was grains, white roots, and tubers (89%). The next most common food groups consumed are vitamin-A-rich fruits and vegetables (48%), other vegetables (17%), dark leafy greens (6%), dairy (4%), nuts and seeds (1%), and eggs (1%).

Figure 9. Dietary diversity score for GWRA
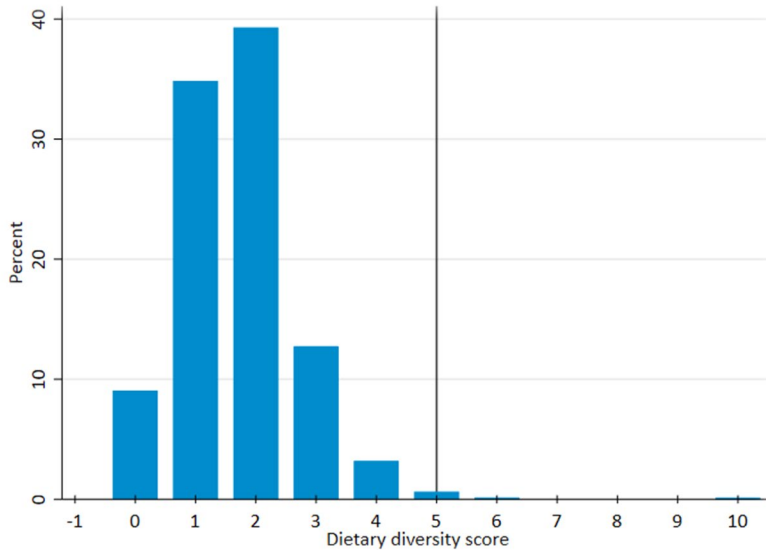
Table 15. GWRA consumption

Outcome	N	All
Percent consuming grains and roots	4,635[38]	89.06

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[36] The figure shows the distribution of the MDD score across the full sample of WRA.

[37] This striking result is corroborated by information provided in Module C. About 76% of the households with WRA who didn't eat any of the food groups also stated that, during the past 30 days, there was at least one time when one or more members of the households went without eating for a whole day. Based on information from the field team, because of the existing drought and shortage of food, women give priority to children, and they might consume less or consume food items not included in the list (e.g., coffee, tea). Moreover, some households also have a perception of aid dependency where they consider the interview will bring some kind of support for them.

[38] Forty-five women didn't answer at least one of the questions related with this indicator.

Outcome	N	All
		(31.22)
Percent consuming pulses	4,635	0.78
		(8.78)
Percent consuming nuts and seeds	4,635	1.36
		(11.58)
Percent consuming dairy	4,635	4.38
		(20.47)
Percent consuming meat, poultry, and fish	4,635	0.54
		(7.33)
Percent consuming eggs	4,635	1.34
		(11.49)
Percent consuming dark leafy greens	4,635	5.89
		(23.55)
Percent consuming other vitamin-A-rich fruits and vegetables	4,635	47.81
		(49.96)
Percent consuming other vegetables	4,635	17.32
		(37.85)
Percent consuming other fruits	4,635	0.95
		(9.70)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

While the dietary diversity score by woreda remained relatively consistent within a +/- 0.5 margin, the share of women with an MDD score by woreda had greater variability (Figure 10). In most woredas, only between 0.25% and 0.75% of women ate a diet of minimum diversity. Babille and Jarso were exceptions, with shares of 1.39 and 2.22.

Figure 10. Percentage of women with a minimum dietary diversity score, by woreda
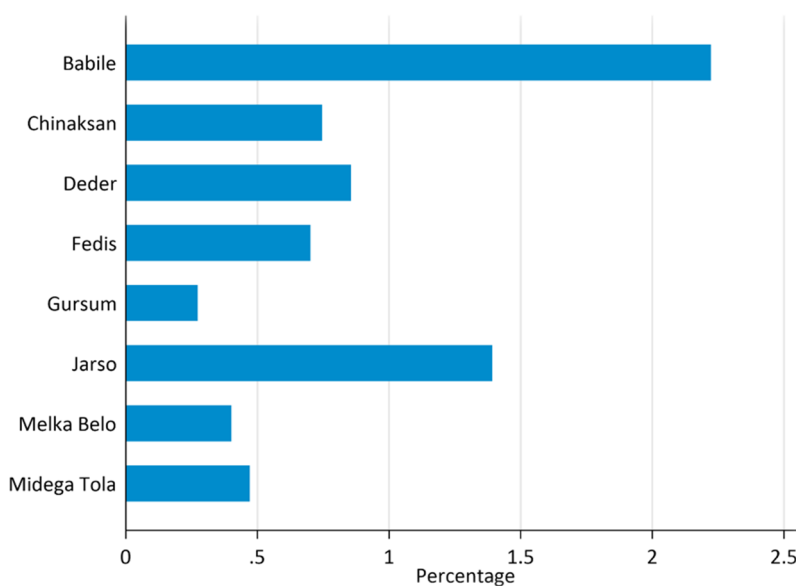
The contraceptive prevalence rate (CPR) measures non-pregnant GWRA (15–49) in a union who are currently using or whose partners are currently using at least one contraceptive method. Table 16 displays this rate. Nearly 11% of non-pregnant women between the ages of 15–49 in a union are using birth control, with nearly all of them (99%) using a form of modern birth control. Modern birth control includes female and male sterilization, injectables (Depo-Provera), intrauterine devices (IUDs), contraceptive pills, implants, female and male condoms, diaphragm with spermicide (cream, foam, or gel), the standard days method, the lactation amenorrhea method, and emergency contraception. Traditional birth control methods include rhythm and withdrawal. Injectables are the most popular form of birth control among women using a birth control method (used by 64% of this group of women).

Table 16. Indicators for reproductive health

Outcome	N	All
BL20: CPR, percent of non-pregnant women 15–49 in a union	2,568	11.37
		(31.75)
BL26: Percent of births receiving at least four ANC visits during pregnancy	1,622	15.72
		(36.41)
BL36: Percent of women in a union who have knowledge of modern family planning methods that can be used to delay or avoid pregnancy[39]	2,936	29.9
		(45.79)
Number of contraceptive methods woman in a union know (0–12)	2,936	1.72
		(2.01)
BL37: Percent of women in a union who made decisions about modern family planning methods in the past 12 months	262[40]	50.38
		(50.09)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Table 16 shows the percentage of GWRA with a live birth in the past 5 years who received at least four ANC visits from skilled health personnel during their most recent pregnancies. "Skilled health personnel" refers to doctors, nurses, midwives, skilled birth attendants, or clinical officers. Women qualify as having received ANC if they have had at least four ANC visits. About 16% of these women met these criteria during their most recent pregnancy. 98% of women received ANC from skilled health personnel, with more than 64% of these visits with nurses or midwives.

Table 16 also depicts the percentage of women in a union who know of modern family planning methods that can delay or avoid pregnancy. Of the women in a union between ages 15 and 49, 30% reported having knowledge of modern family planning methods. The rate at which women in a union reported having knowledge of modern family planning methods is similar across the age groups between 20–29 (31%) and between 30–49 (30%). The rate of women from the age group of 15–19 is lower at 24%. The average number of contraceptive methods married women or in a union know is 1.68.

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[39] "A woman is counted as having knowledge of modern family planning methods if she can identify at least three modern methods of family planning" (BHA, 2021).

[40] Following BHA (2021), this question was only asked to GWRA in a union using birth control methods. The reduced sample size is explained by the low number of women in a union who used any modern contraceptive method in the past 12 months.

Of those who reported knowledge of modern family planning methods, 68% knew three methods or fewer.

Table 16 presents findings on decision-making about family planning. The questions used to calculate this indicator are the following: "Did you or your partner use any of these modern contraceptive methods in the past 12 months?" and "Who usually makes the decision on whether or not you should use contraception: you, your husband/partner, you and your husband/partner jointly, or someone else?" Of the women who have used modern family planning methods in the past 12 months, almost 51% report making that decision either by themselves or with their partner jointly.

Figure 11 presents the variability in family planning knowledge and usage across woredas. Women in a union in Gurum, closely followed by Jarso, are far more familiar with the largest number of contraceptive methods, while women in Babile know the least number of methods out of all of the woredas. Notably, the data suggests that knowing the most contraceptive methods has little correlation with CPR. While the women surveyed in Gursum know the most contraceptive methods, Gursum has the third lowest CPR. Conversely, Babile, where women know the least contraceptive methods, has the second highest CPR. Chinaksan has the third highest number of methods known but significantly outranks all other woredas in terms of the CPR.

Figure 11. Contraceptive prevalence rate and number of contraceptive methods women in a union know, by woreda

BL20 Contraceptive prevalence rate
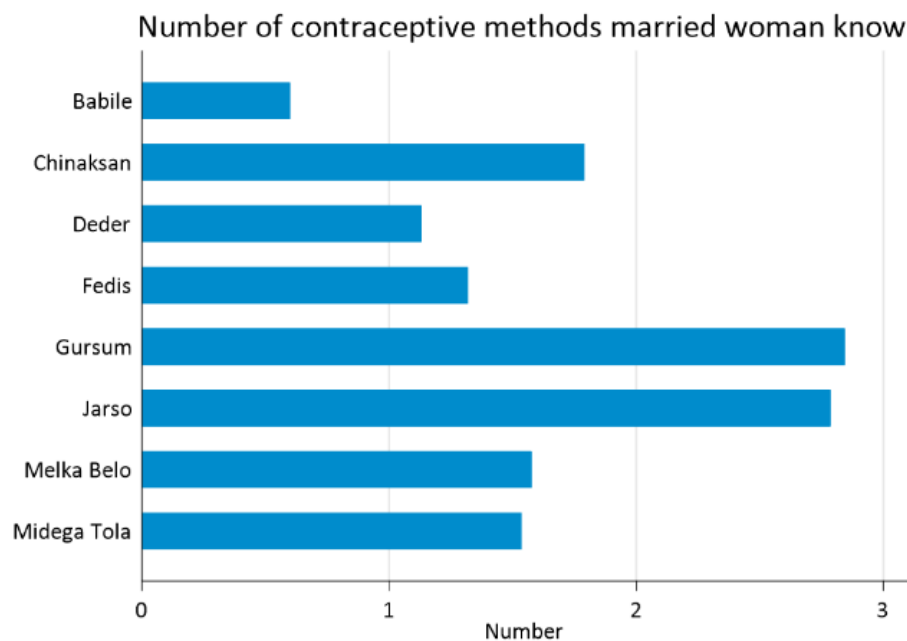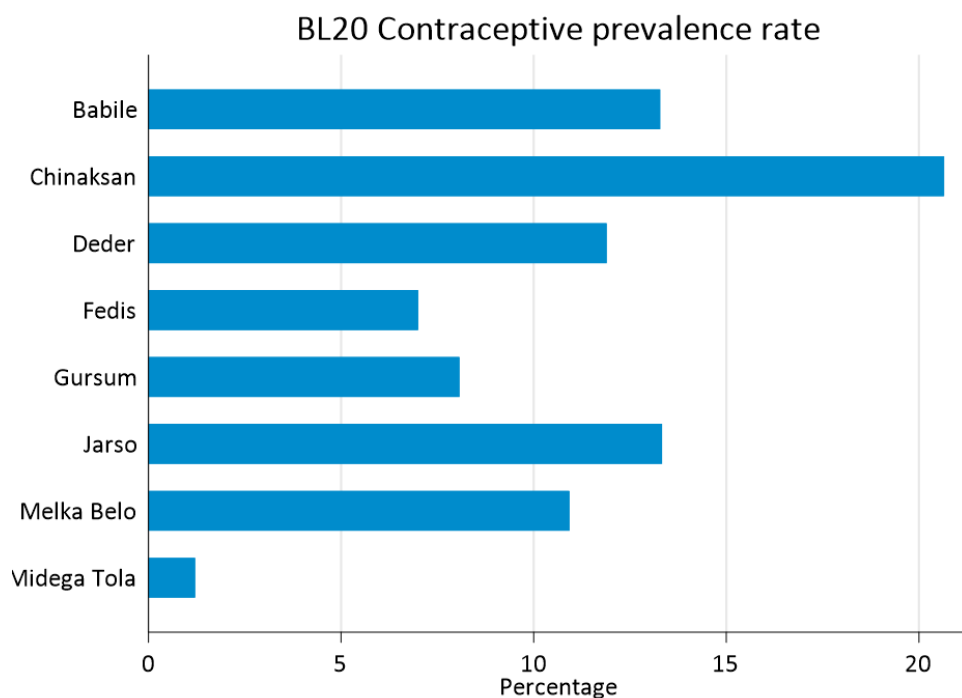
The data across woredas for women in a union making decisions about modern family planning fall within similar levels (hovering around 50%), with the exception of Jarso, where less than 20% of women self-reported as decision makers. A similar pattern is evident for ANC. The data was relatively uniform across woredas (about 10%) except for Babile, which surpassed all others significantly by 20%.

3.8   Water, Sanitation, and Hygiene Practices

Water, sanitation, and hygiene (WASH) practices are captured through five indicators in this section. This section targeted households rather than individuals, which is reflected in the table below.

Table 17. Water indicators

Outcome	N	All
BL16: Percent of households using basic drinking water services[41]	353	4.25
		(20.20)
Percent of households using basic drinking water services based on four of five[42] criteria	4,670	11.2
		(31.54)
Percent of households with water available year-round	4,681	67.49
		(46.85)
Percent of households with water available every day in the past 2 weeks	4,681	67.49

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[41] Due to a skip error, data was only collected for households that used additional filtration to make water potable (353 out of 4681).

[42] The sample size for this indicator is all the households for which four of the five criteria for basic drinking water services can be constructed (excludes per person per day production criterion).

Outcome	N	All
		(46.85)
Percent of households using an improved drinking water source	4,681	82.08
		(38.36)
Percent of households able to fetch water in 30 minutes or less	4,681	47.87
		(49.96)
Per capita volume of water a household draws per day	4,670	29.74
		(45.72)

Table 18 Sanitation and hygiene indicators

Outcome	N	All
BL17: Percent of households with soap and water at a handwashing station on the premises	3,815[43]	2.88
		(16.74)
BL18: Percent of households practicing correct use of recommended household water treatment technologies	4,676[44]	7.36
		(26.11)
BL19: Percent of households practicing open defecation	4,681	58.73
		(49.24)
BL27: Percent of households using improved sanitation facilities (not shared)	4,681	15.87
		(36.55)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Indicator 16 measures the percentage of households with access to basic drinking water services. BL16 uses five criteria to define access to basic drinking water services for households: (i) the water source is an improved source, (ii) the total collection time must be 30 minutes or less for a round trip (including wait time), (iii) the source consistently produces basic drinking water, (iv) water is available every day in the past 2 weeks and (v) the service produces 20 liters per day for each person counted. Following USAID (2021b), questions related to the fifth criterion were only answered by those who use additional filtration to make the water potable.

Table 17 shows that of 353 households that answered all five questions, around 6% reported having access to basic water services. When we look at households satisfying only four out of five criteria,[45] the data shows that around 11% have access to basic water services. Furthermore, around 82% used an

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[43] One of the inputs for this indicator is question F14: "Please show me where members of your household most often wash their hands." We excluded households that either didn't answer the question, answered "I don't know," or refused to answer.
[44] One of the inputs for this indicator is question F09: "Do you do anything to the water to make it safer to drink?". We excluded households that either didn't answer the question, answered "I don't know," or refused to answer.
[45] Due to a skip error, only a reduced set of households answered the questions associated with producing at least 20 liters per person. Therefore, researchers present an alternative indicator to have an idea of the access to basic drinking water for the whole sample.

improved drinking water source,[46] 67% had access to water all year round, and 48% could fetch water in 30 minutes or less.

Table 18 shows sanitation and hygiene indicators. Indicator 17 measures the percentage of households with soap and water at a handwashing station on the premises. Only about 3% of households were observed to have these resources. Indicator 18 illustrates that only about 7% of households practiced the correct use of recommended household water treatment technologies,[47] while Indicator 19 shows that 59% of households practiced open defecation.[48] As seen in Indicator 27, less than 16% have household-level improved sanitation facilities that are not shared with other families.

Figure 12 presents the percentage of households with access to water services disaggregated by woreda, when the indicator is constructed using four out of five criteria. The figure shows that Gursum, followed by Melka Belo and Babile, have the most access to water services, with over 15% of participants reporting access. Participants in Midega Tola have the least access, with roughly 1% of participants noting access, followed by Fedis at roughly 4% and Deder at 7%.

Figure 12. Percentage of households with access to water services, by woreda
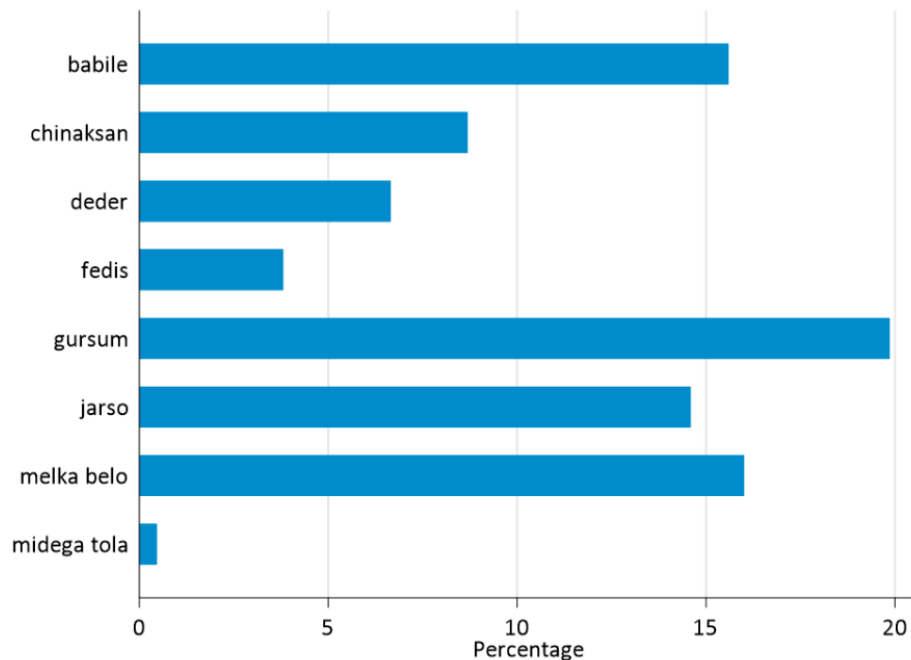
The variation in the share of households practicing open defecation across woredas is very large (Figure 13); the share of Fedis, the woreda with the highest share (approximately 90%), is four times the share in Jarso (22%). The data suggests a negative correlation between the use of improved sanitation facilities and open defecation (Figure 13). Across WASH indicators, Fedis is the woreda with the least access to

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[46] The main source of drinking water is public tap/standpipe (used by 32.3% of households), followed by surface water (used by 25.1% of households). The first is considered an improved water source, while the second is not.

[47] Water treatment technologies included in the study are chlorination, flocculant/disinfection, filtration, solar disinfection, and boiling. The most common technology to treat water is by flocculation before drinking (used by 6.3% of households)

[48] Open defecation is the most common type of sanitation facility, followed by pit latrines without slab/open pit (used by 24% households) and pit latrine with slab/ventilated improved pit latrine with slab (used by 16% of households).

WASH services, including sanitation facilities, and consequently has the highest rate of open defecation at nearly 90%. Accordingly, Jarso, which has the highest reported use of improved sanitation facilities, has the lowest rate of open defecation.

Figure 13. Use of improved sanitation facilities and open defecation by woreda

BL27 Use of improved sanitation facilities

BL19 Open defecation
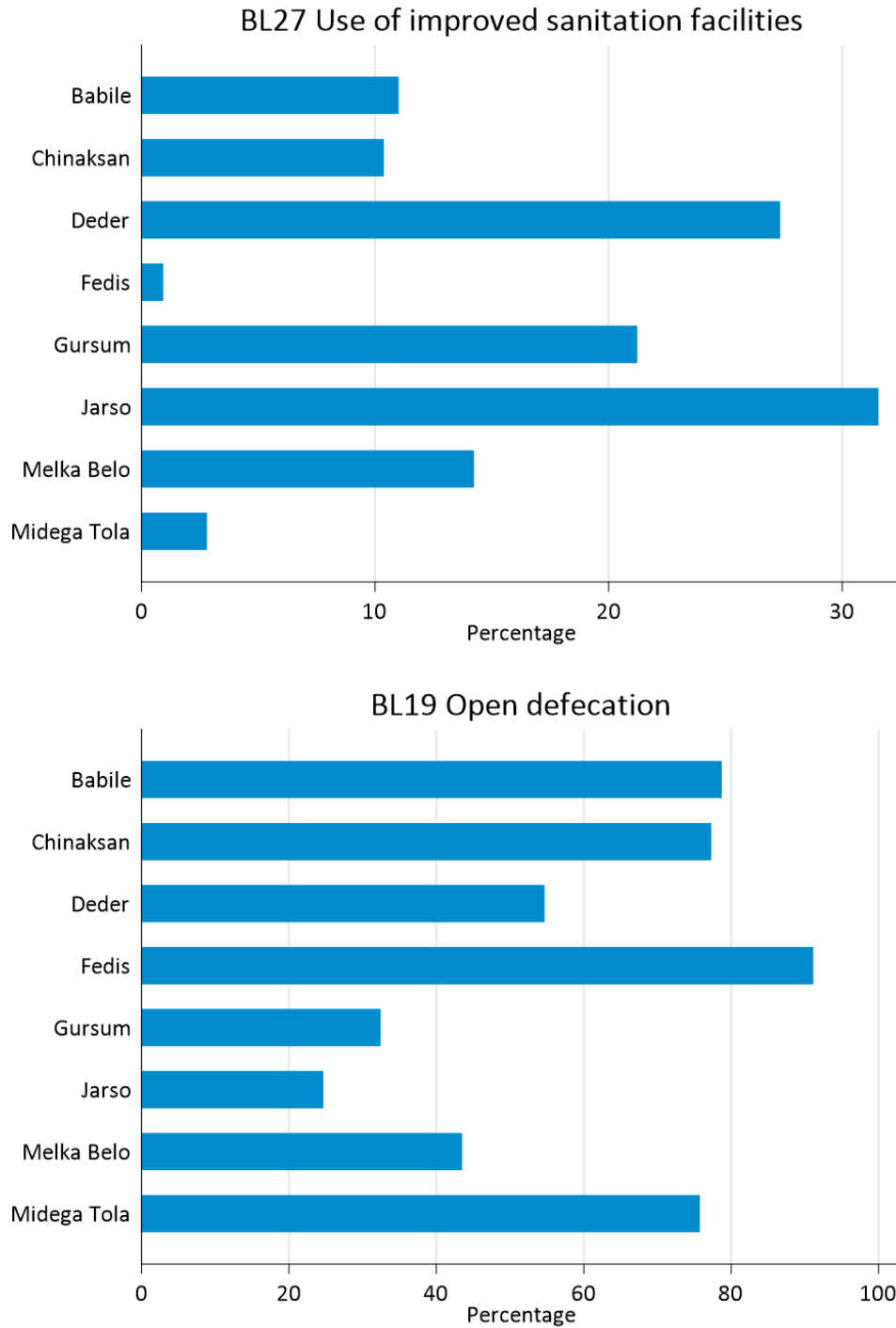
In most woredas, only a small share of the population uses recommended water treatment technologies (Figure 14). Interestingly, Gursum has a much larger share of households using recommended water treatment technologies (about 26%) than the other woredas.

Figure 14. Percentage of households practicing correct use of recommended household water treatment technologies, by woreda
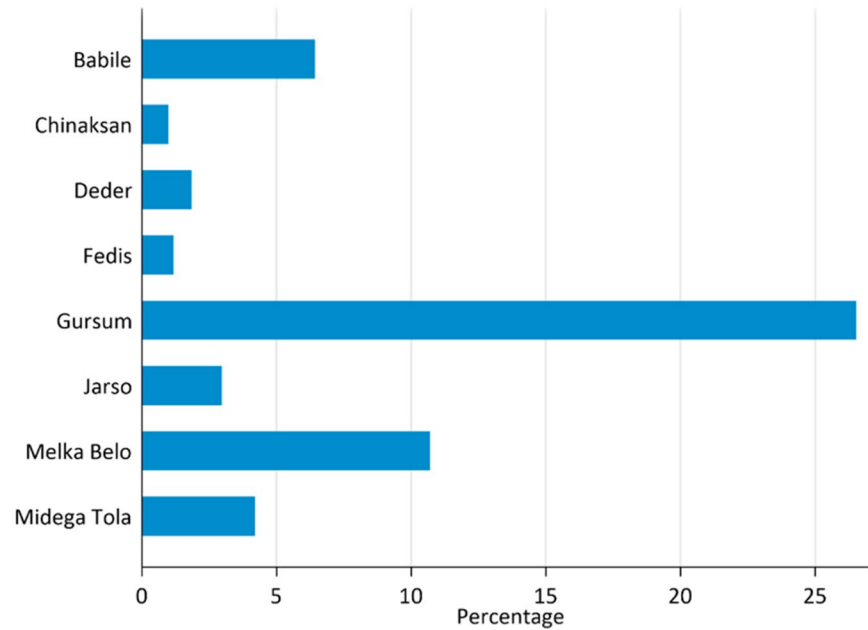
3.9 Agriculture

Access to financial services allows farmers to diversify their livelihood strategies, invest, manage risks, and protect assets during shocks. [49, 50, 51] While a handful of farming households (15.59%) have taken out an agriculture credit in the last 12 months, very few have used crop insurance (1.26%) or saved (2.74%) (Table 19). Consequently, fewer than one in five farming households have accessed financial services[52] in the last 12 months. Babile has the highest percentage of farming households accessing financial services at nearly 30%, while Midega Tola has the lowest at less than 10% (Figure 15). Only 23% of households reported cultivating crops or raising livestock with the specific intent to sell or resell to earn income. For this subset of households, 76% report practicing at least one value chain activity promoted

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[49] Enumerators only ask the questions in this module to households that have at least one farmer (4561 out of 4683). In addition to this, 23 households didn't give their consent to participate or were not available. Besides this, most of the indicators in this section look at smaller subsamples (e.g., enumerators only ask agricultural insurance questions to households with land). We will mention this when relevant.

[50] Only one farmer per household (the lead farmer) answered the questions in Module G. The standard structure of Module G questions is to first ask the lead farmer if someone in the household did the specified activity and subsequently ask who in the household had done so. In this section, we will present the answers at the household level to reduce measurement errors related to any recall mistakes of the lead farmer.

[51] Following BHA's recommendations, we did not collect yield information for crops. In the case of livestock, we only collected information about the number of animals and their health condition.

[52] A household has access to financial services if it satisfies at least one of the following conditions: (i) took any agricultural credit in the past, (ii) saved any cash, or (iii) bought agricultural insurance.

by *Ifaa*. Figure 16 shows the share of farming households practicing the different value chain activities. The most common practice is purchasing crop inputs (65.23%), followed by processing the product (16.65%). Most farming households (89.42%) adhere to at least one natural resource management (NRM) practice, most commonly hedge row planting (63.38%) followed by natural regeneration (42.72%).

Table 19. Financial services, value chain activities, and natural resource management practices

Outcome	N	All
Percent of farming households using financial services[53]	4,450	18.36
		(38.72)
Percent of farming households using agricultural credit[54]	4,450	15.69
		(36.37)
Percent of farming households who saved	4,447	2.74
		(16.34)
Percent of farming households using crop insurance	4,449	1.26
		(11.15)
Percent of farming households who cultivate any crop or raise/buy livestock with the specific intention to sell or resell to earn income	4,448	22.95
		(42.06)
Percent of farming households reporting at least one value chain activity promoted by CRS	1,021	76
		(42.73)
Percent of farming households using at least one NRM practice	4,450	89.42
		(30.77)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses. Enumerators asked financial services and NRM practices questions to the 4,450 that reported having access to a plot of land or animals. In addition, only households that cultivate crops or raise/buy livestock with the specific intent to sell or resell to earn income (1021) answered the value chain activity question.

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[53] A farming household uses financial services if at least one of the following is satisfied: (i) the household uses agricultural credit, (ii) the household saves, or (iii) the household uses crop insurance.
[54] Any type of credit (i.e., both formal and informal) is included in this question.

Figure 15. Percent of farming households who used financial services in the past 12 months, by woreda
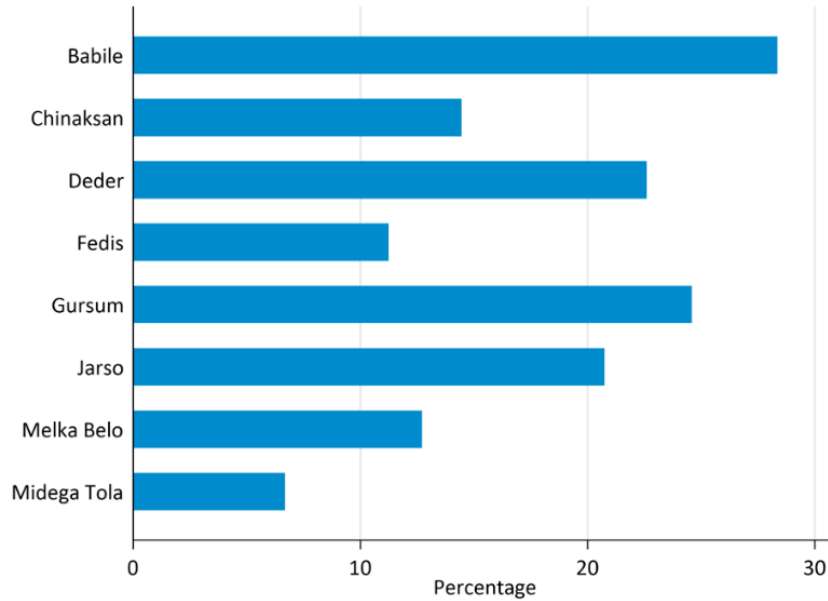
Figure 16. Share of farming households using different value chain activities

[1]Trading or marketing produce through agro dealers and/or community associations
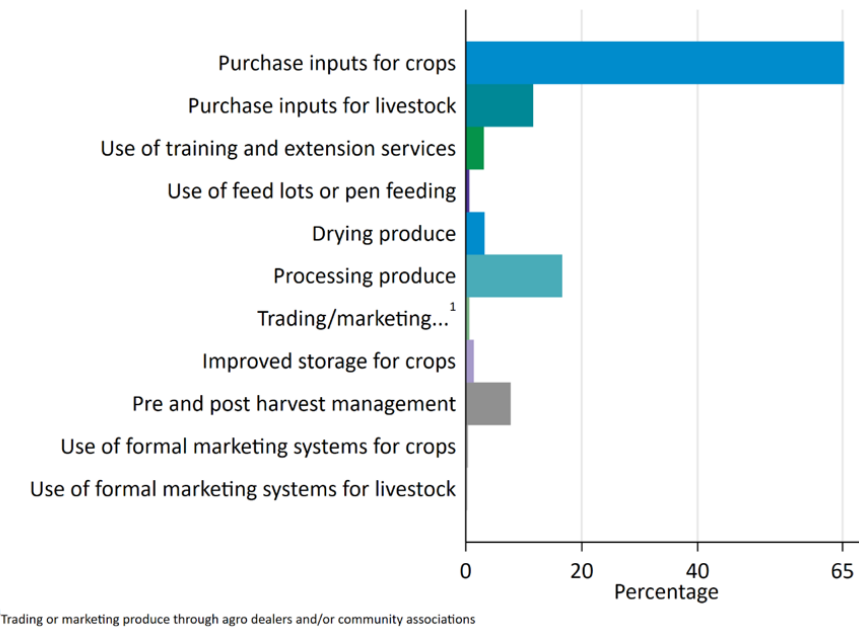
3.9.1   Crops

Most farming households (90.89%) in the sample have planted at least one crop (Table 20). Of the households that have planted at least one crop, the most common crop is maize (73.10%), followed by sorghum (56.33%) and then wheat (14.61%). Few farming households grow the crops promoted by *Ifaa*, which are haricot beans, groundnuts, and potatoes (Table 21). These crops are promoted by *Ifaa* as value-chain crops and not for consumption. CRS expects very few farmers to plant them and only targets these crops for 10% of the farmers by the end of the RFSA.

Table 20. Main crops grown[55]

	N	All
Percent of farming households with a plot of land that planted at least one crop	4,404	90.89
		(28.77)
Percent of farming households growing maize	4,003	73.10
		(44.35)
Percent of farming households growing sorghum	4,003	56.33
		(49.59)
Percent of farming households growing wheat	4,003	14.61
		(35.32)
Percent of farming households growing ground nut[56]	4,003	7.77
		(27.77)
Percent of farming households growing sweet potatoes	4,003	3.17
		(17.52)
Percent of farming households growing barley	4,003	3.15
		(17.46)
Percent of farming households growing millet	4,003	1.80
		(13.29)
Percent of farming households growing common bean	4,003	1.30
		(11.32)
Percent of farming households growing cabbage	4,003	1.05
		(10.18)

Notes: Estimates from the Ifaa baseline survey sample. Standard deviations are in parentheses.

Table 21. Improved management practices or technologies[57] in target crops

Outcome	N	All
Percent of farming households growing haricot beans	4,003	0.05

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[55] For each crop in the table, the percentages were computed with the number of households that grow the specific crop divided by the number of households that grow at least one crop in the plots over which it makes decisions.

[56] The CAPI included both ground nuts and peanuts as possible crops. In the area of study, these crops are confusing, and people use them interchangeably. Due to this, we grouped both answers under the crop ground nuts.

[57] Following BHA (2021), a household is said to have applied improvement practices or technologies if the household uses either at least one of the promoted improvement practices for the target crop or one of the NRM practices. This indicator will depend to a great extent on the NRM practices (not specific to a particular crop), because almost 90% of households use at least one NRM practice.

Information related only to the use of improvement management practices (i.e. without considering the use of NRM practices) is presented using the variable "Percent of farming households using at least one of the promoted improvement management practices".

Outcome	N	All
		(2.23)
Percent of farming households growing groundnuts[58]	4,003	1.45
		(11.95)
Percent of farming households using at least one of the promoted improvement management practices for ground nut[59]	58	70.69
		(45.92)
Percent of farming households who have applied improvement practices or technologies for groundnuts	58	81.03
		(39.55)
Percent of farming households growing potatoes	4,003	0.72
		(8.48)
Percent of farming households using at least one of the promoted improvement management practices for potatoes[60]	29	93.1
		(25.79)
Percent of farming households who have applied improvement practices or technologies for potatoes	29	100
		(0.00)

Notes: Estimates from the RFSA Ifaa Baseline Survey Sample. Standard deviations are in parentheses. The sample on improved management practices for haricot beans was too small for analysis (N=2). A household is said to have applied improvement practices or technologies if the household uses either at least one of the promoted improvement practices for the target crop or one of the NRM practices.

3.9.2   Livestock

The target animals for *Ifaa* are goats, poultry, and oxen. 23% of farming households raise goats, with an average of 3.77 goats (Table 22). The percentage of farming households raising goats varies substantially by woreda, with about 45% of households in Midega Tola reporting raising goats and less than 10% in Deder (Figure 17). In terms of improved management practices promoted by *Ifaa*, 48% of households use at least one practice for their goats.[61] However, since most households report one NRM practice, most households are classified as having applied improvement practices or technologies for goats. Similarly, one in five households raises poultry, with an average of 3.38 poultry. In terms of improved management practices promoted by *Ifaa*, 41% reported using at least one practice for their poultry.[62] However, given that most households report one NRM practice, most households are classified as having applied improvement practices or technologies for poultry. Few households raise oxen (6.35%),

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[58] Only farming households that selected ground nuts as one of the crops they grow were considered here. As discussed in footnote 56, people use peanuts and ground nuts interchangeably in the areas of study. The results related with ground nuts presented in this table are therefore incomplete, because households that selected they grow peanuts were not considered.

[59] The most important practices are organic manure, compost and crop association, used by 54%, 7% and 7% of households growing groundnuts.

[60] The most important practices are organic manure and performing weedings, both used by 34% of households growing potatoes.

[61] Improved shelter/housing and vaccinations are the most common activities used by 22% and 19% of households.

[62] Improved shelter and improved poultry variety/breed are the most common activities used by 21% and 16% of households.

and of these households, 41% reported using at least one improvement management practice.[63] However, given that most households report one NRM practice, most households are classified as having applied improvement practice or technologies for oxen.

Table 22. Improved management practices or technologies[64] in target animals

Outcome	N	All
Percent of farming households raising goats	4,537	23.45
		(42.37)
Percent of farming households who have applied improvement practices or technologies for goats	1,064	47.93
		(49.98)
Percent of farming households using improved management practices for goats	1,064	93.52
		(24.64)
Percent of farming households raising poultry	4,537	19.57
		(39.68)
Percent of farming households who have applied improvement practices or technologies for poultry	888	41.33
		(49.27)
Percent of farming households using improved management practices for poultry	888	94.93
		(21.95)
Percent of farming households raising oxen	4,537	6.35
		(24.38)
Percent of farming households who have applied improvement practices or technologies for oxen	288	47.92
		(50.04)
Percent of farming households using improved management practices for oxen	288	85.07
		(35.70)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses. A household is said to have applied improvement practices or technologies if the household uses either at least one of the promoted improvement practices for the target crop or one of the NRM practices.

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[63] Vaccinations and Improved shelter/housing are the most common activities used by 27% and 19% of households.

[64] Following BHA (2021), a household is said to have applied improvement practices or technologies if the household uses either at least one of the promoted improvement practices for the target animal or one of the NRM practices. This indicator will depend to a great extent on the NRM practices (not specific to a particular crop) because almost 90% of households use at least one NRM practice.

Information related only to the use of improved management practices (i.e., without considering the use of NRM practices) is presented using the variable "Percent of farming households using at least one of the promoted improvement management practices."

Figure 17. Percent of farming households raising goats, by woreda
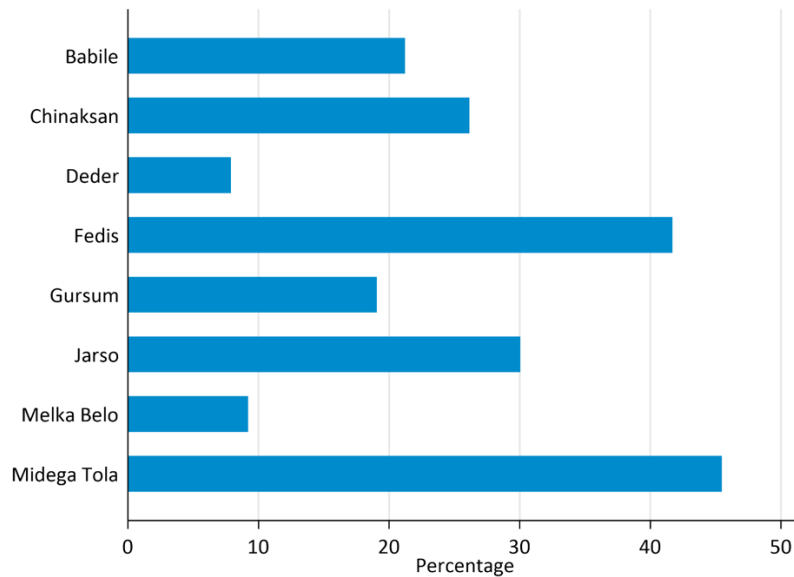
3.10 Poverty Measurement

This section presents different measures of poverty, all based on the household consumption module of the survey. The baseline survey did not include a section for non-food items, so enumerators did not collect this information. To construct poverty measures, the poverty line was multiplied by the share of food consumption in total expenditure (0.85) in the Strengthen PSNP4 Institutions and Resilience I baseline survey (Alderman et Al., 2019). We will present the information for food consumption expenditure. The percentage of the poor and depth of poverty measures will be based on the adjusted poverty line and thus we will refer to these two variables as food poverty and depth of food poverty. We computed the percentage of food-poor people as those living on less than US$1.61 per day[65] (2011 purchasing power parity). The equivalent of US$1.61 in current Ethiopian Birr was determined to be 44.26.[66] [67]

Table 23 summarizes the food poverty measures. The mean daily per-capita food expenditure is 17.64 Birr or about US$0.64. The mean per-adult equivalent[68] measure is slightly higher, 21.36 Birr or about US$0.78. The food poverty rate is approximately 98.61% when using per-capita consumption and

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[65] 1.9 * 0.85 = 1.61.

[66] The 2011 PPP used was 5.439 Birr/dollar. To adjust the price by inflation, we used the food and non-alcoholic beverages consumer price index (food CPI). The food CPI used for 2011 was 65.25, and 329 for June 2022. This gives us the food poverty line of (1.9 * 0.85) * 5.439 * 329/65.28 = 44.26. The food CPI information from 2011 until March 2022 comes from IMF (2022), while the information for April-June 2022 comes from CSA (2022). Neither source had food CPI series for the complete period of interest.

[67] The expenditure module of the survey followed standard practices for expenditure calculation. Frequent items, primarily foods, used 7-day recall.

[68] The per capita measures are computed by dividing the household consumption measure by the number of members of the household. The per adult equivalent measures divide household consumption by a weighted measure of the number of members of the households. The weights differ by age and gender and are used to account for the difference between the cost of children and adults. We used the weights specified in Ethiopia's Household Consumption Expenditure Survey 2010/11.

96.17% when using adult equivalent measures. Even the lower per-adult equivalent measure is very high, which signals that the target population is among the poorest groups in Ethiopia.[69]

Table 23 includes measures of the depth of poverty of the food poor. This measure is used to understand how far below the food poverty line the target population is. The depth of poverty of the food poor is 64.47% by per capita consumption and 58.65% by adult equivalent measures. This means the average food-poor person is 64% below the food poverty line. Figure 18 shows the distribution of food expenditure values across the full sample, where the food poverty line is shown in green.

Table 23. Poverty measurements

Outcome	N	All
Daily per capita food expenditure (Birr)	4,677	17.64
		(11.01)
Daily per adult equivalent food expenditure (Birr)	4,677	21.36
		(13.26)
Household food expenditure per day (Birr)	4,677	96.73
		(54.42)
Percent food poor (per-capita consumption expenditure)	4,677	98.61
		(11.69)
Percent food poor (per adult equivalent consumption expenditure)	4,677	96.17
		(19.20)
Depth of poverty of food poor (using per-adult equivalent consumption expenditure)	4,558	64.47
		(19.05)
Depth of poverty of food poor (using per-capita consumption expenditure)	4,399	58.65
		(20.91)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

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[69] Ethiopia's national poverty rate is 30.8% (World Bank, n.d.). Even though the measure of food poverty in this report is not directly comparable to the national poverty rate, the large difference between both measures is evidence that we are looking at some of the poorest households in Ethiopia.

Figure 18. Distribution of log food consumption expenditure per adult equivalent per day in purchasing power parity USD
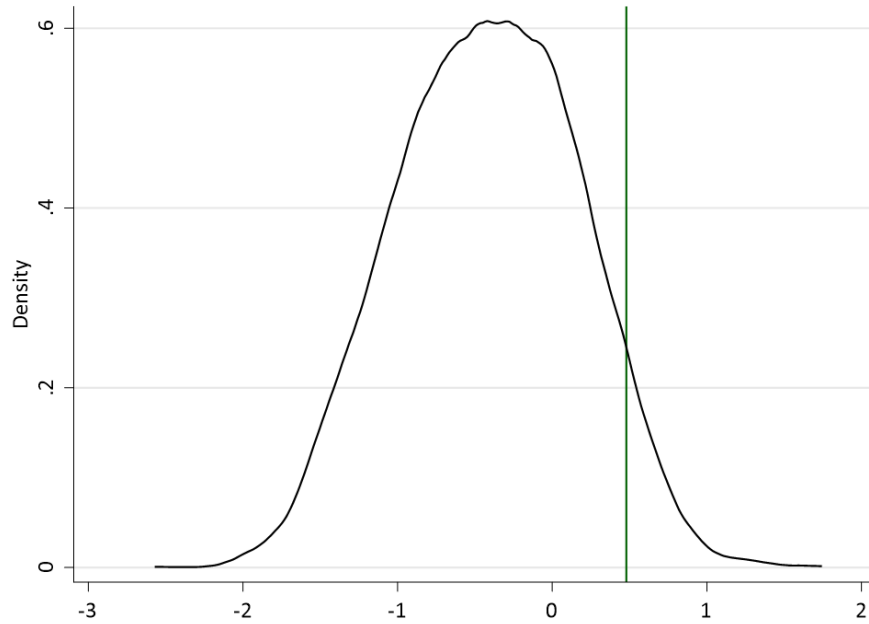
Figure 19 provides a picture of the food poverty measures at the woreda level. Even though all of the woredas are very poor, there are some sizable differences: while woredas like Fedis or Melka Belo have close to 100% food poverty rates, Jarso has a much lower food poverty rate of 82%. The graph for the depth of food poverty portrays a similar picture: woredas with higher food poverty rates tend to have a higher depth of food poverty.

Figure 19. Poverty rate and depth of poverty per adult equivalent measure, by woreda
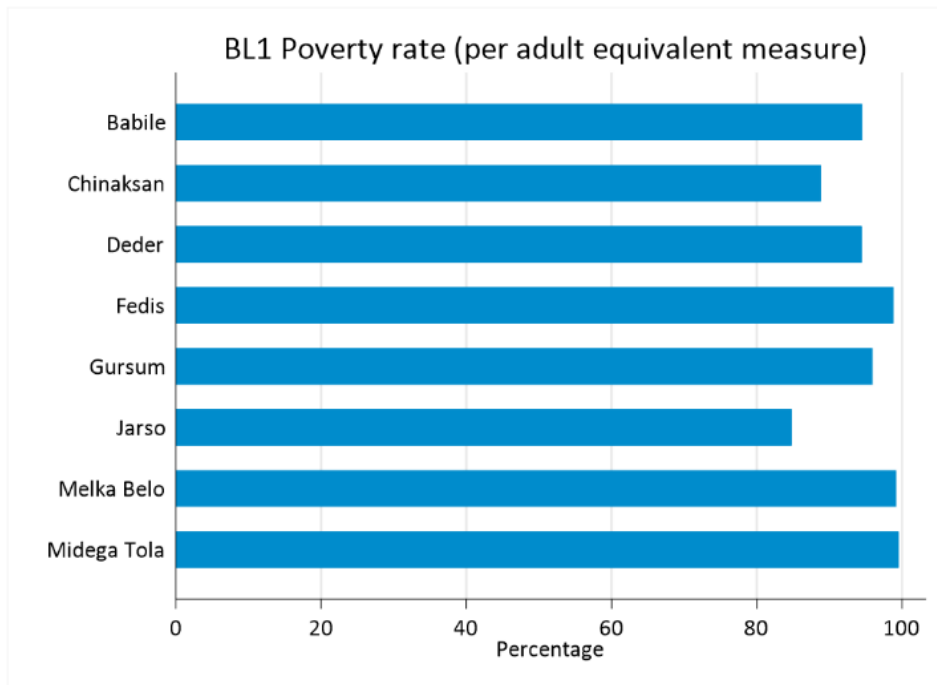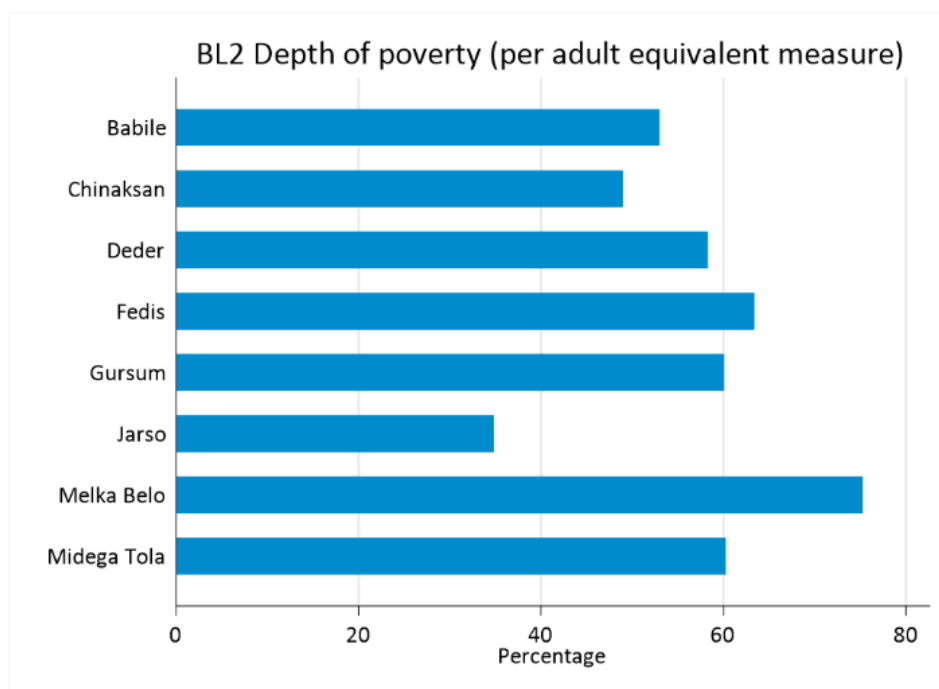
3.11 Gender Dynamics

Gender dynamics are captured through six indicators in this section. As people in a union were the focus of this survey's section, they were the only ones included.[70] These indicators explore men's and women's financial resources and access to credit within the households.

3.11.1 Use of Financial Resources

This section presents findings on participation in cash-earning activities focusing on men and women in a union as well as women's participation in decisions around their and their husbands' incomes.[71]

Table 24. Gender (cash) indicators

Outcome	N	All
BL32: Percent of women and men in a union who earned cash in the past 12 months	3,444	23.05
		(42.12)
BL32: Cash-earning men in a union	1,830	29.07
		(45.42)
BL32: Cash-earning women in a union	1,614	16.23
		(16.74)

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[70] The questions in this section were only asked to the HH and their partner if the HH was married or in a union. Even though the questions were intended to be answered by both, there are many cases where only one of them was available. Additionally, some households didn't give consent to answer the module (5 out of 3,689 households), or the HH was not present (1,009 out of 3,689).

[71] The sample size for this question was men and women in a union.

Outcome	N	All
BL33: Percent of women in a union and earning cash who report participation in decisions about the use of self-earned cash	262	70.61
		(45.64)
BL34: Percent of women in a union and earning cash who report participation in decisions about the use of spouse/partner's self-earned cash	262	43.89
		(49.72)
BL 35: Percent of men in a union and earning cash who report spouse/partner participation in decisions about the use of self-earned cash	532	40.98
		(49.23)

Notes: Indicators BL33 and BL34 are constructed on the population of women in a union that earned money in the last 12 months. BL35 is constructed on the population of men in a union that earned money in the last 12 months. Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

As Table 24 illustrates, just 23% of men and women in a union earned cash in the past year overall, with 29% of men in a union and 16% of women in a union participating in cash-earning activities. Indicator 33 shows that most women in a union (71%) report having decision-making power over the use of their self-earned cash. About 44% of cash-earning women also reported having decision-making power over their spouse/partner's self-earned cash. Similarly, 41% of men in a union reported that their spouse/partner also made decisions about using self-earned cash.

Figure 20 presents the share of men and women in a union earning cash disaggregated at the woreda level. Even though in all woredas less than half of the women and men earned cash, there is a high variability: while in Midega Tola more than 55% of men and 40% of women in a union earned cash, the share is 4.21% in Jarso. Across the board, the data shows that a lower proportion of women earn cash than men.

Figure 20. Men/women in a union who reported earning cash, by woreda
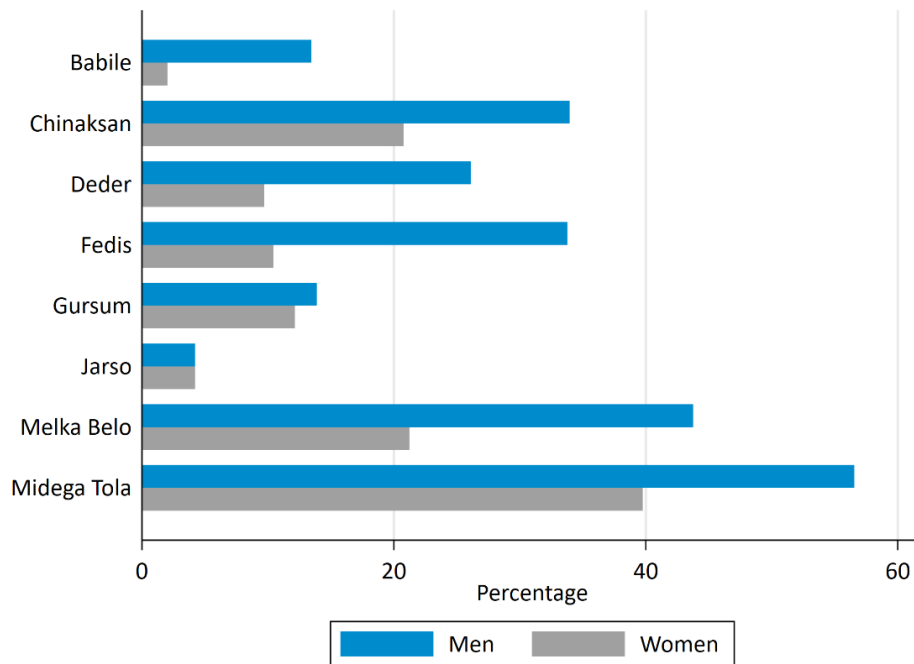
3.11.2 Credit

This section presents findings on credit access and decision-making among people in a union, as well as their participation in community groups. Indicator 41 shows the percentage of men and women in a union who took any type of credit and are members of a community group.[72] The list of community groups that were included in the survey were: agriculture/livestock/fisheries producer's groups; water users' groups; forest users' groups; credit or microfinance groups; mutual help or insurance groups; trade and business association groups; civic groups; local governments; informal/formal organizations in the community; and religious groups.

Table 25. Access to credit and group participation indicators, by gender

Outcome	N	All
BL41: Percent of women/men in a union who are members of a community group[73]	999	59.36
		(49.14)
BL41: Men in a union who are members of a community group	563	65.9
		(47.45)
BL41: Women in a union who are members of a community group	436	50.92
		(50.05)
BL42: Percent of women/men in a union with access to credit	3,444	27.73
		(44.77)
BL42: Men in a union who have access to credit	1,830	29.45
		(45.60)
BL42: Women in a union who have access to credit	1,614	25.77
		(43.75)
BL43: Percent of women/men in a union who make decisions about credit	955	29.53
		(45.64)
BL43: Men in a union who report making decisions about credit	539	28.94
		(45.39)
BL43: Women in a union who report making decisions about credit	416	30.29
		(46.01)

Notes: BL43 was only asked to people that have taken credit. Due to a skip pattern, BL41 (membership to a community group) was also only asked to women/men that have taken credit. Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

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[72] Due to a skip pattern, questions related to community membership were only asked to people who took credit (999 out of 3,444 individuals).

[73] The most common community groups are religious groups and mutual help or insurance groups, attended by 54% and 42% of people in a union.

Table 25 shows that 59% of people in a union are members of a community group, with 66% of men in a union and 51% of women in a union reporting membership. The other two indicators in the table look at credit-related variables for people in a union. 28% of people in a union reported having access to credit- with less than one-third (30%) of men and about one-quarter (26%) of women in a union reporting credit access. Of those who had access to credit, approximately 30% reported making decisions about that credit. Men and women both made decisions about credit at similar rates, with 29% of men and 30% of women in a union stating that they made credit decisions.

Across all woredas surveyed, there was high variability in access to credit by men and women (Figure 21). Gursum had the highest access rate (45% for men and 39% for women), while Melka Belo had the lowest (3.5% for men and 2.8% for women), followed by Chinaksan (11.3% for men and 1% for women). The shares disaggregated by gender follow a similar pattern. Generally, a larger proportion of men have access to credit, except for Fedis and Deder. In Fedis, roughly 3% more women report access to credit than men, while in Deder, the difference is 9%.

Figure 21. Share of men and women in a union with access to credit, by woreda
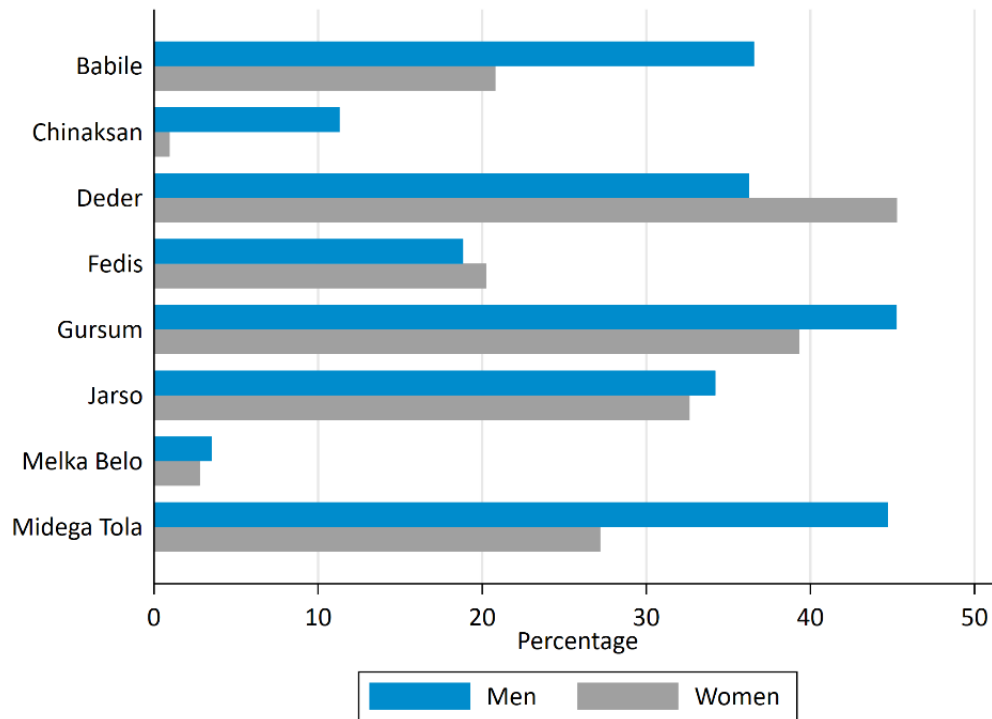
3.12 Resilience

This section presents five different indexes that provide a picture of households' resilience. These indexes are based on subindexes. In each subsection, we will present the main index and the

subindexes. Some of the main indexes are constructed using principal components analysis,[74] and, in most cases, it is difficult to interpret the final number. Relying on the subindexes in addition to the main index helps provide a better understanding of households' resilience capacities.

3.12.1 Ability to Recover from Shocks and Stresses Index

The ability to recover from shocks and stresses index reflects the ability to recover from negative events that have impacted the household. On average, households score 3 on this index. This index is composed of indices that reflect how households perceived their recovery and the total number and severity of shocks the household experienced over the past year.

Table 26. Ability to recover from shocks and stresses index

Outcome	N	All
BL23: Mean ability to recover from shocks and stresses index	4,545	3
		(1.36)
Ability to recover subindex (2–6)	4,649	2.98
		(1.36)
Shock exposure subindex (0–168)	4,575	24.4
		(14.41)
Total shocks experienced (0–21)	4,683	3.6
		(2.19)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

Households experienced an average of 3.6 out of 21 possible shocks in the previous year. The most reported shocks are illustrated below in Figure 22, which shows the shocks experienced by at least 20% of the households. The two most important shocks experienced by more than 70% of the households are increases in food prices (72%) and drought conditions. Other common shocks listed included a delay in PSNP food assistance, increased prices of inputs, and crop pests.

In terms of the number and intensity of shocks experienced, households scored an average of 24.4 out of 168, which accounts for 21 shocks and four different levels of severity (regarding both the impacts on the household economic situation and household consumption). This suggests that out of the average of 3.6 shocks experienced, households perceived those shocks to be severe.

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[74] The indexes relying on principal component analysis are constructed as follows: first, we calculated the first principal components of all the available subindexes associated with the main index; we then predicted the score for each household based on the weighted combination of the first component and the subindexes. This score was rescaled to be between 0 and 100.

Figure 22. Most common shocks reported by households
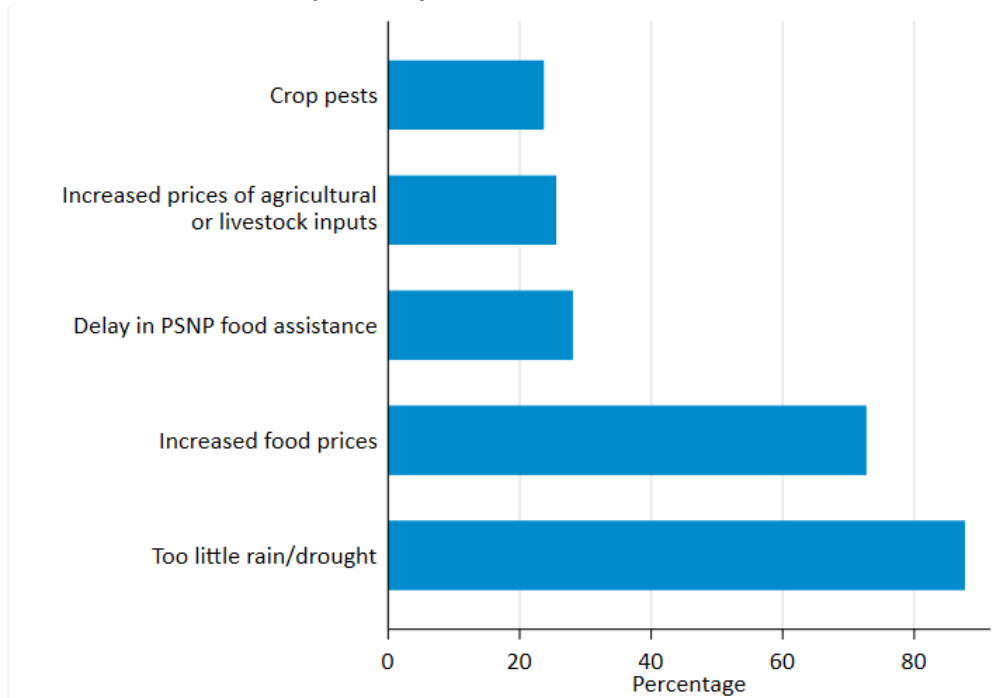
Figure 23 shows the variability across woredas in the ability to recover from shocks and stresses. Fedis has the highest score (4.08), and Melka Belo (2.25) and Jarso (2.93) have the lowest scores. The shock exposure and total shock experiences follow a similar pattern (Figure 24). The households in all woredas perceived the shock to have had a severe impact on their income and food consumption.

Figure 23. Mean ability to recover from shocks and stresses, by woreda
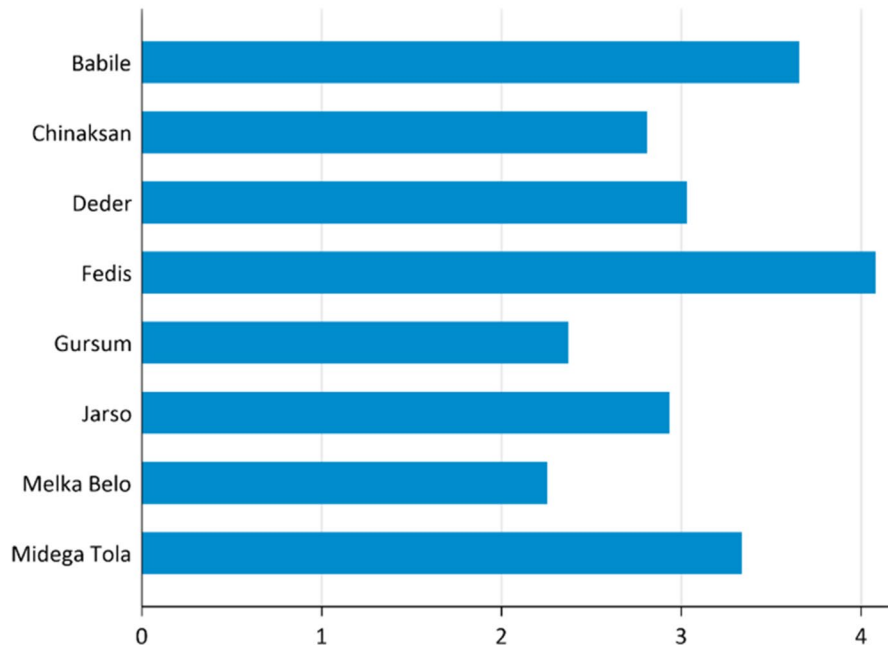
Figure 24. Shock indicators

Shock exposure subindex

Woreda	Value
Babile	~17
Chinaksan	~34
Deder	~19
Fedis	~25
Gursum	~31
Jarso	~23
Melka Belo	~13
Midega Tola	~24

Total shocks experiences

Woreda	Value
Babile	~2.6
Chinaksan	~4.9
Deder	~2.6
Fedis	~3.7
Gursum	~4.6
Jarso	~3.9
Melka Belo	~1.9
Midega Tola	~3.7
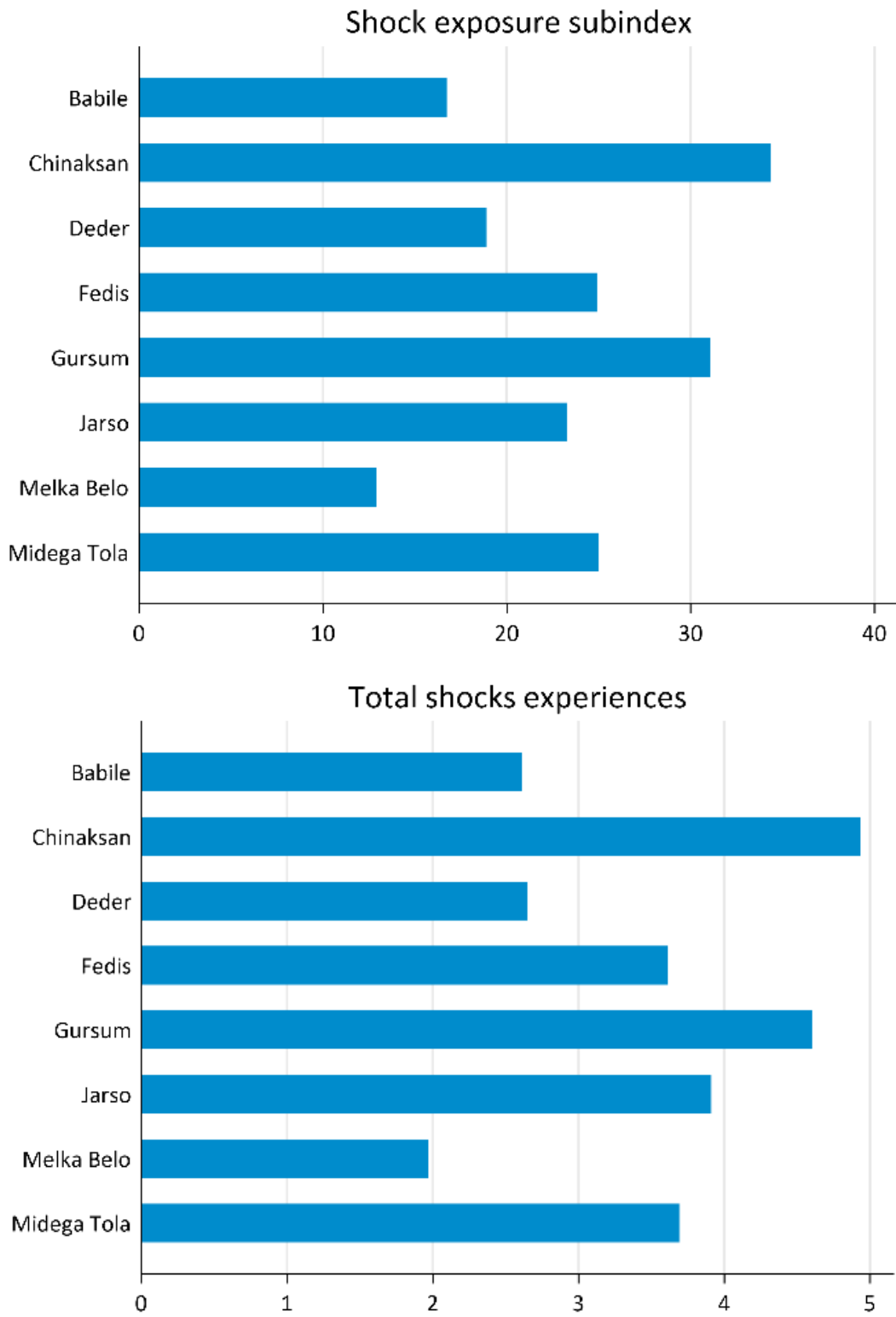
3.12.2 Absorptive Capacity Index

The absorptive capacity index reflects the ability of households to prepare for, deal with, and mitigate the impact of shocks and stressors on well-being outcomes through preventive measures and positive coping strategies. Overall, households scored around 29 out of 100 on this index, reflecting a low ability to absorb shocks.[75] There are few resources that households have access to that would enable them to mitigate shocks better.

A key aspect of the absorptive capacity index is financial resources (e.g., cash savings, remittances) that households can access to absorb shocks. Overall, very few households have access to financial resources for absorbing shocks, lowering their ability to mitigate the impact of shocks on well-being outcomes. Specifically, only 78 households (1.6%) have cash savings, 112 (2.3%) reported receiving remittances, and 56 (1.2%) have access to insurance. Households, on average, own 8.27 different types of household and productive assets (out of 45), although this does not necessarily mean that households have a large asset stock.

Table 27. Absorptive capacity index and related indexes

Outcome	N	All
BL09: Absorptive capacity index (0–100)	4,442	28.68
		(15.49)
BL09: Absorptive capacity index (0–100), excluding access to insurance	4,662	29.96
		(15.12)
Bonding social capital index (0–6)	4,681	2.55
		(1.88)
Access to cash savings index (0–1)	4,680	0.02
		(0.13)
Remittances index (0–1)	4,683	0.02
		(0.15)
Asset ownership index—total type (0–45)	4,665	8.27
		(3.65)
Shock preparedness and responsiveness index (0–3)	4,681	0.39
		(0.56)
Access to insurance index (0–1)	4,450	0.01
		(0.11)
Access to humanitarian assistance index (0–1)	4,679	0.5

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[75] For the absorptive capacity index, it was impossible to compute the subindex "availability of informal safety nets," which was excluded from the calculations. In Table 25, we present two versions of the absorptive capacity index: one with the subindex "access to insurance" and another one without. This was done because we couldn't calculate that subindex for more than 200 households.

Outcome	N	All
		(0.50)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

The absorptive capacity index also captures the level of social capital that households can access to help them absorb shocks. Overall, findings suggest that most households have low to medium social capital. The bonding social capital index reflects the number of types of individuals that households could get and give help to inside of their communities (out of three groups). On average, households feel able to get and give help from 1.25 of these types of individuals.

Another element of absorptive capacity is how well a household is prepared to mitigate shocks[76] through the availability of disaster preparedness groups in the community and other household shock mitigation strategies. On average, households score 0.39 out of 3 on this index, suggesting a low ability to mitigate shocks.

The last dimension of absorptive capacity is the availability of humanitarian assistance in the community. Around half of the households reported either having used humanitarian emergency assistance[77] or its availability in the village.

Most woredas have an absorptive capacity index between 20 and 33. The exception is Jarso, with a score of 46.86 (Figure 25). Looking at the subindexes, we observe a high variability in the bonding social capital index, shock preparedness and responsiveness index, and access to humanitarian assistance index (Figure 26). The first two indexes follow a similar pattern as the absorptive capacity index: Jarso has the highest value, while Melka Belo has the lowest. The last index behaves differently, whereby woredas with low absorptive capacity indexes tend to have higher scores.

Figure 25. Absorptive capacity index, by woreda

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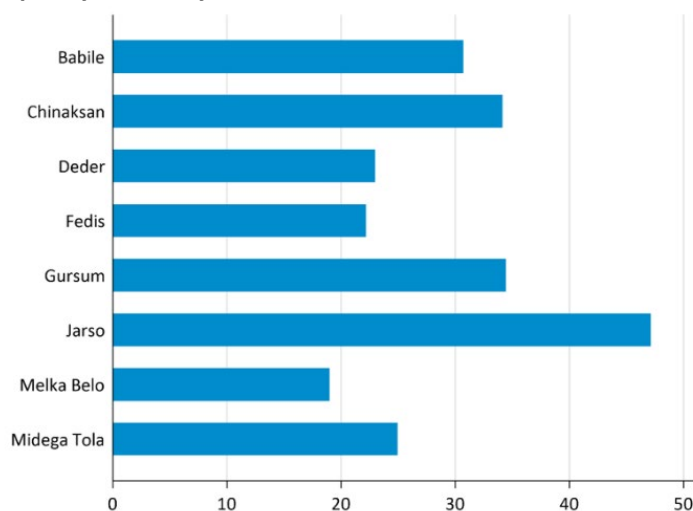
[76] This index does not include whether the household reports participating in any of the following activities: soil conservation activities, flood diversion structures (i.e., protection of land/infrastructure from flooding), planting trees on communal land, or improving access to health services given available data.

[77] The survey question associated with this index is "Has your household received any kind of formal support from the government or non-governmental organizations over the past 12 months?"

Figure 26. Bonding social capital index, shock preparedness and responsiveness index and access to humanitarian assistance index, by woreda

Access to humanitarian assistance index (0-1)
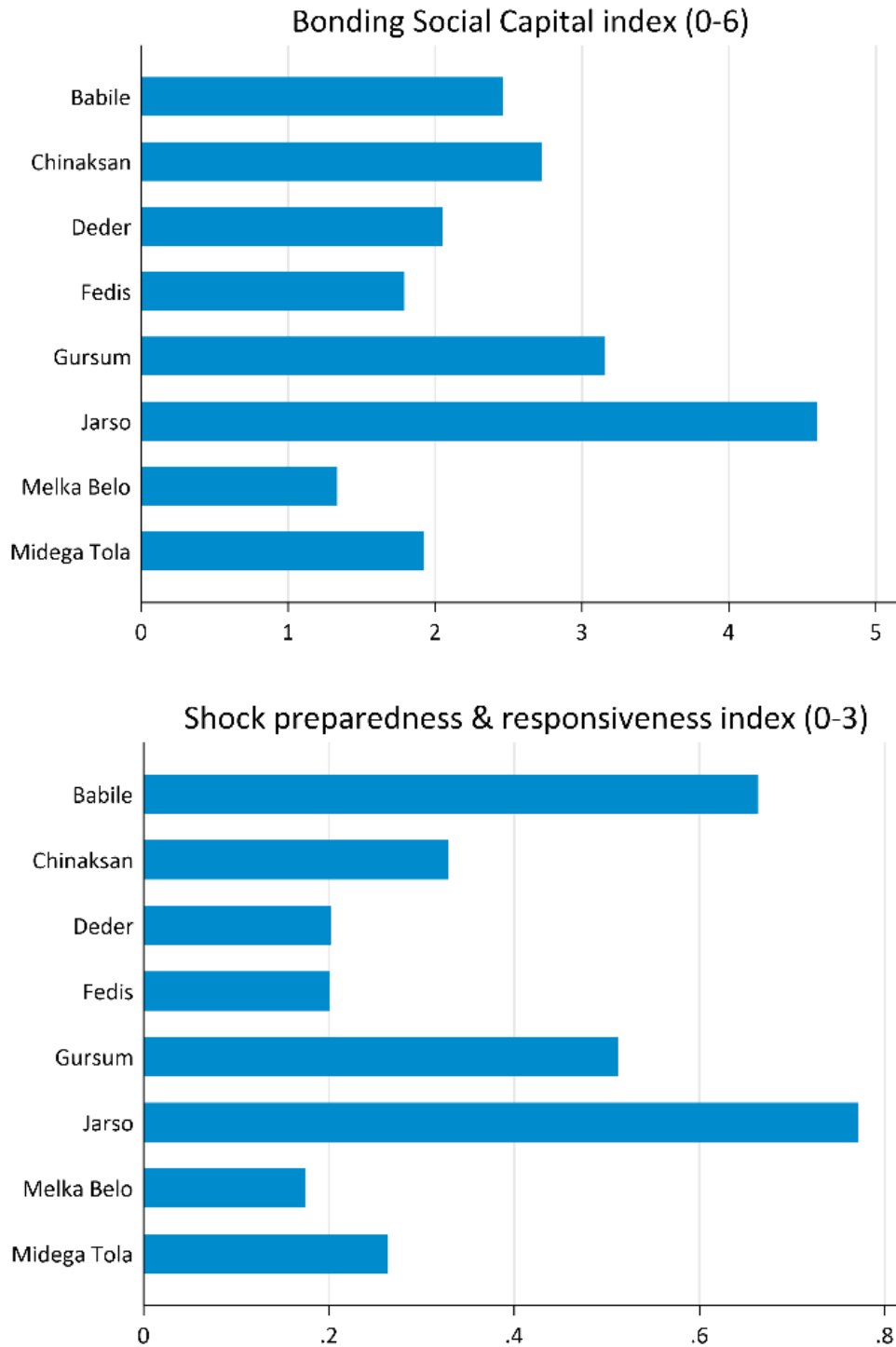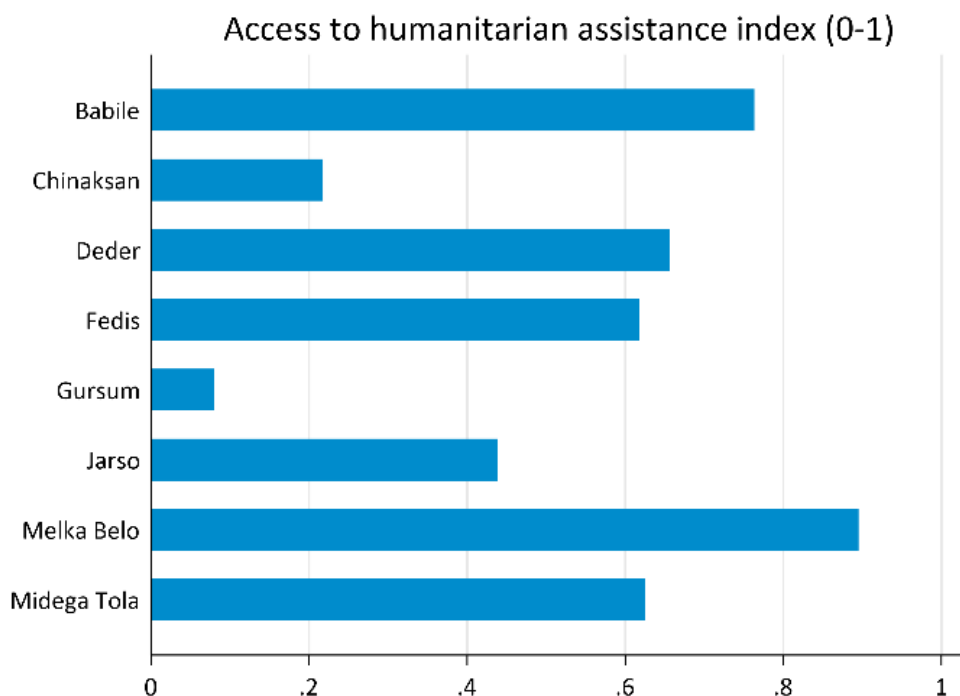
3.12.3 Social Capital Index

These indices convey the ability of households to draw on social networks[78] to get support to reduce the impact of shocks and stresses on their households. They measure both the degree of bonding (social capital among households within their communities) and the degree of bridging (social capital between households in the area and households outside their community). Findings suggest that households can draw on other households within their community slightly more (average score of 54.2) than they can draw on other households outside of their community (average score of 46.04).

Table 28. Social capital index and related indexes

Outcome	N	All
Index of social capital at household level (0–100)	4,681	50.12
		(33.89)
Bonding index (0–100)	4,681	54.2
		(35.77)
Bridging index (0–100)	4,681	46.04
		(36.46)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

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[78] Three different groups of individuals are considered: (i) relatives, (ii) non-relatives in the same ethnic groups/clans, and (iii) non-relatives in other ethnic groups/clans. Both indexes (bridging and bonding) are based on these three groups.

When we disaggregate the indexes at the woreda level, we observe that both the bonding and the bridging index behave similarly (Figure 27). Jarso has by far the highest score in both indexes while Melka Belo has the lowest.

Figure 27. Bonding and bridging indexes, by woreda
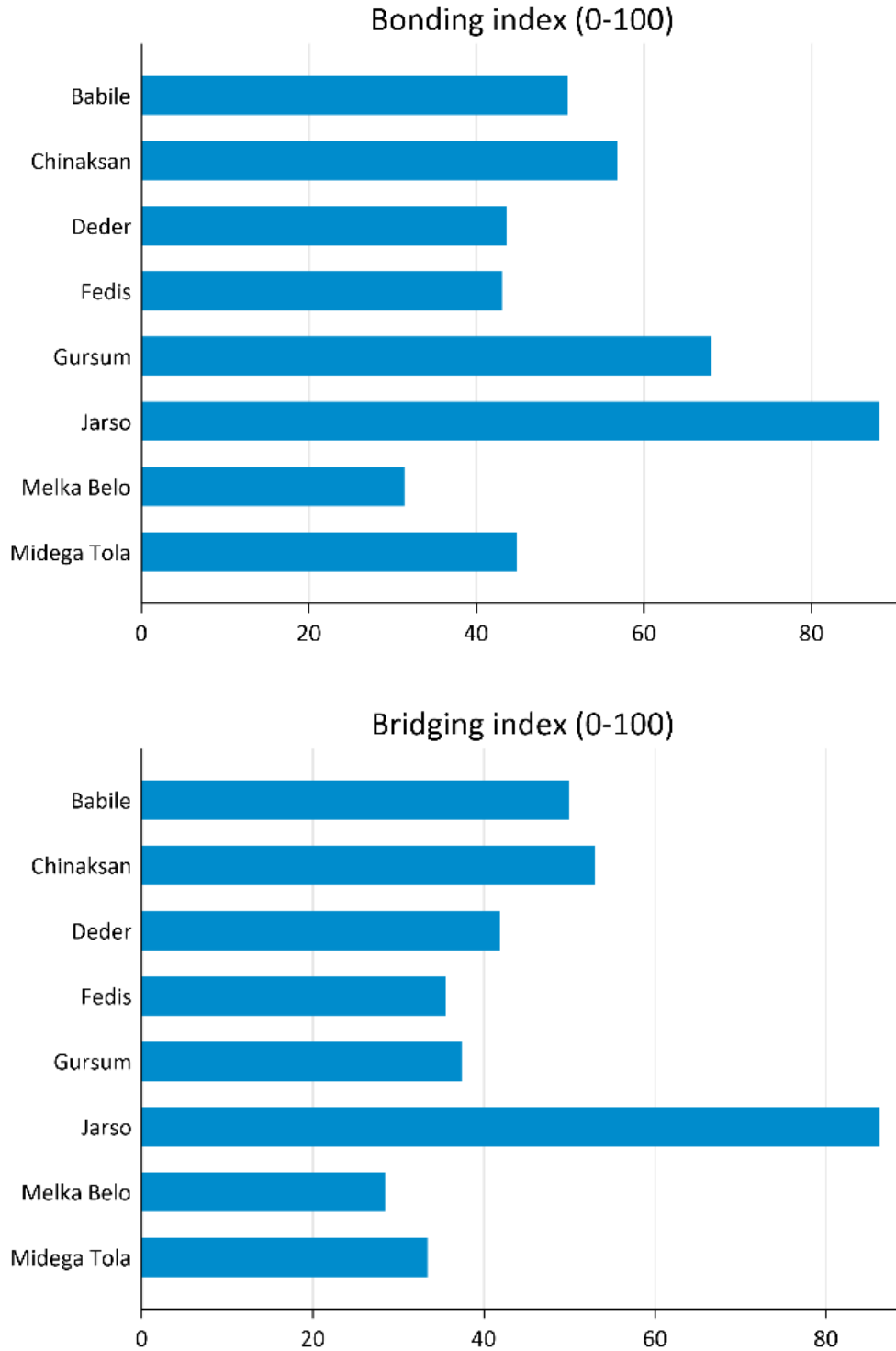
3.12.4 Adaptive Capacity Index

The adaptive capacity index measures the ability of households to manage resources and make proactive and informed choices to better prepare for and adapt to future shocks. The index is composed of several components that reflect different resources or adaptive abilities.[79] The adaptive capacity index, excluding two problematic indexes ("access to financial resources" and "aspirations/confidence to adapt index"), is, on average, 35.93 out of 100, which suggests that households have a limited ability to manage resources and adapt to future shocks.

Table 29. Adaptive capacity index and related indexes

Outcome	N	All
BL08: Adaptive capacity index (0–100)	516	43.45
		(22.57)
BL08: Adaptive capacity index (0–100), excluding aspirations/confidence to adapt	1,964	40.88
		(19.81)
BL08: Adaptive capacity index (0–100), excluding access to finance s. practices	848	37.65
		(21.42)
BL08: Adaptive capacity index (0–100), excluding access to finance s. practices and aspirations/confidence to adapt	3,960	35.93
		(18.93)
Aspirations/confidence to adapt index (0–16)	4,290	9.73
		(2.27)
Bridging social capital index (0–6)	4,681	2.17
		(1.86)
Linking social capital index (0–4)	4,678	0.47
		(0.98)
Social network index (adjusted range 0–3)	4,368	1.08
		(1.32)
Education/training index (0–8)	4,669	0.98
		(1.22)
Livelihood diversification index (0–20)	4,681	1.81
		(0.76)

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[79] In Table 27, we present four versions of the adaptive capacity index: (i) includes all of the available subindexes, (ii) excludes "access to financial resources," (iii) excludes "aspirations/confidence to adapt index," and (iv) excluding the two subindexes previously mentioned. This was done because the inclusion of the subindexes mentioned led to a substantial reduction in the sample size.

Outcome	N	All
Adoption of improved practices index (0–1)[80]	1,021	0.35
		(0.48)
Access to financial resources index (0–1)	2,242	0.34
		(0.47)
Exposure to information index (0–19)	4,681	1.75
		(2.38)
Asset ownership index—total type (0–45)	4,665	8.27
		(3.65)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

One aspect of the adaptive capacity index captures households' social capital and networks, considering that if households can leverage these networks more effectively, they may better prepare for and adapt to future shocks. Across these indicators, households score poorly, suggesting that households are unable to effectively leverage social capital and networks to adapt to shocks. In particular, the bridging social capital index reflects the number of types of individuals whom households could draw on outside of their communities (out of three groups). On average, households feel able to draw on 1.08 of these types of individuals. The linking social capital index reflects how well-connected households are to government or non-governmental organization leaders and whether they can draw on them for help. Households score very low (0.47 out of 4) on this, suggesting that most households neither know leaders nor can they ask leaders for help. Finally, the social network index[81] captures household access to and participation in various support groups. Households score a 1 out of 3, suggesting that less than half of households have access to and/or participate in these groups.

Another aspect of the adaptive capacity index captures the human resources, assets, and financial resources available to households to mitigate shocks. Overall, households have low levels of human capital and asset resources, suggesting constraints on the overall resource pool they can draw on in the face of shocks. The education/training index reflects the level of human capital in the household, specifically adult literacy; whether any adult has surpassed primary school; and the number of trainings in which household adults have participated. Households score low (0.98 out of 8) on this indicator, reflecting that overall household human capital is low. The asset ownership index illustrates the number of different types of assets a household owns (out of 45 types). On average, a household owns 8.27 different types of assets. This could mean that overall household asset stock is low, although this does not reflect the value of each asset. Finally, the access to financial resources index reflects the financial

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[80] This subindex is slightly different than indicator BL30 in section 4.6. While indicator BL30 looks at farming households using *at least one* of the value chain activities promoted by CRS, the subindex "Adoption of improved practices index" considers households adopting *three or more* value chain activities promoted by CRS.

[81] This subindex was adapted to account for the lack of some village-/community-level variables. The original subindex has three individual-level variables and three village-level variables, while the one presented here only includes the individual ones.

resources available in the village through credit and savings institutions.[82] 34% of the households reported the presence of a credit or microfinance group in their village.

A third aspect of the adaptive capacity index reflects how diversified and improved household livelihood activities are. The livelihood diversification index reflects the number of different livelihood activities households were engaged in over the past year. Overall, households were engaged in an average of 1.81 out of 20 activities, indicating that activities are not well diversified. The adoption of improved practices index[83] reflects whether households adopted improved crop or livestock practices, NRM practices, or improved storage practices. Overall, households score 0.34 out of 1, indicating that about 34% of households have adopted improved practices. The exposure to information index captures the number of topics that households have received information on in the past year, which relates directly to a household's ability to make informed choices to better prepare for shocks. On average, households have received information on 1.75 out of 19 available topics, highlighting that households have had very limited exposure to information to help inform shock mitigation strategies.

Finally, the aspirations/confidence to adapt index reflects a household adult's aspirations, confidence to adapt, and a sense of control over one's life. On average, adults score 9.73 out of 16 on this index, reflecting a moderate sense of confidence to adapt.

The adjusted adaptive capacity index fluctuates at about 25% and 35% for most woredas (Figure 28). Jarso and Chinaksan are exceptions. As we have observed with other indexes, Jarso has by far the highest score (65), almost three times the score of Fedis (23.21)—the woreda with the lowest score.

Most individual subindexes behave similarly, except for the education/training subindex. In Figure 29, it is evident that Melka Belo has one of the highest scores, while Jarso has the second-highest score, behind Gursum.

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[82] This index differs from the one in BHA's manual because of the lack of community-level variables. Instead of using two separate questions (one for savings and another for credit institutions), we relied on the following question in Module K: "Is there a credit or microfinance group including Savings and Credit Cooperative Organization/merry-go-rounds/Village Savings and Loan Association in your community?"

[83] This subindex does not include the adoption of storage methods, which was not collected. Additionally, the subindex does not include a measure of quality for each of the service types. Instead, it only captures whether the service exists. Health services reflect whether non-governmental organizations are currently conducting health activities and not whether local health institutions are available.

Figure 28. Adjusted[84] adaptive capacity index, by woreda
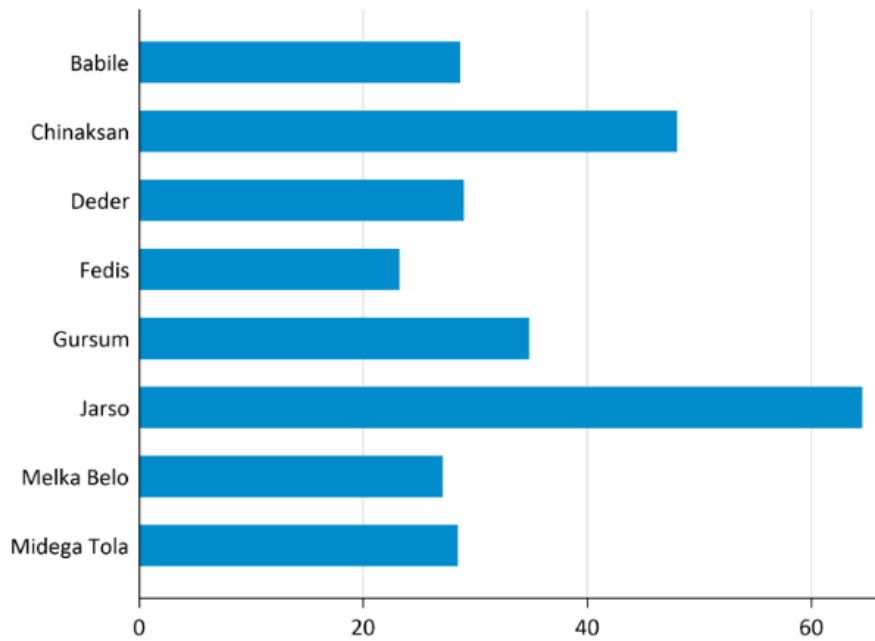
Figure 29. Education/training index by woreda
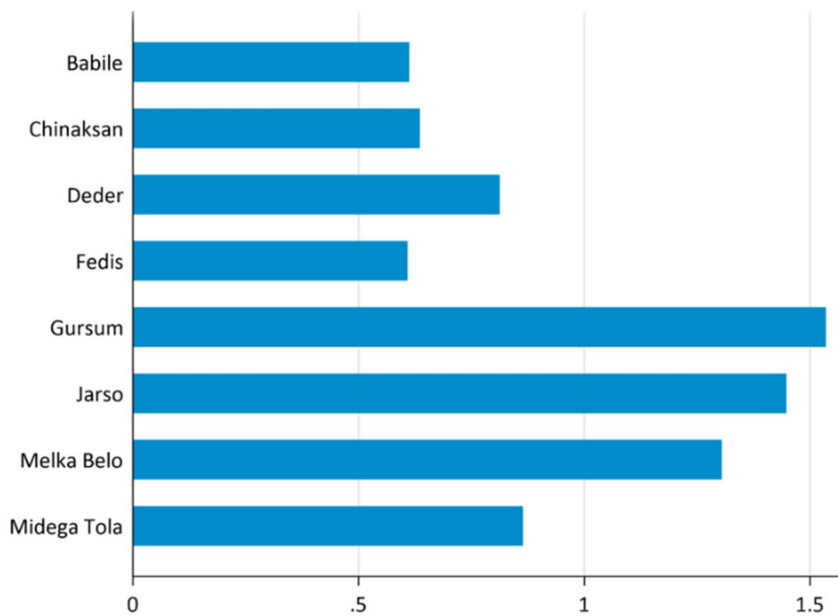
Like the previous section, for subindexes associated with social capital, Jarso has by far the highest score (Figure 30). The differences between Jarso and the rest of the woredas are quite large for both subindexes; the score for Jarso is two and three times higher than the score for the woreda, with the second-largest score.

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[84] This version of the index excludes the subindexes Access to Finance Service practices and Aspirations/Confidence to adapt.

Figure 30. Social capital related indexes, by woreda

Social network index (adjusted range 0-3)

Linking social capital index (0-4)
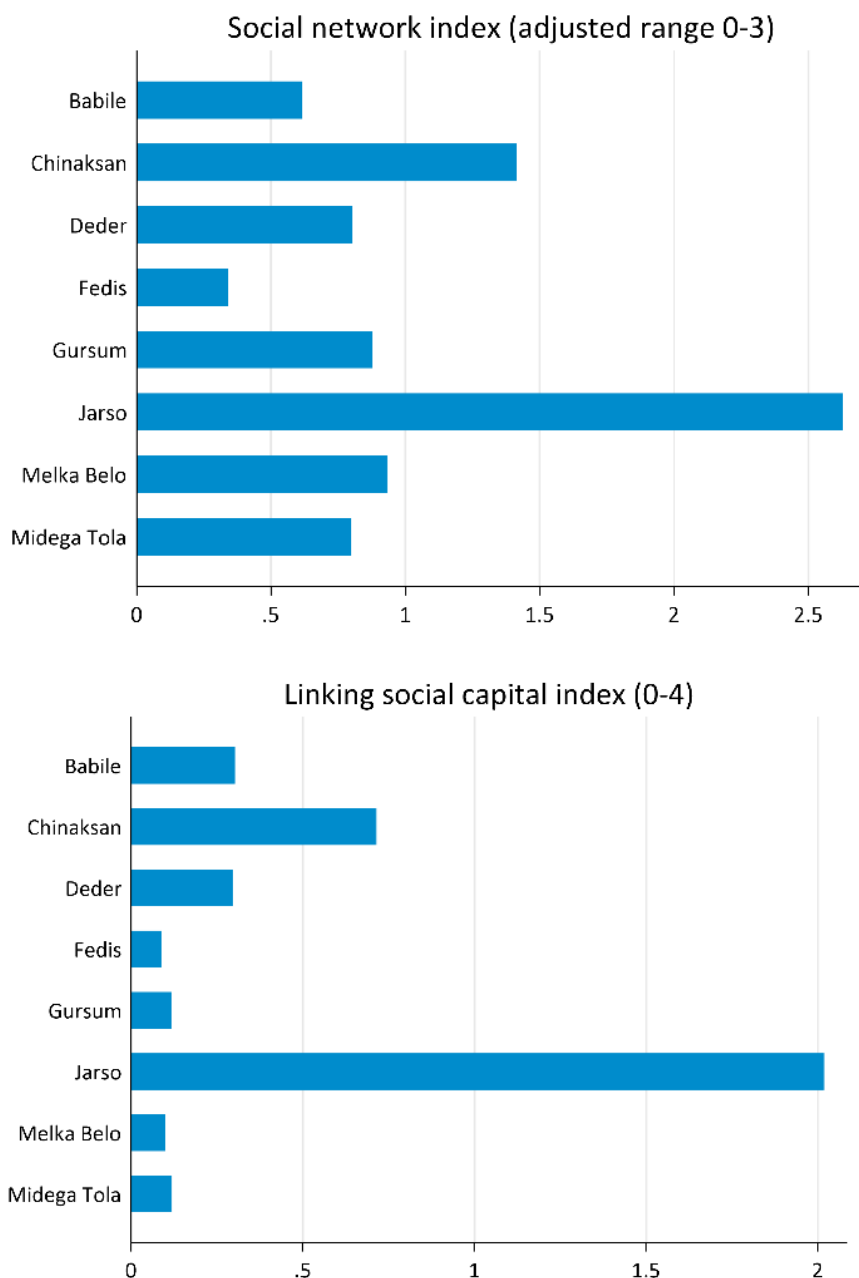
3.12.5 Transformative Capacity Index

The transformative capacity index[85] captures system-level resources, governance, and institutions that make up the enabling environment that promotes or limits a household's capacity to respond to shocks

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[85] For the transformative capacity index, it was not possible to compute the subindexes "access to markets," "access to infrastructure," and "collective action." In Table 28, we present four versions of the adaptive capacity index: (i) includes all the available subindexes, (ii) excludes "access to agricultural services," (iii) excludes "gender equity subindex," and (iv) excludes the two subindexes previously mentioned. This was done because the inclusion of the subindexes mentioned leads to a substantial reduction of the sample size.

and stressors. The transformative capacity index, excluding two problematic indexes, is, on average, 41.53 (out of 100), indicating that there are not very strong institutions available to enhance household capacity to respond to shocks.

Table 30. Transformative capacity index and indexes

Outcome	N	All
BL25: Transformative capacity index (0–100)	200	43.86
		(22.10)
BL25: Transformative capacity index (0–100), excluding agricultural services and gender equity	4,290	41.53
		(20.33)
BL25: Transformative capacity index (0–100), excluding gender equity index	4,290	36.25
		(21.37)
BL25: Transformative capacity index (0–100), excluding agricultural services	200	44.76
		(22.13)
Access to formal safety nets index (0–11)	4,462	2.05
		(0.79)
Access to communal natural resources index (0–4)	4,681	1.29
		(1.64)
Basic services index (0–1), including only the police variable	4,682	0.98
		(0.13)
Access to agricultural services index (0–1)	4,683	0.12
		(0.33)
Bridging social capital index (0–6)	4,681	2.17
		(1.86)
Linking social capital index (0–4)	4,678	0.47
		(0.98)
Social cohesion index (0–3)	4,573	1.1
		(1.10)
Local decision-making index (0–1)	4,619	0.91
		(0.28)
Local government responsiveness index (0–2)	4,683	1.84
		(0.38)
Gender index (0–3)	4,682	2.68

Outcome	N	All
		(0.56)
Gender equitable decision-making index (0–1)	259	0.71
		(0.44)

Notes: Estimates from the RFSA Ifaa baseline survey sample. Standard deviations are in parentheses.

One dimension of the transformative capacity index is access to basic services. Because of a lack of information, the basic services index only considers the availability of police/security/force.[86] This index was close to 1, which means that almost all households have access to government security forces (local or national) that can reach a village within 1 hour.

Another dimension of the transformative capacity index is the availability of economic institutions to support livelihoods. Access to these economic institutions is varied. Only 12% of households report having access to agricultural extension services.[87] A slightly larger number of households have access to natural communal resources; on average, households have access to only 1.29 out of four natural communal resources (communal grazing land, water source, firewood, and irrigation source).

Another aspect of the transformative capacity index reflects the strength of households to support themselves through their networks. Overall, households have a low ability to draw on their networks. As mentioned in the Adaptive Capacity Index section, households feel able to draw on 1.08 out of three types of individuals (bridging social capital index), and the low linking social capital score suggests most households neither know leaders nor can they ask leaders for help. A related index is the social cohesion index[88] which illustrates how active households have been in various support groups in the community. On average, households report engaging in 1.1 out of three support groups, reflecting low participation in support groups. Finally, the local decision-making index reflects how actively households participate in groups in their communities. 91% of households report active participation.

The gender index reflects constraints to gender-neutral behavior at the community level. On average, communities report that 2.68 out of three gender-neutral behaviors are norms.[89] The gender equitable decision-making index[90] reflects how equitable decision-making is across male and female adults within the same household. On average, households score 0.71 out of 1 on this index, reflecting that out of two key household decisions,[91] on average, more than one involves both male and female household members.

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[86] Due to a CAPI error, questions on the other basic services (primary school, health services, and financial services) were not collected.

[87] This index was calculated based on the percentage using agricultural extension services versus those with access, given available data.

[88] This index ranges from 0–3 instead of 0–4 as we do not have data on whether community members came together for social events.

[89] The three behaviors considered were: (i) men and women sit and eat together within their households, (ii) men and women regularly sit together at public meetings, and (iii) men in the village help with childcare.

[90] This index does not include measures of equitable decision-making around nutrition and child health, as well as savings. The index was constructed using information from households where both the HH and his/her spouse were available. The results of this index should be considered cautiously due to the low sample size.

[91] The two major decisions are: (i) how the cash earned will be used and (ii) decisions about making major household purchases.

The final dimension of the transformative capacity index measures how available and reliable external sources of support are. Overall, households have access to a moderate number of these external resources. The formal safety nets index reflects the number of external safety nets (e.g., emergency food or cash assistance, agricultural inputs) available in the community. Overall, households have access to two out of 11 formal safety nets. The government responsiveness index reflects whether households have access to a reliable police force and a peace committee. On average, households have access to 1.84 of two of these resources.

At the woreda level, Jarso has the highest score (close to 80), while the rest of the woredas have values in the range of 23 to 43 (Figure 31). Even though there is high variability in all the subindexes that comprise the transformative capacity index, it is worth highlighting the access to agricultural services index.[92] Figure 32 shows that almost all woredas have scores below 0.1. Jarso is the exception, with a score above 0.9.

Figure 31. Adjusted[93] transformative capacity index, by woreda

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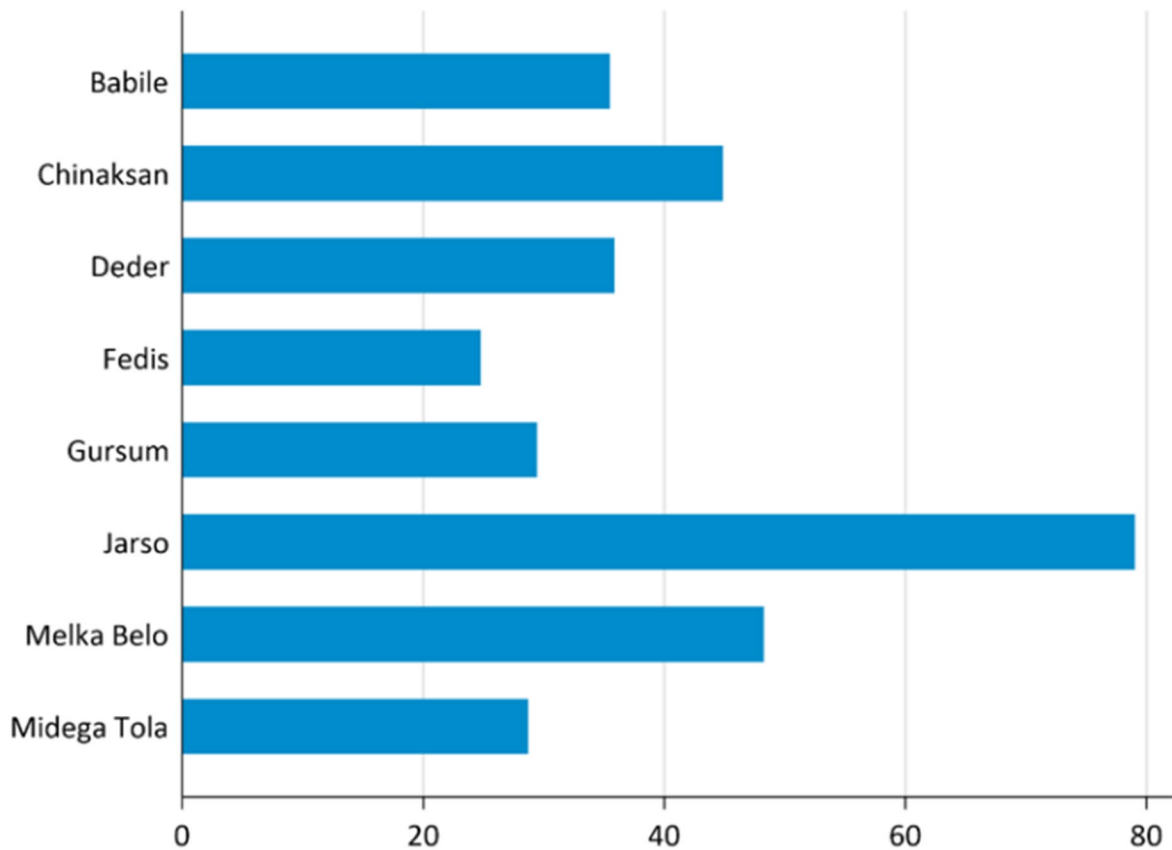
[92] A household gets an index of 1 if it uses training and extension services.
[93] Does not include agricultural services and gender equity indexes.

Figure 32. Access to agricultural services index, by woreda
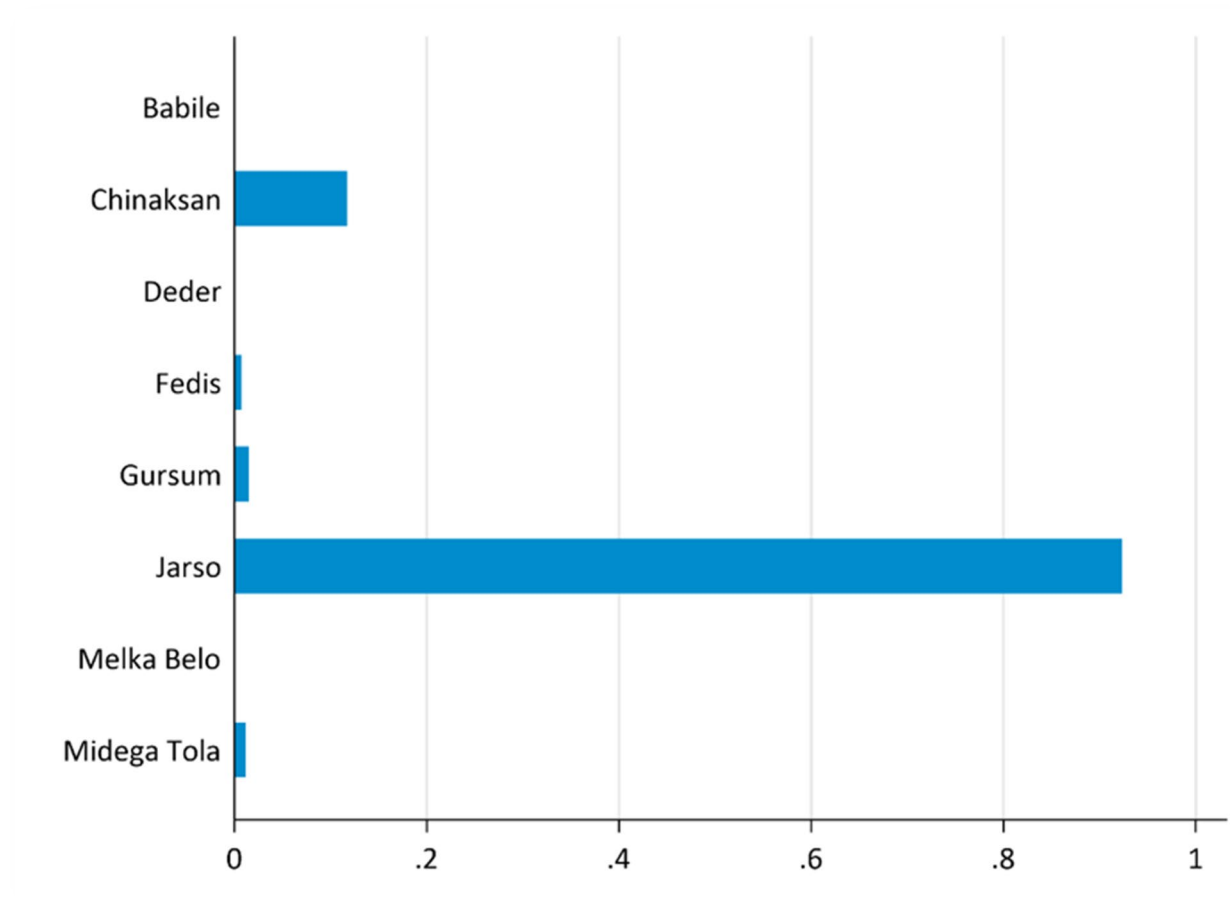
4. COMPARISON OF TREATMENT AND CONTROL GROUPS

This section presents the results of balance tests run across treatment arms. The different subsections display tables containing similar outcome variables to those discussed in Section 4. For each variable we run:

Equation 1, where i denotes the household or individual, y_i stands for the outcome variable, and $Treated_i$ is equal to 1 if household i lives in a treated kebele.

Equation 1. Balance test regression across treatment arms

$$y_i = \beta_0 + \beta_1 \cdot Treated_i + \epsilon_i$$

The variable of interest in this section is β_i, which represents the difference between the treatment and control groups. For each outcome variable, we show the mean value for the control and treatment groups, the β_i coefficient, `its associated *T*-statistic and the *p*-value. Standard errors are clustered at the kebele level.

Causal Design ran more than 140 balance tests. In an experimental study using random assignment, the difference between treatment arms is expected to be equal to zero. This is more likely to happen in situations where the number of clusters is very large. In samples of practical size, it is possible to obtain a significant difference in means across treatment arms for some variables by chance. In the case of this impact evaluation, we worked with 120 clusters, which were allocated to the treatment or control groups. Even though the allocation was done randomly, it is possible that by chance some variables have a statistically significant difference across treatment arms. Even for statistically identical groups, at a 5% significance level, one out of every 20 tests is expected to indicate a significant difference due to random chance.

From the 141 balance tests presented in the tables of this section, there were 15 variables with a statistically significant difference across treatment arms at a 10% significance level, four at a 5% significance level, and none at a 1% significance level. Even though the number of variables with a statistically significant difference at a 10% significance level is slightly higher than what would be expected (15 versus 14), the opposite happens when we look at a significance level of 5% (four versus seven) or 1% (zero versus 1.4). These results show that the randomization led to a sampling error within the expected ranges.

The sections with the highest share of significant differences were characteristics of the study population; women's health, maternal nutrition, and reproductive health; agriculture; and gender dynamics.

4.1 Characteristics of the Study Population

Table 31. Individual-level sample characteristics

Outcome	N	Control	N	Treatment	Difference	T-Stat Diff	P-value Diff
Average age	11,739	19.075	16,130	19.217	0.143	0.496	0.621

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
		(16.16)		(16.10)	(0.29)		
Percent of children under 5 years old	11,739	14.413	16,130	13.751	-0.663	-0.915	0.362
		(35.12)		(34.44)	(0.72)		
Percent of children 5–14 years old	11,739	38.853	16,130	39.033	0.179	0.229	0.819
		(48.74)		(48.78)	(0.78)		
Percent of adults (older than 15 years old)	11,739	46.733	16,130	47.216	0.483	0.522	0.603
		(49.90)		(49.92)	(0.93)		
Percent of females	11,739	49.689	16,130	50.155	0.466	0.835	0.406
		(50.00)		(50.00)	(0.56)		
Percent of GWRA	11,739	22.523	16,130	22.951	0.428	0.858	0.392
		(41.78)		(42.05)	(0.50)		
Percent of adults who are in a union	5,486	58.476	7,616	56.276	-2.200	-1.57	0.119
		(49.28)		(49.61)	(1.40)		
Percent of adults with at least some schooling	5,486	26.85	7,616	25.985	-0.865	-0.496	0.621
		(44.32)		(43.86)	(1.74)		
Percent of adults who are farmers	5,485	66.582	7,613	65.914	-0.668	-0.262	0.794
		(47.17)		(47.40)	(2.55)		
Percent of people older than 10years who did work and were paid in cash	5,498	34.503	7,980	29.348	-5.155*	-1.745	0.084
		(47.54)		(45.54)	(2.95)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 32. Household-level sample characteristics

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Average household size	1,950	6.02	2,733	5.902	-0.118	-1.024	0.308
		(2.11)		(2.20)	(0.12)		
Average number of children under the age of 5 in the household	1,950	0.868	2,733	0.812	-0.056	-1.081	0.282
		(0.94)		(0.94)	(0.05)		
Average age of HH	1,950	41.583	2,733	41.911	0.328	0.709	0.48
		(10.76)		(11.11)	(0.46)		
Percent of HH who are in a union	1,950	79.744	2,733	75.375	-4.369**	-2.538	0.012
		(40.20)		(43.09)	(1.72)		
Percent of HH who are female	1,950	23.487	2,733	26.82	3.333*	1.789	0.076
		(42.40)		(44.31)	(1.86)		
	1,950	13.692	2,733	13.355	-0.337	-0.203	0.84

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of HH with some schooling		(34.39)		(34.02)	(1.66)		
Percent of female HH with some schooling	458	2.183	733	3.001	0.818	0.755	0.452
		(14.63)		(17.07)	(1.08)		
Percent of male HH with some schooling	1,492	17.225	2,000	17.15	-0.075	-0.037	0.97
		(37.77)		(37.70)	(2.02)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.2 Food Security

Table 33. Food Insecurity Experience Scale

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Raw FIES score (scale 0–8)	1,949	6.884	2,729	6.87	-0.014	-0.15	0.881
		(1.35)		(1.43)	(0.09)		
Percent of households with some indication of food insecurity	1,949	99.538	2,729	99.45	-0.088	-0.368	0.714
		(6.78)		(7.39)	(0.24)		
Percent of households that experienced approx. moderate-to-severe food insecurity	1,949	96.973	2,729	95.566	-1.407	-1.536	0.127
		(17.14)		(20.59)	(0.92)		
Percent of households that experienced approx. severe food insecurity	1,949	77.014	2,729	78.124	1.110	0.371	0.711
		(42.09)		(41.35)	(2.99)		
Percent of households that answered yes to all eight questions	1,949	37.045	2,729	38.292	1.248	0.305	0.761
		(48.30)		(48.62)	(4.09)		
Percent of households that answered no to all eight questions	1,949	0.462	2,729	0.55	0.088	0.368	0.714
		(6.78)		(7.39)	(0.24)		
Raw FIES score (scale 0–8)	1,949	6.884	2,729	6.87	-0.014	-0.15	0.881

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 34. Food consumption score

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Food consumption score (FCS) (0–112)	1,916	20.897	2,685	20.212	-0.684	-0.824	0.411
		(10.03)		(9.28)	(0.83)		
Percent of households with poor FCS (<22)	1,916	69.259	2,685	70.279	1.020	0.248	0.805
		(46.15)		(45.71)	(4.12)		
Percent of households with borderline FCS (22–35)	1,916	21.555	2,685	22.905	1.350	0.438	0.662
		(41.13)		(42.03)	(3.08)		
Percent of households with acceptable FCS (>35)	1,916	9.186	2,685	6.816	-2.370	-1.483	0.141
		(28.89)		(25.21)	(1.60)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.3 Child Nutrition and Feeding Practices

Table 35. Infant and young children feeding practices

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of children under 6 months exclusively breastfed	40	30	48	47.917	17.917	1.59	0.117
		(46.41)		(50.49)	(11.27)		
Percent of children 6–23 months receiving a minimum acceptable diet	302	2.318	423	1.182	-1.136	-0.98	0.329
		(15.07)		(10.82)	(1.16)		
Percent of children 6–23 months receiving a minimum meal frequency	302	64.57	423	65.012	0.442	0.085	0.933
		(47.91)		(47.75)	(5.22)		
Percent of children 6–23 months consuming a diet of a minimum diversity	303	2.64	423	1.418	-1.222	-0.863	0.39
		(16.06)		(11.84)	(1.42)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 36. Food groups consumed by children (6–23 months) in the last 24 hours

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent consuming breastmilk	303	81.518	423	79.196	-2.322	-0.634	0.528

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
		(38.88)		(40.64)	(3.66)		
Percent consuming grains, roots, tubers	303	67.987	423	74.704	6.718	1.248	0.214
		(46.73)		(43.52)	(5.38)		
Percent consuming legumes and nuts	303	3.3	423	2.837	-0.463	-0.349	0.728
		(17.89)		(16.62)	(1.33)		
Percent consuming dairy products	303	15.842	423	12.293	-3.548	-1.027	0.307
		(36.57)		(32.87)	(3.46)		
Percent consuming meats	303	0.33	423	0.709	0.379	0.734	0.465
		(5.74)		(8.40)	(0.52)		
Percent consuming eggs	303	2.97	423	1.891	-1.079	-0.82	0.414
		(17.00)		(13.64)	(1.32)		
Percent of consuming vitamin-A-rich vegetables and fruits	303	12.211	423	6.856	-5.355**	-2.122	0.036
		(32.80)		(25.30)	(2.52)		
Percent consuming other vegetable and fruits	303	6.271	423	6.856	0.585	0.297	0.767
		(24.28)		(25.30)	(1.97)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 37. Young children (0–59 months) diarrhea incidence and treatment

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of children under 5 (0–59 months) who had diarrhea in the prior 2 weeks	946	9.619	1221	12.531	2.911	1.359	0.177
		(29.50)		(33.12)	(2.14)		
Percent of children under 5 (0–59 months) with diarrhea treated with oral rehydration therapy (ORT)	91	94.505	153	92.157	-2.349	-0.677	0.5
		(22.91)		(26.97)	(3.47)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.4 Women's Health, Maternal Nutrition, and Reproductive Health

Table 38. Indicators for women's health, maternal nutrition, and reproductive health

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of GWRA with MDD	1,928	0.985	2,709	0.775	-0.210	-0.759	0.449
		(9.88)		(8.77)	(0.28)		
CPR of non-pregnant GWRA in a union	1,110	12.432	1,458	10.562	-1.870	-0.958	0.34
		(33.01)		(30.75)	(1.95)		
Percent of births receiving at least four ANC visits during pregnancy	693	14.863	929	16.362	1.499	0.494	0.622
		(35.60)		(37.01)	(3.03)		
Percent of GWRA in a union who have knowledge of modern family planning methods	1,270	33.465	1,666	27.191	-6.274*	-1.764	0.08
		(47.21)		(44.51)	(3.56)		
Number of contraceptive methods married women or in a union know (0–12)	1,270	1.849	1,666	1.626	-0.223	-1.283	0.202
		(1.97)		(2.05)	(0.17)		
Percent of women in a union who made decisions about modern family planning methods in the past 12 months	119	47.899	143	52.448	4.548	0.554	0.581
		(50.17)		(50.12)	(8.21)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

Table 39. Woman of reproductive age's consumption

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Grains and roots	1,928	88.071	2,707	89.767	1.697	0.701	0.484
		(32.42)		(30.31)	(2.42)		
Pulses (beans, peas, and lentils)	1,928	0.83	2,707	0.739	-0.091	-0.275	0.784
		(9.07)		(8.57)	(0.33)		
Nuts and seeds (including groundnuts)	1,928	1.089	2,707	1.552	0.462	1.253	0.213
		(10.38)		(12.36)	(0.37)		
Dairy	1,928	4.512	2,707	4.285	-0.227	-0.239	0.811
		(20.76)		(20.26)	(0.95)		

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Meat, Poultry, and fish	1,928	0.674	2,707	0.443	-0.231	-1.026	0.307
		(8.19)		(6.64)	(0.23)		
Eggs	1,928	1.66	2,707	1.108	-0.552	-1.509	0.134
		(12.78)		(10.47)	(0.37)		
Dark green leafy vegetables	1,928	7.573	2,707	4.692	-2.881*	-1.697	0.092
		(26.46)		(21.15)	(1.70)		
Other vitamin-A-rich fruits and vegetables	1,928	48.963	2,707	46.989	-1.973	-0.594	0.554
		(50.00)		(49.92)	(3.32)		
Other veg	1,928	18.361	2,707	16.587	-1.774	-0.778	0.438
		(38.73)		(37.20)	(2.28)		
Other fruit	1,928	1.452	2,707	0.591	-0.861*	-1.7	0.092
		(11.97)		(7.67)	(0.51)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.5 Water, Sanitation, and Hygiene Practices

Table 40. Water, sanitation, and hygiene indicators

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
BL16: Percent with access to basic drinking water services	133	4.511	220	4.091	-0.420	-0.181	0.857
		(20.83)		(19.85)	(2.33)		
Percent with access to basic drinking water services based on four of five of the criteria	1,949	10.57	2,721	11.65	1.081	0.55	0.583
		(30.75)		(32.09)	(1.96)		
Percent of households with soap and water at a handwashing station on the premises	1,949	3.079	2,732	1.83	-1.248	-1.563	0.121
		(17.28)		(13.41)	(0.80)		
Percent of households practicing use of recommended household water treatment technologies	1,947	6.574	2,729	7.915	1.341	0.713	0.477
		(24.79)		(27.00)	(1.88)		
Percent of households practicing open defecation	1,949	58.851	2,732	58.638	-0.212	-0.04	0.968
		(49.22)		(49.26)	(5.33)		

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent using improved sanitation facilities (not shared)	1,949	16.06	2,732	15.739	-0.320	-0.113	0.91
		(36.73)		(36.42)	(2.83)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.6 Agriculture

Table 39. Financial services, value chain activities, and natural resource management practices

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of households using financial services	1,860	16.774	2,590	19.498	2.724	1.254	0.212
		(37.37)		(39.63)	(2.17)		
Percent of households using agricultural credit	1,860	13.817	2,590	17.027	3.210	1.564	0.121
		(34.52)		(37.59)	(2.05)		
Percent of households who saved	1,858	2.799	2,589	2.704	-0.095	-0.139	0.889
		(16.50)		(16.22)	(0.68)		
Percent of households using crop insurance	1,860	1.667	2,589	0.966	-0.701	-1.532	0.128
		(12.81)		(9.78)	(0.46)		
Percent of households reporting at least one value chain activity	453	76.38	568	75.704	-0.675	-0.089	0.929
		(42.52)		(42.92)	(7.56)		
Percent of households using at least one NRM practice	1,860	88.763	2,590	89.884	1.121	0.389	0.698
		(31.59)		(30.16)	(2.88)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 40. Improved management practices or technologies in target crops

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of households growing haricot beans	1,693	0.059	2,310	0.043	-0.016	-0.217	0.829
		(2.43)		(2.08)	(0.07)		
Percent using at least one practice for haricot beans	1	100	1	100	0.000		
		(.)		(.)	(.)		
Percent of households growing groundnuts	1,693	1.299	2,310	1.558	0.259	0.33	0.742
		(11.33)		(12.39)	(0.79)		
	22	81.818	36	80.556	-1.263	-0.098	0.923

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent using at least one practice for groundnut		(39.48)		(40.14)	(12.88)		
Percent of households growing potato	1,693	0.295	2,310	1.039	0.744*	1.907	0.059
		(5.43)		(10.14)	(0.39)		
Percent using at least one practice for potatoes	5	100	24	100	0.000		
		(0.00)		(0.00)	(.)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 41. Improved management practices or technologies in target animals

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of households raising goats	1,895	26.174	2,642	21.499	-4.675*	-1.662	0.099
		(43.97)		(41.09)	(2.81)		
Percent of households using at least one practice for goats	496	92.54	568	94.366	1.826	0.785	0.434
		(26.30)		(23.08)	(2.33)		
Percent of households raising poultry	1,895	20.158	2,642	19.152	-1.006	-0.395	0.694
		(40.13)		(39.36)	(2.55)		
Percent of households using at least one practice for poultry	382	92.67	506	96.64	3.970	1.5	0.136
		(26.10)		(18.04)	(2.65)		
Percent of households raising oxen	1,895	7.599	2,642	5.45	-2.149*	-1.9	0.06
		(26.51)		(22.71)	(1.13)		
Percent of households using at least one practice for oxen	144	82.639	144	87.5	4.861	0.628	0.532
		(38.01)		(33.19)	(7.75)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.7 Poverty Measurement

Table 42. Poverty measurement indicators

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Daily per capita food expenditure (Birr)	1,947	17.742	2,730	17.564	-0.178	-0.141	0.888
		(11.04)		(10.99)	(1.26)		
	1,947	21.566	2,730	21.218	-0.348	-0.231	0.818

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Daily per adult equivalent food expenditure (Birr)		(13.38)		(13.18)	(1.51)		
Household food expenditure per day (Birr)	1,947	99.109	2,730	95.035	-4.074	-0.616	0.539
		(56.04)		(53.17)	(6.61)		
Percent poor (per adult equivalent consumption expenditure)	1,947	95.591	2,730	96.587	0.996	0.888	0.376
		(20.54)		(18.16)	(1.12)		
Depth of poverty of poor (per adult equivalent consumption expenditure)	1,820	58.448	2,579	58.791	0.343	0.14	0.889
		(21.46)		(20.52)	(2.45)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.8　Gender Dynamics

4.8.1　Use of Financial Resources

Table 43. Gender (cash) indicators

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of cash earners in a union	1,479	27.045	1,965	20.051	-6.994*	-1.732	0.086
		(44.43)		(40.05)	(4.04)		
Percent of cash-earning men in a union	820	32.683	1,010	26.139	-6.544	-1.268	0.207
		(46.93)		(43.96)	(5.16)		
Percent of cash-earning women in a union	659	20.03	955	13.613	-6.418	-1.456	0.148
		(40.05)		(34.31)	(4.41)		
Percent of women in a union and earning cash who report participation in decisions about the use of self-earned cash	132	71.97	130	69.231	-2.739	-0.212	0.833
		(45.09)		(46.33)	(12.92)		
Percent of women in a union and earning cash who report participation in decisions about the use of spouse/partner's self-earned cash	132	46.212	130	41.538	-4.674	-0.369	0.713
		(50.05)		(49.47)	(12.65)		

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Percent of men in a union and earning cash who report spouse/partner's participation in decisions about the sue of self-earned cash	268	36.94	264	45.076	8.135	1.11	0.271
		(48.35)		(49.85)	(7.33)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.8.2 Credit

Table 44. Gender access to credit and group participation indicators

Outcome	N	Control	N	Treatment	Difference	T-Stat Diff	P-value Diff
Percent of people in a union who are members of a community group	340	67.353	659	55.235	-12.118	-1.178	0.242
		(46.96)		(49.76)	(10.29)		
Percent of men in a union who are members of a community group	209	72.249	354	62.147	-10.102	-0.967	0.336
		(44.88)		(48.57)	(10.45)		
Percent of women in a union who are members of a community group	131	59.542	305	47.213	-12.329	-1.152	0.253
		(49.27)		(50.00)	(10.70)		
Percent of people in a union with access to credit	1,479	22.583	1,965	31.603	9.020*	1.724	0.087
		(41.83)		(46.50)	(5.23)		
Percent of men in a union with access to credit	820	25.122	1,010	32.97	7.848	1.423	0.157
		(43.40)		(47.03)	(5.52)		
Percent of women in a union with access to credit	659	19.423	955	30.157	10.734*	1.876	0.063
		(39.59)		(45.92)	(5.72)		
Percent of men and women in a union who make decisions about credit	334	29.042	621	29.791	0.749	0.119	0.906
		(45.46)		(45.77)	(6.31)		
Percent of men in a union who report making decisions about credit	206	24.757	333	31.532	6.774	0.919	0.361
		(43.27)		(46.53)	(7.37)		
Percent of women in a union who report making decisions about credit	128	35.938	288	27.778	-8.160	-1.162	0.249
		(48.17)		(44.87)	(7.02)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.9   Resilience

4.9.1   Ability to Recover from Shocks and Stresses Index

Table 45. Ability to recover from shocks and stresses index

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Mean ability to recover from shocks and stresses index	1,884	2.922	2,661	3.054	0.132	1.05	0.296
		(1.34)		(1.37)	(0.13)		
Ability to recover index (2–6)	1,934	2.907	2,715	3.034	0.127	0.974	0.332
		(1.33)		(1.38)	(0.13)		
Shock exposure index (0–168)	1,899	23.638	2,676	24.943	1.305	0.778	0.438
		(13.48)		(15.01)	(1.68)		
Total shocks experienced (0–21)	1,950	3.511	2,733	3.665	0.154	0.632	0.528
		(2.07)		(2.27)	(0.24)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.9.2   Absorptive Capacity Index

Table 44. Absorptive capacity index and subindexes

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Absorptive capacity index (0–100)	1,857	29.449	2,585	28.132	-1.317	-0.726	0.469
		(15.71)		(15.30)	(1.81)		
Absorptive capacity index (0–100): No access to insurance	1,944	30.604	2,718	29.493	-1.110	-0.629	0.53
		(15.22)		(15.04)	(1.76)		
Bonding social capital index (0–6)	1,949	2.555	2,732	2.553	-0.002	-0.01	0.992
		(1.89)		(1.86)	(0.21)		
Access to cash savings index (0–1)	1,949	0.018	2,731	0.015	-0.003	-0.554	0.581
		(0.13)		(0.12)	(0.01)		
Remittances index (0–1)	1,950	0.024	2,733	0.024	-0.000	-0.044	0.965
		(0.15)		(0.15)	(0.01)		
	1,946	8.6	2,719	8.036	-0.563*	-1.83	0.07

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Asset ownership index—total type (0–45)		(3.77)		(3.54)	(0.31)		
Shock preparedness and responsiveness index (0–3)	1,949	0.394	2,732	0.389	-0.004	-0.088	0.93
		(0.57)		(0.56)	(0.05)		
Access to insurance index (0–1)	1,860	0.017	2,590	0.01	-0.007	-1.533	0.128
		(0.13)		(0.10)	(0.00)		
Access to humanitarian assistance index (0–1)	1,947	0.503	2,732	0.492	-0.012	-0.184	0.854
		(0.50)		(0.50)	(0.06)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.9.3   Social Capital Index

Table 45. Social capital index and subindexes

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Index of social capital at household level (0–100)	1,949	50.462	2,732	49.876	-0.585	-0.162	0.871
		(34.10)		(33.74)	(3.61)		
Bonding subindex (0–100)	1,949	54.336	2,732	54.1	-0.236	-0.064	0.949
		(35.70)		(35.83)	(3.69)		
Bridging subindex (0–100)	1,949	46.588	2,732	45.653	-0.935	-0.243	0.808
		(36.58)		(36.36)	(3.84)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.9.4   Adaptive Capacity index

Table 46. Adaptive capacity index and indexes

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Adaptive capacity index (0–100)	216	47.065	300	40.839	-6.226	-0.948	0.347
		(20.30)		(23.77)	(6.57)		
Adaptive capacity index (0–100): No adopt improved practices	785	43.692	1,179	39.003	-4.689	-1.099	0.274
		(19.96)		(19.50)	(4.27)		
Adaptive capacity index (0–100): No access to finance s. practices	389	39.406	459	36.154	-3.252	-0.657	0.513
		(21.12)		(21.58)	(4.95)		
Adaptive capacity index (0–100): No access to finance s. practices and improved	1,690	36.92	2,270	35.199	-1.721	-0.625	0.533
		(19.27)		(18.64)	(2.75)		
Aspirations/confidence to adapt index (0–16)	1,812	9.792	2,478	9.69	-0.103	-0.637	0.525
		(2.31)		(2.24)	(0.16)		
Bridging social capital index (0–6)	1,949	2.202	2,732	2.149	-0.052	-0.247	0.805
		(1.88)		(1.84)	(0.21)		
Linking social capital (0–4)	1,949	0.501	2,729	0.451	-0.050	-0.399	0.691
		(1.01)		(0.96)	(0.13)		
Social network index (adjusted range 0–3)	1,830	1.139	2,538	1.041	-0.098	-0.677	0.5
		(1.32)		(1.32)	(0.14)		
Education/training index (0–8)	1,943	1.016	2,726	0.955	-0.061	-0.617	0.538
		(1.21)		(1.23)	(0.10)		
Livelihood diversification index (0–20)	1,949	1.848	2,732	1.776	-0.072	-1.184	0.239
		(0.77)		(0.76)	(0.06)		
Adoption of improved practices index (0–1)	453	0.375	568	0.335	-0.041	-0.551	0.583
		(0.48)		(0.47)	(0.07)		
Access to financial resources (0–1)	868	0.3	1372	0.365	0.066	0.629	0.531
		(0.46)		(0.48)	(0.10)		
Exposure to information index (0–19)	1,949	1.745	2,732	1.751	0.006	0.026	0.979
		(2.26)		(2.47)	(0.23)		
	1,946	8.6	2,719	8.036	-0.563*	-1.83	0.07

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Asset ownership index— total type (0–45)		(3.77)		(3.54)	(0.31)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

4.9.5   Transformative Capacity Index

Table 47. Transformative capacity index and indexes

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Transformative capacity index (0–100)	82	42.016	118	45.141	3.125	0.302	0.766
		(25.51)		(19.39)	(10.34)		
Transformative capacity index (0–100): Excluding agricultural services and gender equity	1,784	42.375	2,506	40.927	-1.448	-0.404	0.687
		(21.63)		(19.34)	(3.58)		
Transformative capacity index (0–100): Excluding gender equity index	1,784	37.484	2,506	35.365	-2.119	-0.545	0.587
		(23.05)		(20.05)	(3.89)		
Transformative capacity index (0–100): Excluding agricultural Services	82	41.949	118	46.717	4.768	0.497	0.625
		(22.42)		(21.81)	(9.59)		
Access to formal safety nets index (0–11)	1,842	2.071	2,618	2.043	-0.028	-0.218	0.828
		(0.84)		(0.76)	(0.13)		
Access to communal natural resources index (0–4)	1,950	1.372	2,732	1.23	-0.142	-0.52	0.604
		(1.70)		(1.59)	(0.27)		
Basic services index (0–1): Only police variable	1,950	0.981	2,733	0.985	0.004	0.493	0.623
		(0.14)		(0.12)	(0.01)		
Access to agricultural services index (0–1)	1,950	0.154	2,733	0.103	-0.051	-0.85	0.397
		(0.36)		(0.30)	(0.06)		
Bridging social capital index (0–6)	1,949	2.202	2,732	2.149	-0.052	-0.247	0.805
		(1.88)		(1.84)	(0.21)		
Linking social capital (0–4)	1,949	0.501	2,729	0.451	-0.050	-0.399	0.691
		(1.01)		(0.96)	(0.13)		
Social cohesion index (0–3)	1,908	1.191	2,663	1.043	-0.148	-0.948	0.345
		(1.14)		(1.07)	(0.16)		

Outcome	N	Control	N	Treat-ment	Difference	T-Stat Diff	P-value Diff
Local decision making index (0–1)	1,930	0.929	2,689	0.899	-0.030	-1.205	0.23
		(0.26)		(0.30)	(0.03)		
Local government responsiveness index (0–2)	1,950	1.829	2,733	1.843	0.014	0.299	0.765
		(0.39)		(0.36)	(0.05)		
Gender index (0–3)	1,950	2.653	2,733	2.699	0.046	0.641	0.523
		(0.57)		(0.54)	(0.07)		
Gender equitable decision making index (0–1)	105	0.762	154	0.682	-0.080	-0.387	0.702
		(0.42)		(0.46)	(0.21)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5. COMPARISON OF LIVELIHOOD AND NON-LIVELIHOOD KEBELES

As was discussed in Section 3, half of the 120 kebeles in the impact evaluation study are eligible to receive livelihood interventions, while the other half are not. Researchers randomly selected the 60 livelihood kebeles in the impact evaluation study from a list of 100 livelihood-eligible kebeles. Because the eligibility criteria to receive livelihood interventions was based on a specific set of criteria (e.g., proximity to market)- it is to be expected that the two groups of kebeles differ along different dimensions. To better understand these differences, in this section, we present the balance tests run between livelihood and non-livelihood kebeles. It is important to notice that differences across livelihood statuses don't pose any threat to the IE. The information presented here is complementary to the IE and allows a better understanding of the main differences across livelihood status.

The different subsections below display tables containing similar outcome variables as the ones discussed in Section 4. We run a similar regression as in the previous section. In Equation 2. Balance test regression for livelihood and non-livelihood kebeles, I denotes the household or individual, i denotes the household or individual, y_i stands for the outcome variable and $Livelihood_i$ is equal to 1 if household i lives in a livelihood kebele.

Equation 2. Balance test regression for livelihood and non-livelihood kebeles

$$y_i = \gamma_0 + \gamma_1 \cdot Livelihood_i + \varepsilon_i$$

The variable of interest in this section is γ_i, which represents the difference between livelihood and non-livelihood kebeles. For each outcome variable, we show the mean value for the livelihood and non-livelihood groups, the γ_i coefficient, as well as its associated *T*-statistic and the *p*-value. Standard errors are clustered at the kebele level.

We ran 141 balance tests. There were 32 variables with a statistically significant difference across treatment arms at a 10% significance level, 23 at a 5% significance level, and five at a 1% significance level. These values are higher than the ones found in the previous section, which reflects the fact that livelihood kebeles were purposefully selected. In the share of significant differences across sections, four sections account for most of the variables (26 out of 32) with a significant difference. These sections are characteristics of the study population; child nutrition and feeding practices; women's health, nutrition, and reproductive health; and gender dynamics. Below we briefly discuss some of the differences. It is important to notice that even though the differences are statistically significant, most of them are small. Overall, we don't find substantial differences between livelihood and non-livelihood kebeles.

Table 48 presents the demographic variables with a statistically significant difference. Eleven (out of 18) demographic variables were statistically different, and these were distributed almost equally between individual-level and household-level characteristics. Livelihood kebeles have fewer children 5–14 years and more adults and women. Additionally, the average adult and HH living in a livelihood kebele is less likely to be married or in a union and, for female HHs, more likely to have some schooling.

Even though the differences are statistically significant, it is important to notice that, for most variables, the differences are not very large. For example, the average household size in a livelihood kebele is 5.795, compared to 6.107 in non-livelihood kebeles.

Table 48. Characteristics of the study population, variables with a significant difference across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Individual-level characteristics							
Average age	14,309	18.817	13,560	19.516	0.699**	2.525	0.013
		(16.05)		(16.20)	(0.28)		
Percent of children 5–14 years old	14,309	39.681	13,560	38.193	-1.488*	-1.952	0.053
		(48.93)		(48.59)	(0.76)		
Percent of adults (older than 15 years old)	14,309	45.74	13,560	48.355	2.615***	2.95	0.004
		(49.82)		(49.97)	(0.89)		
Percent of females	14,309	49.235	13,560	50.723	1.488***	2.753	0.007
		(50.00)		(50.00)	(0.54)		
Percent of GWRA	14,309	22.084	13,560	23.496	1.412***	3.007	0.003
		(41.48)		(42.40)	(0.47)		
Percent of adults who are in a union	6,545	58.824	6,557	55.574	-3.249**	-2.392	0.018
		(49.22)		(49.69)	(1.36)		
Household-level characteristics							
Average household size	2,343	6.107	2,340	5.795	-0.312***	-2.706	0.008
		(2.18)		(2.14)	(0.12)		
Average number of children under the age of 5 in the household	2,343	0.89	2,340	0.779	-0.111**	-2.223	0.028
		(0.97)		(0.91)	(0.05)		
Percent of HH who are in a union	2,343	78.873	2,340	75.513	-3.360*	-1.904	0.059
		(40.83)		(43.01)	(1.77)		
Percent of HH that are female	2,343	23.517	2,340	27.35	3.834**	2.032	0.044
		(42.42)		(44.59)	(1.89)		
Percent of female HH with some schooling	551	1.452	640	3.75	2.298**	2.237	0.027
		(11.97)		(19.01)	(1.03)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

Table 49 shows that in livelihood kebeles, fewer children 6–23 months of age tend to consume a minimum acceptable diet and a diet of minimum diversity. Keeping in mind that in the whole sample, the percentage of children is very low, children 6–23 months in non-livelihood kebeles are three and four times more likely to consume a minimum acceptable diet and a diet of minimum diversity. The differences in these two indicators are mostly determined by differences in children's consumption patterns. Children 6–23 months in livelihood kebeles are less likely to consume breastmilk, meat, and vitamin-A-rich vegetables but are more likely to consume legumes and nuts.

Table 49. Child nutrition and feeding practices, variables with a significant difference across livelihood status

Outcome	N	Non Liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Infant and young children feeding practices							
Percent of children 6–23 months receiving a minimum acceptable diet	373	2.681	353	0.567	-2.114**	-2.074	0.04
		(16.17)		(7.52)	(1.02)		
Percent of children 6–23 months consuming a diet of a minimum diversity	373	3.217	353	0.567	-2.651**	-2.128	0.035
		(17.67)		(7.52)	(1.25)		
Food consumption groups							
Percent consuming breastmilk	373	83.914	353	76.204	-7.710**	-2.2	0.03
		(36.79)		(42.64)	(3.51)		
Percent consuming legumes and nuts	373	1.609	353	4.533	2.924**	2.281	0.024
		(12.60)		(20.83)	(1.28)		
Percent consuming meats	373	1.072	353	0	-1.072**	-2.082	0.04
		(10.31)		(0.00)	(0.52)		
Percent of consuming vitamin-A-rich vegetables and fruits	373	11.528	353	6.516	-5.013**	-2.023	0.045
		(31.98)		(24.72)	(2.48)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

As with children, there is a significant difference in GWRA's consumption patterns (Table 50). Women in livelihood kebeles tend to consume fewer nuts and seeds and less fruit but more vitamin-A-rich fruits and vegetables and other vegetables. Despite the differences in consumption patterns, the share of women with MDD is not statistically different across livelihood status. The share of women with MDD in the whole sample is very low (0.86%), and more than 90% of women consume less than three food groups. Variations in a few items consumed will not lead to sizable differences in the share of women consuming a diet of minimum diversity.

Table 50. GWRA age consumption, variables with a significant difference across livelihood status

Outcome	N	Non Liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Nuts and seeds (including groundnuts)	2,317	1.683	2,318	1.035	-0.648*	-1.711	0.09
		(12.87)		(10.12)	(0.38)		
Other vitamin-A-rich fruits and vegetables	2,317	44.281	2,318	51.337	7.056**	2.207	0.029
		(49.68)		(49.99)	(3.20)		
Other vegetables	2,317	14.243	2,318	20.406	6.163***	2.814	0.006
		(34.96)		(40.31)	(2.19)		
Other fruit	2,317	1.338	2,318	0.561	-0.777*	-1.765	0.08
		(11.49)		(7.47)	(0.44)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

Table 51 presents the variables with statistically significant differences in the gender dynamics section. Credit-related variables account for most of the differences. In general, more people in a union tend to belong to a community group and to a union with access to credit. In the case of financial variables, women in a union living in livelihood kebeles are more likely to participate in decisions related to using a spouse or partner's self-earned cash. The magnitude of the differences in this section is not negligible. For example, in livelihood kebeles, people in a union are 11% more likely to belong to a union with access to credit. There are even higher differences in the financial resources variable, where the differences are more than 23%.

Table 51. Gender dynamics, variables with a significant difference across livelihood status

Outcome	N	Non Liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Use of financial resources							
Percent of women in a union and earning cash who report participation in decisions about the use of spouse/partner's self-earned cash	105	29.524	157	53.503	23.979**	2.222	0.03
		(45.83)		(50.04)	(10.79)		
Credit							
Percent of women in a union who are members of a community group	153	54.248	283	49.117	-5.132	-0.507	0.613
		(49.98)		(50.08)	(10.12)		
Percent of people in a union with access to credit	1621	21.592	1,823	33.187	11.595**	2.272	0.025
		(41.16)		(47.10)	(5.10)		

Outcome	N	Non Liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of men in a union with access to credit	865	23.699	965	34.611	10.912**	2.043	0.043
		(42.55)		(47.60)	(5.34)		
Percent of women in a union with access to credit	756	19.18	858	31.585	12.405**	2.151	0.033
		(39.40)		(46.51)	(5.77)		
Percent of people in a union who make decisions about credit	350	28	605	30.413	2.413	0.403	0.688
		(44.96)		(46.04)	(5.99)		
Percent of men in a union who report making decisions about credit	205	24.878	334	31.437	6.559	0.932	0.354
		(43.34)		(46.50)	(7.03)		
Percent of women in a union who report making decisions about credit	145	32.414	271	29.151	-3.263	-0.513	0.609
		(46.97)		(45.53)	(6.36)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.1   Characteristics of the Study Population

Table 52. Individual-level sample characteristics across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Average age	14,309	18.817	13,560	19.516	0.699**	2.525	0.013
		(16.05)		(16.20)	(0.28)		
Percent of children under 5 years old	14,309	14.578	13,560	13.451	-1.127	-1.624	0.107
		(35.29)		(34.12)	(0.69)		
Percent of children 5–14 years old	14,309	39.681	13,560	38.193	-1.488*	-1.952	0.053
		(48.93)		(48.59)	(0.76)		
Percent of adults (older than 15 years old)	14,309	45.74	13,560	48.355	2.615***	2.95	0.004
		(49.82)		(49.97)	(0.89)		
Percent of females	14,309	49.235	13,560	50.723	1.488***	2.753	0.007
		(50.00)		(50.00)	(0.54)		
Percent of GWRA	14,309	22.084	13,560	23.496	1.412***	3.007	0.003
		(41.48)		(42.40)	(0.47)		
	6,545	58.824	6,557	55.574	-3.249**	-2.392	0.018

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of adults who are in a union		(49.22)		(49.69)	(1.36)		
Percent of adults with at least some schooling	6,545	25.561	6,557	27.131	1.570	0.896	0.372
		(43.62)		(44.47)	(1.75)		
Percent of adults who are farmers	6,543	65.78	6,555	66.606	0.825	0.328	0.743
		(47.45)		(47.17)	(2.51)		
Percent of people older than 10 years who did work and were paid in cash	6,763	30.977	6,715	31.929	0.951	0.332	0.741
		(46.24)		(46.62)	(2.87)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 53. Household-level sample characteristics across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Average household size	2,343	6.107	2,340	5.795	-0.312***	-2.706	0.008
		(2.18)		(2.14)	(0.12)		
Average number of children under the age of 5 in the household	2,343	0.89	2,340	0.779	-0.111**	-2.223	0.028
		(0.97)		(0.91)	(0.05)		
Average age of HH	2,343	41.897	2,340	41.651	-0.246	-0.534	0.594
		(11.20)		(10.73)	(0.46)		
Percent of HH who are in a union	2,343	78.873	2,340	75.513	-3.360*	-1.904	0.059
		(40.83)		(43.01)	(1.77)		
Percent of HH that are female	2,343	23.517	2,340	27.35	3.834**	2.032	0.044
		(42.42)		(44.59)	(1.89)		
Percent of HH with some schooling	2,343	13.487	2,340	13.504	0.017	0.011	0.992
		(34.17)		(34.18)	(1.63)		
Percent of female HH with some schooling	551	1.452	640	3.75	2.298**	2.237	0.027
		(11.97)		(19.01)	(1.03)		
Percent of male HH with some schooling	1,792	17.188	1,700	17.176	-0.011	-0.006	0.996
		(37.74)		(37.73)	(2.00)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.2 Food Security

Table 54. Food insecurity experience scale across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Raw FIES score (scale 0–8)	2,343	6.921	2,338	6.827	-0.093	-1.002	0.318
		(1.39)		(1.41)	(0.09)		
Percent of households that experienced severe food insecurity	2,343	78.19	2,338	77.032	-1.159	-0.398	0.692
		(41.30)		(42.07)	(2.91)		
Percent of households that experienced moderate-to-severe food insecurity	2,343	96.714	2,338	95.552	-1.162	-1.214	0.227
		(17.83)		(20.62)	(0.96)		
Percent of households with some indication of food insecurity	2,340	99.444	2,338	99.53	0.085	0.355	0.723
		(7.43)		(6.84)	(0.24)		
Percent of households that answered yes to all eight questions	2,343	40.546	2,338	34.944	-5.602	-1.404	0.163
		(49.11)		(47.69)	(3.99)		
Percent of households that answered no to all eight questions	2,343	0.555	2,338	0.47	-0.084	-0.352	0.725
		(7.43)		(6.84)	(0.24)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 55. Food consumption score across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
FCS (0-112)	2,301	20.264	2,300	20.731	0.467	0.578	0.564
		(9.97)		(9.22)	(0.81)		
Percent of households with poor FCS (<22)	2,301	72.056	2,300	67.652	-4.403	-1.113	0.268
		(44.88)		(46.79)	(3.96)		
Percent of households with borderline FCS (22–35)	2,301	19.731	2,300	24.957	5.226*	1.781	0.077
		(39.81)		(43.29)	(2.93)		
Percent of households with acceptable FCS (>35)	2,301	8.214	2,300	7.391	-0.823	-0.529	0.598
		(27.46)		(26.17)	(1.55)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.3   Child Nutrition and Feeding Practices

Table 56. Infant and young children feeding practices across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of children under 6 months exclusively breastfed	46	34.783	42	45.238	10.455	0.859	0.394
		(48.15)		(50.38)	(12.18)		
Percent of children 6–23 months receiving a minimum acceptable diet	373	2.681	353	0.567	-2.114**	-2.074	0.04
		(16.17)		(7.52)	(1.02)		
Percent of children 6–23 months receiving a minimum meal frequency	372	66.935	353	62.606	-4.329	-0.863	0.39
		(47.11)		(48.45)	(5.02)		
Percent of children 6–23 months consuming a diet of a minimum diversity	373	3.217	353	0.567	-2.651**	-2.128	0.035
		(17.67)		(7.52)	(1.25)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 57. Food groups consumed by children (6–23 months) in the last 24 hours across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent consuming breastmilk	373	83.914	353	76.204	-7.710**	-2.2	0.03
		(36.79)		(42.64)	(3.51)		
Percent consuming grains, roots, tubers	373	72.118	353	71.671	-0.447	-0.086	0.932
		(44.90)		(45.12)	(5.21)		
Percent consuming legumes and nuts	373	1.609	353	4.533	2.924**	2.281	0.024
		(12.60)		(20.83)	(1.28)		
Percent consuming dairy products	373	16.354	353	11.048	-5.306	-1.631	0.105
		(37.04)		(31.39)	(3.25)		
Percent consuming meats	373	1.072	353	0	-1.072**	-2.082	0.04
		(10.31)		(0.00)	(0.52)		
Percent consuming eggs	373	2.949	353	1.7	-1.249	-1.015	0.312
		(16.94)		(12.94)	(1.23)		
	373	11.528	353	6.516	-5.013**	-2.023	0.045

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of consuming vitamin-A-rich vegetables and fruits		(31.98)		(24.72)	(2.48)		
Percent consuming other vegetable and fruits	373	7.507	353	5.666	-1.841	-0.99	0.324
		(26.39)		(23.15)	(1.86)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 58. Young children diarrhea incidence and treatment (children 0–59 months) across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of children under 5 (—-59 months) who had diarrhea in the prior 2 weeks	1,161	10.767	1,006	11.829	1.062	0.488	0.626
		(31.01)		(32.31)	(2.18)		
Percent of children under 5 (0–59 months) with diarrhea treated with ORT	125	95.2	119	90.756	-4.444	-1.205	0.232
		(21.46)		(29.09)	(3.69)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.4 Women's Health, Maternal Nutrition and Reproductive Health

Table 59. Indicators for women's health, maternal nutrition, and reproductive health across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of GWRA with MDD	2,319	0.69	2,318	1.035	0.345	1.29	0.2
		(8.28)		(10.12)	(0.27)		
Contraceptive prevalence rate of non-pregnant GWRA in a union	1,325	11.925	1,243	10.78	-1.144	-0.608	0.544
		(32.42)		(31.03)	(1.88)		
Percent of births receiving at least four ANC visits during pregnancy	833	15.126	789	16.35	1.224	0.411	0.682
		(35.85)		(37.01)	(2.98)		
Percent of GWRA in a union who	1,516	29.881	1,420	29.93	0.048	0.014	0.989

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
have knowledge of modern family planning methods		(45.79)		(45.81)	(3.58)		
Number of contraceptive methods married women or in a union know (0–12)	1,516	1.699	1,420	1.747	0.048	0.274	0.785
		(1.95)		(2.08)	(0.18)		
Percent of women in a union who made decision about modern family planning methods in the past 12 months	143	53.147	119	47.059	-6.088	-0.739	0.462
		(50.08)		(50.12)	(8.24)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 60. Woman of reproductive age's consumption across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Grains and roots	2,317	87.872	2,318	90.25	2.378	1.006	0.317
		(32.65)		(29.67)	(2.36)		
Pulses (beans, peas, and lentils)	2317	0.518	2,318	1.035	0.517	1.542	0.126
		(7.18)		(10.12)	(0.34)		
Nuts and seeds (including groundnuts)	2317	1.683	2,318	1.035	-0.648*	-1.711	0.09
		(12.87)		(10.12)	(0.38)		
Dairy	2317	4.92	2,318	3.84	-1.081	-1.169	0.245
		(21.63)		(19.22)	(0.92)		
Meat, poultry, and fish	2317	0.561	2,318	0.518	-0.043	-0.197	0.844
		(7.47)		(7.18)	(0.22)		
Eggs	2317	1.424	2,318	1.251	-0.173	-0.486	0.628
		(11.85)		(11.12)	(0.36)		
Dark green leafy vegetables	2317	4.704	2,318	7.075	2.371	1.477	0.142
		(21.18)		(25.65)	(1.60)		
Other vitamin-A-rich fruits and vegetables	2,317	44.281	2,318	51.337	7.056**	2.207	0.029
		(49.68)		(49.99)	(3.20)		
Other vegetables	2,317	14.243	2,318	20.406	6.163***	2.814	0.006
		(34.96)		(40.31)	(2.19)		

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Other fruit	2,317	1.338	2,318	0.561	-0.777*	-1.765	0.08
		(11.49)		(7.47)	(0.44)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.5 Water, Sanitation and Hygiene Practices

Table 61. Water, Sanitation, and Hygiene Indicators across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
BL16: Percent with access to basic drinking water services	177	3.39	176	5.114	1.724	0.745	0.459
		(18.15)		(22.09)	(2.31)		
Percent of households using basic drinking water services based on four of five of the criteria	2,340	10.556	2,330	11.845	1.290	0.659	0.511
		(30.73)		(32.32)	(1.96)		
Percent of households with soap and water at a handwashing station on the premises	2,342	1.964	2,339	2.736	0.772	1.008	0.315
		(13.88)		(16.32)	(0.77)		
Percent of households practicing correct use of recommended household water treatment technologies	2,339	7.183	2,337	7.531	0.348	0.186	0.853
		(25.83)		(26.39)	(1.88)		
Percent of households practicing open defecation	2,342	59.949	2,339	57.503	-2.446	-0.455	0.65
		(49.01)		(49.44)	(5.38)		
Percent using improved sanitation facilities (not shared)	2,342	14.603	2,339	17.144	2.541	0.926	0.356
		(35.32)		(37.70)	(2.74)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.6   Agriculture

Table 62. Financial services, value chain activities and natural resource management practices across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of households who using financial services	2,218	18.35	2,232	18.369	0.019	0.009	0.993
		(38.72)		(38.73)	(2.13)		
Percent of households using agricultural credit	2,218	15.78	2,232	15.591	-0.189	-0.092	0.926
		(36.46)		(36.29)	(2.04)		
Percent of households who saved	2,217	2.21	2,230	3.274	1.063	1.596	0.113
		(14.70)		(17.80)	(0.67)		
Percent of households using insurance	2,217	1.353	2,232	1.165	-0.188	-0.429	0.669
		(11.56)		(10.73)	(0.44)		
Percent of households reporting at least one value chain activity	459	72.113	562	79.181	7.068	0.942	0.349
		(44.89)		(40.64)	(7.51)		
Percent of households using at least one natural resource management practice	2,218	88.278	2,232	90.547	2.269	0.849	0.398
		(32.18)		(29.26)	(2.67)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

Table 63. Improved management practices or technologies in target crops across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of households growing haricot beans	1,941	0	2,062	0.097	0.097	1.432	0.155
		(0.00)		(3.11)	(0.07)		
Percent using at least one practice for haricot beans			2	100			
				(0.00)			
Percent of households growing groundnuts	1,941	1.391	2,062	1.503	0.112	0.141	0.888
		(11.71)		(12.17)	(0.80)		
Percent using at least one practice for groundnut	27	74.074	31	87.097	13.023	1.036	0.312
		(44.66)		(34.08)	(12.57)		
Percent of households growing potato	1,941	0.824	2,062	0.63	-0.194	-0.438	0.662
		(9.04)		(7.92)	(0.44)		

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent using at least one practice for potatoes	16	100	13	100	0.000		
		(0.00)		(0.00)	(.)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

Table 64. Improved management practices or technologies in target animals across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of households raising goats	2,265	23.709	2,272	23.195	-0.513	-0.188	0.851
		(42.54)		(42.22)	(2.73)		
Percent of households using at least one practice for goats	537	94.786	527	92.22	-2.566	-1.128	0.262
		(22.25)		(26.81)	(2.28)		
Percent of households raising poultry	2,265	19.029	2,272	20.114	1.086	0.444	0.658
		(39.26)		(40.09)	(2.44)		
Percent of households using at least one practice for poultry	431	95.824	457	94.092	-1.732	-0.734	0.464
		(20.03)		(23.60)	(2.36)		
Percent of households raising oxen	2,265	6.755	2,272	5.942	-0.813	-0.733	0.465
		(25.10)		(23.65)	(1.11)		
Percent of households using at least one practice for oxen	153	90.85	135	78.519	-12.331	-1.56	0.122
		(28.93)		(41.22)	(7.90)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.7 Poverty Measurement

Table 65. Poverty measurement indicators across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Daily per capita food expenditure (Birr)	2,340	16.626	2,337	18.652	2.027*	1.71	0.09
		(10.25)		(11.63)	(1.19)		
Daily per adult equivalent food expenditure (Birr)	2,340	20.234	2,337	22.493	2.259	1.594	0.114
		(12.51)		(13.89)	(1.42)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.8   Gender Dynamics

5.8.1   Use of Financial Resources

Table 66. Gender cash indicators across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of cash earners in a union	1,621	21.407	1,823	24.52	3.113	0.785	0.434
		(41.03)		(43.03)	(3.97)		
Percent of cash-earning men in a union	865	27.977	965	30.052	2.075	0.41	0.682
		(44.91)		(45.87)	(5.06)		
Percent of cash-earning women in a union	756	13.889	858	18.298	4.409	1.077	0.284
		(34.61)		(38.69)	(4.09)		
Percent of women in a union and earning cash who report participation in decisions about the use of self-earned cash	105	68.571	157	71.975	3.403	0.257	0.798
		(46.65)		(45.06)	(13.25)		
Percent of women in a union and earning cash who report participation in decisions about the use of spouse/partner's self-earned cash	105	29.524	157	53.503	23.979**	2.222	0.03
		(45.83)		(50.04)	(10.79)		
Percent of men in a union and earning cash who report spouse/partner' participation in decisions about the use of self-earned cash	242	35.537	290	45.517	9.980	1.393	0.168
		(47.96)		(49.88)	(7.17)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

5.8.2   Credit

Table 67. Gender access to credit and group participation indicators across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of people in a union who are members of a community group	363	65.84	636	55.66	-10.180	-0.976	0.331
		(47.49)		(49.72)	(10.42)		

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Percent of men in a union who are members of a community group	210	74.286	353	60.907	-13.379	-1.256	0.212
		(43.81)		(48.87)	(10.65)		
Percent of women in a union who are members of a community group	153	54.248	283	49.117	-5.132	-0.507	0.613
		(49.98)		(50.08)	(10.12)		
Percent of people in a union with access to credit	1,621	21.592	1,823	33.187	11.595**	2.272	0.025
		(41.16)		(47.10)	(5.10)		
Percent of men in a union with access to credit	865	23.699	965	34.611	10.912**	2.043	0.043
		(42.55)		(47.60)	(5.34)		
Percent of women in a union with access to credit	756	19.18	858	31.585	12.405**	2.151	0.033
		(39.40)		(46.51)	(5.77)		
Percent of men and women in a union who make decisions about credit	350	28	605	30.413	2.413	0.403	0.688
		(44.96)		(46.04)	(5.99)		
Percent of men in a union who report making decisions about credit	205	24.878	334	31.437	6.559	0.932	0.354
		(43.34)		(46.50)	(7.03)		
Percent of women in a union who report making decisions about credit	145	32.414	271	29.151	-3.263	-0.513	0.609
		(46.97)		(45.53)	(6.36)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

5.9   Resilience

5.9.1   Ability to Recover from Shocks and Stresses Index

Table 68. Ability to recover from shocks and stresses index across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Mean ability to recover from shocks and stresses index	2,285	2.953	2,260	3.046	0.093	0.749	0.455
		(1.32)		(1.39)	(0.12)		
Ability to recover index (2–6)	2,328	2.922	2,321	3.04	0.118	0.916	0.361
		(1.33)		(1.39)	(0.13)		

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Shock exposure index (0–168)	2,297	26.073	2,278	22.716	-3.357**	-2.032	0.044
		(15.56)		(12.93)	(1.65)		
Total shocks experienced (0–21)	2,343	3.817	2,340	3.385	-0.432*	-1.809	0.073
		(2.34)		(2.00)	(0.24)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.9.2 Absorptive Capacity Index

Table 69. Absorptive capacity index and subindexes across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Absorptive capacity index (0–100)	2,213	28.498	2,229	28.865	0.367	0.207	0.837
		(15.82)		(15.15)	(1.77)		
Absorptive capacity index (0–100): No access to insurance	2,332	29.914	2,330	29.998	0.084	0.049	0.961
		(15.45)		(14.79)	(1.73)		
Bonding social capital index (0–6)	2,341	2.494	2,340	2.614	0.119	0.592	0.555
		(1.88)		(1.87)	(0.20)		
Access to cash savings index (0–1)	2,340	0.015	2,340	0.019	0.004	0.79	0.431
		(0.12)		(0.14)	(0.01)		
Remittances index (0–1)	2,343	0.026	2,340	0.021	-0.005	-0.707	0.481
		(0.16)		(0.14)	(0.01)		
Asset ownership index—total type (0–45)	2,334	8.349	2,331	8.193	-0.156	-0.513	0.609
		(3.78)		(3.51)	(0.30)		
Shock preparednesss and responsiveness index (0–3)	2,341	0.381	2,340	0.401	0.020	0.438	0.662
		(0.57)		(0.55)	(0.05)		
Access to insurance index (0–1)	2,218	0.014	2,232	0.012	-0.002	-0.428	0.669
		(0.12)		(0.11)	(0.00)		
Access to humanitarian assistance index (0–1)	2,340	0.477	2,339	0.516	0.039	0.626	0.532
		(0.50)		(0.50)	(0.06)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

5.9.3 Social Capital Index

Table 70. Social capital index and subindexes across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Index of social capital at household level (0–100)	2,341	49.076	2,340	51.165	2.088	0.594	0.554
		(34.15)		(33.60)	(3.51)		
Bonding subindex (0–100)	2,341	53.481	2,340	54.915	1.433	0.396	0.692
		(35.99)		(35.54)	(3.61)		
Bridging subindex (0–100)	2,341	44.671	2,340	47.415	2.743	0.731	0.466
		(36.84)		(36.02)	(3.75)		

*Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.*

5.9.4 Adaptive Capacity Index

Table 71. Adaptive capacity index and indexes across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Adaptive capacity index (0–100)	203	43.586	313	43.354	-0.233	-0.036	0.972
		(21.70)		(23.15)	(6.49)		
Adaptive capacity index (0–100): No adopt improved practices	851	41.822	1,113	40.154	-1.667	-0.396	0.693
		(19.65)		(19.92)	(4.21)		
Adaptive capacity index (0–100): No access to finance s. practices	382	35.967	466	39.022	3.055	0.636	0.527
		(20.11)		(22.36)	(4.81)		
Adaptive capacity index (0–100): No access to finance s. practices and improved	1,942	35.507	2,018	36.344	0.837	0.311	0.756
		(18.40)		(19.42)	(2.69)		
Aspirations/confidence to adapt index (0–16)	2,129	9.624	2,161	9.841	0.217	1.389	0.168
		(2.31)		(2.22)	(0.16)		
Bridging social capital index (0–6)	2,341	2.094	2,340	2.248	0.154	0.747	0.457
		(1.87)		(1.85)	(0.21)		
Linking social capital (0–4)	2,339	0.442	2,339	0.502	0.061	0.496	0.621
		(0.97)		(1.00)	(0.12)		
	2,162	1.06	2,206	1.103	0.043	0.305	0.761

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Social network index (adjusted range 0–3)		(1.31)		(1.33)	(0.14)		
Education/training index (0–8)	2,334	0.947	2,335	1.014	0.066	0.678	0.499
		(1.19)		(1.25)	(0.10)		
Livelihood diversification index (0–20)	2,341	1.771	2,340	1.84	0.069	1.133	0.26
		(0.72)		(0.80)	(0.06)		
Adoption of improved practices index (0–1)	459	0.37	562	0.338	-0.032	-0.447	0.656
		(0.48)		(0.47)	(0.07)		
Access to financial resources (0–1)	996	0.423	1,244	0.273	-0.149	-1.46	0.148
		(0.49)		(0.45)	(0.10)		
Exposure to information index (0–19)	2,341	1.712	2,340	1.785	0.073	0.319	0.75
		(2.33)		(2.43)	(0.23)		
Asset ownership index—total type (0–45)	2,334	8.349	2,331	8.193	-0.156	-0.513	0.609
		(3.78)		(3.51)	(0.30)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.Transformative Capacity Index

5.9.5   Transformative Capacity Index

Table 72. Transformative capacity index and indexes across livelihood status

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Transformative capacity index (0–100)	83	35.075	117	50.092	15.017*	1.78	0.091
		(15.78)		(23.82)	(8.44)		
Transformative capacity index (0–100): Excluding agricultural services and gender equity	2,163	40.635	2,127	42.439	1.804	0.522	0.603
		(20.16)		(20.47)	(3.46)		
Transformative capacity index (0–100): Excluding gender equity index	2,163	35.237	2,127	37.273	2.036	0.545	0.587
		(20.91)		(21.78)	(3.74)		
Transformative capacity index (0–100): Excluding agricultural services	83	36.84	117	50.382	13.542	1.587	0.129
		(16.17)		(24.05)	(8.53)		
	2,245	2.018	2,215	2.092	0.074	0.602	0.548

Outcome	N	Non-liveli-hood	N	Liveli-hood	Difference	T-Stat Diff	P-value Diff
Access to formal safety nets index (0–11)		(0.81)		(0.78)	(0.12)		
Access to communal natural resources index (0–4)	2,343	1.356	2,339	1.222	-0.134	-0.501	0.617
		(1.65)		(1.62)	(0.27)		
Basic services index (0–1): Only police variable	2,343	0.984	2,340	0.983	-0.001	-0.111	0.911
		(0.13)		(0.13)	(0.01)		
Access to agricultural services index (0-1)	2,343	0.108	2,340	0.141	0.032	0.557	0.579
		(0.31)		(0.35)	(0.06)		
Bridging social capital index (0–6)	2,341	2.094	2,340	2.248	0.154	0.747	0.457
		(1.87)		(1.85)	(0.21)		
Linking social capital (0–4)	2,339	0.442	2,339	0.502	0.061	0.496	0.621
		(0.97)		(1.00)	(0.12)		
Social cohesion index (0–3)	2,283	1.075	2,288	1.134	0.059	0.388	0.699
		(1.04)		(1.16)	(0.15)		
Local decision making index (0–1)	2,318	0.911	2,301	0.912	0.001	0.026	0.98
		(0.28)		(0.28)	(0.03)		
Local government responsiveness index (0–2)	2,343	1.804	2,340	1.87	0.066	1.464	0.146
		(0.41)		(0.34)	(0.04)		
Gender index (0–3)	2,343	2.622	2,340	2.738	0.117*	1.698	0.092
		(0.58)		(0.52)	(0.07)		
Gender equitable decision-making index (0–1)	106	0.67	153	0.745	0.075	0.336	0.74
		(0.47)		(0.42)	(0.22)		

Notes: Standard deviations are in parentheses. * denotes significance at 10 pct., ** at 5 pct., and *** at 1 pct. Standard errors are clustered at the kebele level.

6. CONCLUSION

The *Ifaa* baseline survey was conducted in eight woredas in the region of Oromia, Ethiopia. This baseline survey of 4,683 households shows an area with low levels of education, high poverty rates, and high levels of food insecurity. Around 66% of adults in the area are farmers, and 31.5% of people older than 10 worked and were paid in cash in the past 12 months. Over 94% of households have access to a plot of land, and more than 90% of these households plant at least one crop; maize and sorghum are the most common crops. It is important to highlight that very few households grow haricot beans, groundnuts, or potatoes, which are *Ifaa's* target crops.

The baseline survey was administered to PSNP beneficiaries, some of the poorest households in Ethiopia, during the lean season in May–June 2022. Many shocks have affected these households in the last couple of years, including droughts, fall armyworms, desert locusts, and political conflict (Alderman et al., 2021). This is reflected in the extremely high poverty rates and levels of food insecurity in the region. More than 92% of people spend less than $1.59 per day[94] (2011 PPP) on food. Using the FIES to measure food insecurity, we can conclude that nearly all households (96%) experience moderate to severe food insecurity, while more than 77% face severe food insecurity. The survey modules looking at children's nutrition and women's nutrition provide a similar picture. Less than 2% of all children 6 to 23 months met MDD criteria or MAD standards, while less than 1% of women consumed a diet that met the MDD criteria. These low percentages are associated with a low-quality diet: people consume few food groups and, in cases of severe food insecurity, are forced to reduce the quantity of food they consume or spend days without eating.

The survey's resilience module demonstrated that households have low capacities to face negative shocks. The two most common shocks reported by households were too little rain/drought and increases in food prices. On average, people perceived shocks as severe, and households report not having many resources to cope with a shock's impact. Access to financial resources, insurance, or formal safety nets is very low, and households have few assets available to mitigate a shock's impact. Furthermore, institutions in the area that could improve households' response capacity are weak.

Causal Design performed two balance exercises. First, we compared treatment and control kebeles. The second balance exercise examined livelihood kebeles compared to non-livelihood kebeles. The baseline data shows a good balance between treatment and control kebeles, with only two (out of 141) variables showing statistically significant[95] differences across treatment arms. In the case of livelihood and non-livelihood kebeles, a larger number of statistically significant differences (23 variables) were observed, which reflects the fact that livelihood kebeles were purposefully selected. In addition to the balance exercises, this study examined the differences across woredas.[96] Even though all woredas selected are among the poorest regions in Ethiopia, we saw sizable differences across many variables. These

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[94] This value reflects an adjustment to the poverty line of $1.90 per day (2011 PPP). See Section 4.7 for more details.
[95] This number corresponds to a 5% significance level.
[96] The survey was not designed to produce estimates at the woreda level. The results at this level are only informative and should be interpreted with care.

differences tend to be correlated; woredas with higher levels of poverty tend to have higher levels of food insecurity and lower capacities to cope with negative shocks.

Looking ahead to the endline survey in 2025, the most pressing challenge is the possibility of attrition. The gap of 3 years between the baseline and endline means households might migrate to different communities, making it difficult to interview the same households at the endline. Additionally, the provision of *Ifaa* interventions follows a graduation model in which households that graduate stop receiving interventions. Households interviewed for the baseline might graduate in the next years and thus would stop receiving *Ifaa* interventions. The main strategy to address the possibility of attrition is to include an inflation factor of 10% in the number of households surveyed. Going forward, constant communication with CRS will be very helpful in understanding possible changes in the endline survey population.

7. REFERENCES

Alderman H., Bachewe F., Gilligan D., Hidrobo M., Ledlie N., Ramani G., &Taffesse A. (2019). Impact Evaluation of the Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity (DFSA) Baseline Report. Washington, DC: The Implementer-Led Evaluation & Learning Associate Award.

Alderman H., Bachewe F., Gilligan D., Hidrobo M., Ledlie N., Ramani G., & Taffesse A. (2021). Impact Evaluation of the Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity (DFSA) Endline Report. Washington, DC: The Implementer-Led Evaluation & Learning Associate Award.

Banerjee A., Duflo E., Goldberg N., Karlan D., Osei R., Parienté W., Shapiro J., Thuysbaert B., and Udry C. (2015). A multifaceted program causes lasting progress for the very poor: Evidence from six countries. *Science*, (348)6236. https://www.science.org/doi/10.1126/science.1260799

Berhane, G., Gilligan, D. O., Hoddinott, J., Kumar, N., & Taffesse, A. S. (2014). Can social protection work in Africa? The impact of Ethiopia's productive safety net programme. *Economic Development and Cultural Change, 63(1),* 1–26.

Central Statistical Agency. (2011). *Household Consumption and Expenditure (HCE) Survey 2010/2011, Analytical Report*. The Federal Democratic Republic of Ethiopia. http://www.csa.gov.et/survey-report/category/75-hice-2011

Central Statistical Agency. (2022). Country and regional level consumer price indices (CPI). The Federal Democratic Republic of Ethiopia.. http://www.csa.gov.et/price-indices/consumer-price-index

FAO. (2016). Methods for estimating comparable rates of food insecurity experienced by adults throughout the world. Rome, FAO.

FAO, IFAD, UNICEF, WFP, & WHO. (2022). The State of Food Security and Nutrition in the World 2022.

FAO. (2017). *The Food Insecurity Experience Scale: Measuring food insecurity through people's experiences*. United Nations. https://www.fao.org/3/i7835e/i7835e.pdf

FAO. (n.d.). *Voices of the Hungry: Modeling Food Insecurity on Bivariate and Regression Analyses*. http://www.fao.org/3/a-bp091e.pdf.

Hirvonen, K., Hoddinott, J., Minten, B., & Stifel, D. (2017). Children's diets, nutrition knowledge, and access to markets. *World Development,* (95) 303–315.

IMF. (2022). Country Indexes and Weight. Produced by: International Monetary Fund (IMF). Retrieved from: https://data.imf.org/regular.aspx?key=61015892

IMPEL. (2021). Baseline Study of the FIOVANA Resilience Food Security Activity in Madagascar (Vol. 1). Washington, DC: The Implementer-Led Evaluation & Learning Associate Award.

IMPEL. (2022). RFSA Ifaa IE Pre-Analysis Plan. Washington, DC: The Implementer-Led Evaluation & Learning Associate Award.

Nord, M. (2014). *Introduction to Item Response Theory applied to Food Security Measurement: Basic Concepts, Parameters, and Statistics.* Technical Paper, FAO, Rome. http://www.fao.org/economic/ess/ess-fs/voices/en

Upton, J., Tennant, E., Florella, K. J., & Barrett, C. B. (2021). Caveat utilitor: A comparative assessment of resilience measurement approaches. *Journal of Development Economics,* (157). https://doi.org/10.1016/j.jdeveco.2022.102873

USAID. (2021a). *Bureau for Humanitarian Assistance Indicator Handbook Part I: Indicators for Baseline and Endline Surveys for Resilience Food Security Activities*. United States Department of State. https://www.usaid.gov/document/indicator-handbook-part-i-indicators-baseline-and-endline-surveys

USAID. (2021b). *Bureau for Humanitarian Assistance Indicator Handbook Supplement to Part I: BHA Baseline/Endline Questionnaire and Indicator Tabulations for Resilience Food Security Activities*. United States Department of State. https://www.usaid.gov/document/indicator-handbook-supplemental-part-i-baselineendline-questionnaire-and-indicator-tabulations

WFP. (2008). Food consumption analysis: Calculation and use of the Food Consumption Score in food security analysis. United Nations.

WHO and UNICEF. (2021). *Indicators for assessing infant and young child feeding practices: definitions and measurement methods.* United Nations. https://www.who.int/publications/i/item/9789240018389

Wiesmann, D., L. Bassett, T. Benson, & Hoddinott, J. (2009). *Validation of the World Food Programme's Food Consumption Score and Alternative Indicators of Household Food Security.* IFPRI Discussion Paper 00870. Washington, DC: International Food Policy Research Institute. https://www.researchgate.net/publication/46442105_Validation_of_the_World_Food_Programme's_food_consumption_score_and_alternative_indicators_of_household_food_security

World Bank. (n.d.). Poverty headcount ratio at $1.90 a day (2011 PPP) (% of population) – Ethiopia. https://data.worldbank.org/indicator/SI.POV.DDAY?locations=ET