

Pre-Analysis Plan for “The General Equilibrium Effects of Graduation Programs: Experimental Evidence from Ethiopia”¹

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Summary: This document outlines the analysis plan for the household surveys conducted in Ethiopia using a clustered randomized controlled trial to evaluate the impact of an economic inclusion program in the context of Ethiopia’s rural Productive Safety Net Project (PSNP). This economic inclusion program provides livelihood services to a subset of PSNP public work households. It complements core PSNP transfers households receive as remuneration for the participation in public works, by adding a sequenced package of training and coaching as well as either a grant or facilitated access to subsidized credit. This evaluation will estimate the direct impact of the interventions on beneficiaries and will examine who benefits the most from them. It will investigate the value-added of additional government implemented life-skills training. Finally, it will study the indirect (spillover) effects of these interventions on the local economy.

Appendix A: Details on primary outcomes construction and secondary outcomes

Appendix B: Survey Instruments

Appendix C: List of products and services

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1. Introduction

We evaluate the impact of Livelihoods (LH) interventions in the context of Ethiopia’s rural Productive Safety Net Project (PSNP). This economic inclusion (EI) program provides livelihood services to a subset of PSNP public work households. It complements core PSNP transfers households receive as remuneration for the participation in public works, by adding a sequenced package of training and coaching as well as either a grant or facilitated access to subsidized credit. The program targets woredas with timely payments in past iterations of the PSNP program, and aims to cover all major regions within Ethiopia. A total of 34 woredas were selected to implement LH interventions, and the project was designed to cover around 40,000 households in the first year of implementation, when the IE will be implemented.

Within participating woredas, we randomize LH interventions across kebele – administrative units of approximately 500 households each. In kebeles selected for LH, public works clients are invited to express interest in participating via a newly introduced targeting or “profiling” exercise. Clients who express interest in participating go through a targeting exercise which assigns each interested client household a wealth ranking, credit score, and commitment score. Households with the lowest wealth rank (20% of intended LH participants in each kebele, that is 20% of the “livelihood caseload”) are selected for the grant track, and receive a livelihoods grant equal to 300 USD in cash. Households with the highest credit scores are selected for the credit track, and receive facilitated access to subsidized credit; this accounts for 70% of the livelihood caseload, with the remaining 10% of the livelihood caseload also assigned to credit and discussed below. Households are encouraged to diversify their activities and can choose between an on-farm and off-farm pathway, which determines the type of technical training they will receive. Development Agents (DAs) and Community Facilitators (CF) then form groups of beneficiaries and deliver training in financial literacy, technical training (depending on the pathway chosen), business skills, and business planning over a four to five months period. In selected kebeles, they also receive life-skills training. After developing a business plan, clients are linked with microfinance institutions to apply for credit or receive the grant. Finally, they receive weekly coaching sessions organized by CFs over the 12 months following the reception of the grant/application for credit.

2. Research Questions

We answer three key sets of research questions on LH. These research questions are broadly informative about the impacts, and their underlying mechanisms, of EI programs.

1. **What are the impacts of livelihood interventions, and how do these impacts vary with respect to household characteristics?** We complement the large body of evidence on the positive impact of small-scale EI programs (including in Ethiopia) and the growing body of evidence on the impacts of large-scale government led EI programs, by estimating the effects of LH on households participating in the program. We do so by leveraging the randomized allocation of the program across Kebeles and across households within-Kebeles.
2. **What is the value added of different components:**
 - 2.1. **What is the value-added of additional government implemented life-skills training?** We estimate the impacts of the scope of training leveraging the randomized allocation of “life skills” or “soft skills” training across Kebeles.
 - 2.2. **What is the value added of the grant compared to facilitated access to subsidized credit?** We estimate this using a regression discontinuity design, leveraging the wealth rank determining eligibility for the grant during the profiling exercise.

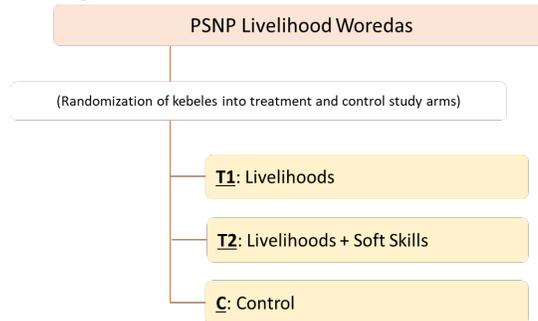
3. **What are the spillover effects of LH?** We estimate the spillover effects of LH, leveraging the scale of implementation and the randomized allocation of LH across Kebeles. To estimate spillover effects, we compare households *not* targeted by LH across “Control” (randomly selected not to participate in LH interventions) Kebeles and “Treatment” (randomly selected to participate in LH interventions) Kebeles, which we identify by leveraging the profiling exercise implemented across Control and Treatment Kebeles.

Below, we outline in more detail how the randomization of Kebeles into participation in the program and the targeting exercise (“profiling”) will be leveraged to answer these questions in turn. We discuss the key outcomes of interest and our empirical strategy and regression specifications.

1. Randomization

Kebele level randomization: The 536 Kebeles in our experimental sample (selected among PSNP Kebeles) will be randomly assigned to three experimental study arms during public lotteries. This random assignment will be stratified at the Woreda-level, to ensure the appropriate LH-caseload is assigned to each Woreda (around 1,320 cases per woreda with some minor variations). As shown in Figure 1 below, the three experimental arms are Control (no implementation of LH), LH without Life-skills training (“Livelihoods”, LH implemented but without Life-skills trainings), and LH with Non-Technical Trainings (“Livelihoods + Life-Skills”, LH implemented with Life-Skills trainings). For some analyses, we will group the Livelihoods and Livelihoods + Soft Skills Kebeles into one LH Kebele category.

Figure 1. Kebele level randomization



The number of Kebeles participating in Livelihoods in each Woreda is between 15 - 21, ensuring an adequate number of profiled households eligible for selection into the LH program to meet the program’s target of 1,320 LH cases in each Woreda. In each Woreda, 5 Kebeles are assigned to Control “C”, while the remaining Kebeles are assigned with equal probability to Livelihoods “T1” and Livelihoods + Soft Skills “T2”. (In case of an uneven number of Kebeles, a coin toss determines whether there will be one more Kebele assigned to “T1” vs “T2”). In Woredas where the number of profiled households prior to the lottery is below 1,500, the number of Control Kebele “C” is decreased to 3, and the number of “T1” and “T2” Kebeles is increased by one Kebele each to ensure that the budgeted caseload of 1,320 per Woreda can be achieved. Where there are still too few households profiled, the federal government, together with the regions and participating Woredas may reallocate a limited number of cases from these Woredas to Woredas in the same zone with a higher number of profiled households.

Assignment to treatment arms is conducted by a public lottery at the Woreda level. In attendance are Woreda level officials, as well as multiple representatives from the Kebele level food security task force from each

participating Kebele, and the Research firm for recording outcomes. Kebele officials publicly draw their treatment status (by drawing tokens out of an obscured urn), and the assignment is then ratified by signature by all officials in attendance.

After lotteries, the total caseload at the Woreda level (typically 1,320) is then assigned to each of the randomly selected treatment Kebeles (Livelihoods “T1” and Livelihoods + Soft Skills “T2”), proportionally to the number of households profiled in each Kebele:

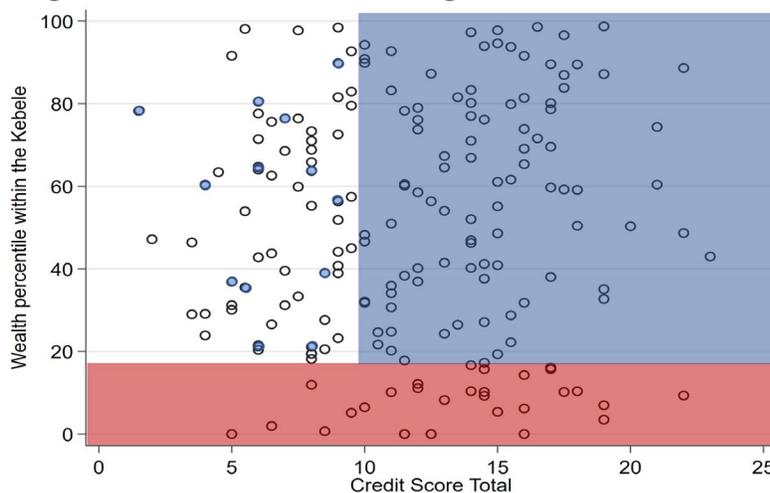
$$LH \text{ caseload} = \frac{\text{Woreda caseload}}{\text{number of treatment Kebeles (T1 or T2)}} \times \frac{\text{number of HH profiled in the Kebele}}{\text{average number of HH profiled in all treatment Kebeles}}$$

Household level targeting and randomization: In Kebeles selected for Livelihoods and Livelihoods + Life skills, households are then assigned to the ‘Grant track’ and ‘Credit track’ as follows: Let N be the caseload assigned to the Kebele, then:

1. 20% of LH cases (20% * N) are assigned to the ‘Grant track’. Those cases are targeted to the lowest households in the Kebele level wealth ranking. These are the households in the red shaded area in Figure 2.
2. 80% of LH cases (80% * N) are assigned to the ‘Credit track’. 70% of cases (70% * N) are assigned to the households highest on the credit preparedness score (and not already selected for the ‘Grant track’). These are the households in the blue shaded area in Figure 2.

The remaining 10% of LH cases (10% * N) are assigned randomly among all remaining households not already selected for either the ‘Grant track’ or the ‘Credit track’ (the “missing middle”). These are the randomly selected blue shaded dots within the white shaded area of Figure 2.

Figure 2. Household-level LH assignment in treated Kebeles



Note: Each dot represents a household in a representative Kebele with 190 profiled households, assuming a LH caseload at the Kebele of 130. The wealth percentile is determined by the community-based wealth rank, the credit preparedness score is determined based on a set of questions asked during profiling. The data are representative of the households in 110 Kebeles already profiled to date. Households in the red area are selected for the ‘Grant track’. Households in the blue area (and blue shaded households) are selected for the ‘Credit track’.

3. Data

This project will utilize data from administrative sources, as well as our own surveys with implementers (woreda and kebele level officials, development agents, and community facilitators), with households, and enterprises. We first sample a random set of Kebeles from among those participating in the experiment for sampling and surveys as follows:

Table 1 – Experimental sample

	<u>Number in ...</u>			<u>Experimental arms</u>
	<u>Total</u>	<u>Experimental sample</u>	<u>Survey sample</u>	
Woreda	832	30	30	
Non-sample Woreda	802	0	0	
Sample Woreda	30	30	30	
Kebele (in Sample Woreda)		536	348	
Non-PSNP Kebele		0	0	
PSNP Kebele		536	348	
+ Non-Experimental Kebele		0	0	
+ Experimental Kebele		536	348	Control, LH w/o LST, LH w/ LST

Woreda Our experimental sample consists of Kebeles in 30 Woredas. These Woreda were selected on the basis of representativeness across multiple regions, and the expected feasibility of implementation of LH.

Kebele Our experimental sample of Kebeles consists of 536 Kebeles spread across those 30 Woreda, which we refer to as the Experimental Kebeles. Experimental Kebeles were selected by Woreda officials with priority for Kebeles with a large number of PSNP beneficiary households and particularly a large number of LH-interested (defined below) households. In each Woreda, either 3 or 5 Kebele were assigned to control depending on the total caseload and the number of interested households in all Kebeles combined, with the remaining split equally between LH and LH+ treatment arms.

We will conduct surveys in all control Kebele, and randomly select an equal number (i.e. either 3 or 5) of each of the LH and LH+ Kebeles in each Woreda to be included in our sample. Overall, this yields a sample of 348 Kebele, 116 each from Control, LH and LH+ treatment arms.

a. Implementation / Administrative Data

We conduct monitoring surveys with implementers while also collecting attendance sheets to track beneficiary participation in trainings and other livelihood program aspects.

DA / CF Monitoring Surveys:

We conduct monitoring surveys of Community Facilitators (CFs) and Development Agents (DAs) starting July 2023 when Baseline is collected. These surveys will continue to be conducted throughout all follow-up rounds. The monitoring surveys will collect information on:

- Training received
- Training provided to beneficiaries
- Business plans implemented

- Availability of funds and readiness for grant/credit disbursement
- Requirements for beneficiaries to obtain credit
- Fidelity and homogeneity of implementation of LH
- Education
- Work experience
- Wage
- Work Satisfaction
- Workload
- Status of coaching phase
- Other occupations
- Other sources of income

Woreda Livelihoods Experts Monitoring Surveys:

We conduct monitoring surveys to the woreda livelihood experts starting on June 2023 and throughout all follow-up rounds. These surveys collect information on:

- Status each of the components of the LH package
- Availability of funds for disbursement of credit or grant
- Percentage of beneficiaries receiving grant or credit
- Average LH credit size
- Security situation

Attendance data:

We will collect pictures and digitize data on attendance for all parts of the training in all LH Kebeles and for each LH training group.

b. Households

Household Profiling: Household Profiling data is collected by Development Agents in collaboration with Kebele leaders and the Food Security Task Force in each Experimental Kebele. This data collects, for each LH-interested household:

- Name, gender and age of the household head and the primary participant in livelihood activities
- Relationship of the primary participant to the household head
- Community (Kebeles consist of multiple communities) in which the household is located
- Household's PSNP client card number
- Credit Score
- Location
- Preliminary farm and non-farm pathway
- Total assets
- Wealth Rank
- Commitment Score

Household Profiling data is subsequently digitized and used for both treatment assignment and sampling.

Baseline (May – Sep 2023): Baseline data will collect information on the current situation of households. This collects information regarding:

- Household members demographic characteristics

- Investment
- Business skills
- Non-technical skills
- Technical skills
- Income
- Assets
- Social capital
- Social networks
- Informal transfers
- Finance
- Time Use
- Dependency
- Shocks and coping strategies
- Diversification
- Poverty
- Food security

FUP1 (March 2024 – Aug 2024): This data will be collected in 3 different rounds. The questionnaire is a condensed version of the Baseline instrument, focusing on Livelihoods (training participation, business plan development and receipt of credit/grant, coaching participation), investment, consumption and poverty, income, finance, and bilateral informal transfers. This data is intended to collect compliance with treatment, and short-term outcomes of the program.

FUP2 (Oct 2024 – Dec 2024): This survey will collect the same information in Baseline with additional question on livelihoods (training participation, business plan development and receipt of credit/grant, coaching participation). The survey instruments are not finalized at this stage, and we will update this PAP once they are.

FUP3/Endline (Oct 2025 – Dec 2025): Planned.

c. Enterprises

Market census and surveys (during FUP1 – rounds 2, 3, FUP2 and in Endline): This survey will collect data from the main market in each kebele. The main market is identified during the community survey in the first wave of FUP1 (see next paragraph), by asking community leaders to name the primary markets at which members of this kebele shop. In each market, we will:

1. Conduct a census of all market sellers, collecting basic information on seller type and ownership.
2. Among the number of sellers, we conduct a survey of randomly selected 20 sellers in each market, collecting data on revenues, profits, labor, capital, etc.
3. We will also collect 3 price quotes of 20 products and services at each market.

Community survey (during FUP1, FUP2 and Endline) This survey targets the kebele community. We define a community as one kebele. This survey is meant for a group of people that will include at least one member from each of following categories:

- Kebele chairman

4. Sampling

	<u>Experimental sample</u>	<u>Survey sample</u>	<u>Experimental arms</u>
Households (in Experimental Kebele)		8,760	
Non-PSNP HH		0	
PSNP HH		8,760	
+ Non-listed PSNP HH		0	
+ Listed PSNP HH		8,760	
++ non-LH-interested HH		0	
++ LH-interested HH	51,806	8,760	Control, LH-grant, LH-credit
+++ LH-grant eligible HH	6,655	3,522	Control, LH-grant
+++ LH-credit eligible HH	45,151	5,238	Control, LH-credit

Experimental sample

Households Within each Survey Sample Kebele, we will sample from the pool of LH-interested households. When discussing households, we group them into four mutually exclusive groups. The first are “non-PSNP households”; these are households who are not PSNP-beneficiaries (or PSNP-beneficiaries who do not participate in public works) and are therefore not eligible for LH participation. The second are PSNP households who were not listed in the HH Profiling (“non-listed PSNP households”); although these households might potentially be eligible for LH, because they were not identified during the HH Profiling, they did not have the opportunity to express interest in LH and therefore are not eligible for LH. The third are PSNP households who were listed in the HH Profiling but reported that they were not interested in LH (“non-LH-interested households”); these households are not eligible for LH. As none of these first three groups are eligible for LH, we exclude them from our survey sample, although they might plausibly be affected by LH through spillovers.

The fourth group of households are PSNP households who were listed in the HH Profiling and reported that they were interested in LH (“LH-interested households”); these households are eligible for LH, and our survey sample will consist of these households. In Kebeles with a well implemented HH profiling, we expect LH-interested households will consist of almost all PSNP households with the potential to start a household enterprise. In Kebeles with a well implemented HH Profiling, LH-interested households are the most relevant sample for spillovers from LH; from a social welfare perspective, we are most interested in impacts on PSNP households (as they are most vulnerable, and are the targeted beneficiaries of PSNP), and we primarily expect spillovers through local wage and price effects, which are most likely to affect households with sufficient labor to start a household enterprise.

We further break LH-interested households into two mutually exclusive groups: “LH-grant eligible households”, and “LH-credit eligible households”. According to the HH Profiling guidance, these two groups are identified as follows. Let N be the LH-caseload that would be assigned to an Experimental Kebele if it was an LH Kebele, that is the total number of LH-grant plus LH-credit packages that would be assigned to the Experimental Kebele. First, the $20\% \cdot N$ poorest of LH-interested households, determined by a community-based targeting exercise supported by a community wealth ranking, are LH-grant eligible. Second, all

remaining LH-interested households are LH-credit eligible. All LH-interested households receive a “Credit Capacity” score during the HH Profiling, which determines assignment of LH-credit in LH Kebele as discussed below.

Sampling

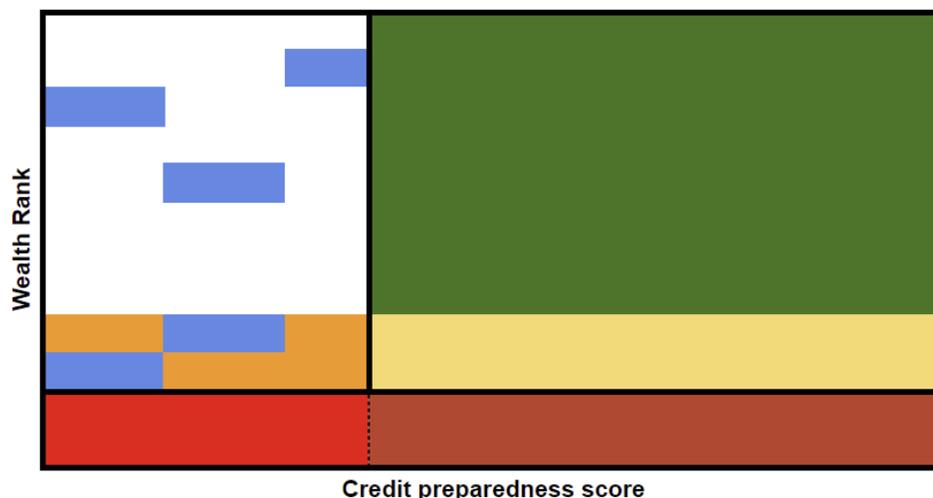
Households: We will sample 25 households in all 348 Kebeles in our survey sample for surveying. Households are sampled only from the LH-interested households. Households will be sampled as follows from 5 strata of LH-interested households:

- LH-Grant eligible not marginally eligible for LH-Grant
- LH-Grant eligible marginally eligible for LH-Grant
- LH-Credit eligible
- Missing Middle randomly selected for LH-Credit
- Missing Middle control

The definition of the first two strata implies LH-Grant eligible households will be sampled stratified on Poverty Rank; we will randomly sample 5 LH-Grant eligible households from each of these two groups (10 LH-Grant eligible total, red box in Figure 3). The third stratum (LH-Credit eligible) are households that are not poor enough to be LH-grant eligible and have a high credit preparedness score, making them eligible for LH-credit (blue box in Figure 3); we will randomly sample 5 of these households. The fourth stratum are households that were randomly chosen to be LH-Credit eligible from the missing middle (blue dots in the white box in Figure 3; we will randomly sample 5 of these households. The fifth stratum are households that are part of the missing middle but were not chosen to be eligible for LH-credit. These are within-Kebele control households; we will randomly sample 5 of these households.

In a few Kebele, the strata are too small to sample 5 households + 1 replacement household. In these Woreda, we re-assign those cases to the same strata in randomly chosen Kebele within the same Woreda that are large enough in order to maintain the overall target sample size.

Figure 3 – Sampling scheme



FUP1/Midline: We sample everyone that we surveyed at Baseline for the main sample. The sample is then split into 3 waves evenly. Since not all total numbers of sample by strata are divisible by 3 (in fact, in most strata, we sample 5), we make probabilistic assignments of households to rounds (i.e. 1-2-2, 2-1-2, or 2-2-1).

DA/CF: Within each Experimental Kebele, we will sample (and survey) all DAs (up to 5) and the CF. There will only be a CF hired in Experimental Kebele assigned to LH, and we will therefore survey the CF only in Experimental Kebele assigned to LH, and we will survey all 5 DAs in all Experimental Kebele.

Markets: We assign enumerators to each market. Enumerators:

- a) Map each market, counting the total number of sellers (=N)
- b) Define a path which they will take walking through each market, stopping at each seller to census them, collecting basic information on enterprise type and location
- c) Randomly interview 20 sellers of that market, drawn by CAPI in real time (with probability 20/N)

Enumerators are randomly assigned to different markets and different products. A separate enumerator also collects 3 price quotes from randomly selected sellers for each product at each market.

Fixed Enterprises: We will gather a complete listing of all enterprises in each Kebele.

5. Empirical Strategy

Empirical Specifications

In this section, we discuss in detail how the Kebele randomization and household level targeting (with limited randomization) are leveraged to answer our 3 main research questions.

P.1.: Average total effect of the LH program (Question 1):

To estimate the overall average impacts of the program on beneficiaries of the program, we compare LH recipient households in treated Kebeles (Livelihood “T1” and Livelihood + Soft Skills “T2”) to those that would have been recipients in control Kebeles “C” (selected according to the same rules that determined inclusion in the program in treated Kebeles). This effect is an average treatment effect across all recipients, encompassing averages across the effect in Livelihoods and Livelihoods + Soft skills Kebeles, the mix of ‘grant track’ and ‘credit track’ recipients, the livelihoods options chosen by recipients, and includes both direct effects as well as spillovers.

We run the following ANCOVA specification:

$$y_{ikw} = \alpha_w + \beta T_k + \delta_{is}^{strata} + \gamma_1 y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (1)$$

where y_{ikw} is an outcome for individual / household i in Kebele k in Woreda w . T_k is a dummy variable for Kebeles assigned to treatment (both Livelihoods “T1” and Livelihoods + Soft Skills “T2”). α_w are Woreda fixed effects included due to Woreda-level stratification of the treatment. δ_{is}^{strata} are sampling strata fixed effects, y_{ikw}^{BL} are baseline outcomes (replaced with the Woreda-level mean for missing values, and M_{ikw}^{BL} is an indicator for such missing baseline values).

We include in this regression all households eligible for treatment (*either* the grant track or the credit track) as defined by the caseload allocation rules described above. That is, we include in treated Kebele all grant and credit track recipients, and in control Kebele all households that would have received the grant or credit track, had their Kebele been selected for treatment (including the 10% that would have been randomly selected to be credit track recipients). Since our sampling scheme (see below) does not assign an equal sampling probability to each group, we re-weight observations using inverse sampling weights to make the sample representative of the total population of recipients – that is, so that grant track eligible households carry an overall weight of 20%, credit-score based credit track eligible households carry a total weight of 70%, and randomly selected credit track eligible households carry a weight of 10%.

The estimand of interest is β , representing the average intent-to-treat effect (treatment + spillover effects) on recipient households (both grant track and credit track) of being eligible for the LH program. This effect is appealing, as it provides an answer to the average benefit of the program to all recipients, a key effect of interest for decision makers evaluating the program as a whole and making decisions around scale-up or establishment of similar programs elsewhere.

P.2.: Total effect of the LH program - Soft Skills vs. No Soft Skills (Question 2.1):

Next, we are interested in distinguishing whether the total effect of the program differs with the addition of the Soft Skills training. We run the following specification:

$$y_{ikw} = \alpha_w + \beta_1 T_k^1 + \beta_2 T_k^2 + \delta_{is}^{strata} + \gamma_1 y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (2)$$

where y_{ikw} is an outcome for individual / household i in Kebele k in Woreda w . T_k^1 is a dummy variable for Kebeles assigned to Livelihoods and T_k^2 is a dummy for Kebeles assigned to Livelihoods + Soft Skills. All other terms are as above. We again include in this regression all households eligible for treatment (*either* the grant track or the credit track) and use inverse sampling weights to make the estimate representative of the population of recipients.

The estimands of interest are β_1 and β_2 , representing the average intent-to-treat effect (treatment + spillover effects) on recipient households (both grant track and credit track) of the Livelihoods program and the Livelihoods + Soft Skills program respectively. We also test for whether $\beta_2 > \beta_1$, corresponding to our hypothesis that the additional soft skills component adds value to the program on average. We will also compare this added value to the estimated cost of the Soft Skills program to gauge cost effectiveness of this component.

Below, we further outline how we will test for interactions between the soft skills component and other dimensions of the program, e.g. whether soft skills may have different value added for credit vs. grant track recipients.

P.3.: Total effect of the LH program - Grant Track vs. Credit Track (Question 2.2):

Next, we are interested in whether grant or credit track beneficiaries benefit differently from the program. This is not obvious: Grant track households are differently selected, and in particular are poorer on average than credit track recipients. If there is heterogeneity in treatment effects of both grant and credit with respect to wealth and / or credit preparedness, this will interact with the differential selection of households into each track. We therefore estimate Equation (1), but interact treatment status with whether recipients were eligible for the grant track (bottom of the wealth rank), or the credit track (top of the credit preparedness ranking):

$$y_{ikw} = \alpha_w + \beta_1 T_k + \beta_2 T_k * grant_{ikw} + \delta_{is}^{strata} + \gamma_1 y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (3)$$

where $grant_{ikw}$ is a dummy for whether an individual/household i is eligible for the grant track. All other terms are as in Equation (1), and the sample remains the same, including all eligible households.

The estimands of interest are β_1 and $(\beta_1 + \beta_2)$, representing the average intent-to-treat effect (treatment + spillover effects) on recipient households in the credit track vs. the grant track respectively. We also test for whether $\beta_2 = \beta_1$, corresponding to our hypothesis that the program has equal effects on grant and credit recipients.

To test whether the additional soft skills component has a differential impact for grant vs. credit recipients, we analogously estimate Equation (2), adding interactions with $grant_{ikw}$ as above.

P.4.: Overall Spillover vs. Direct Effect of the LH program (Question 3):

The program effects estimated above correspond to total treatment effects, including both direct effects for recipients, as well as within-Kebele spillovers that recipients may experience from other households in the same Kebele receiving the livelihoods treatment. These spillovers may be both positive (e.g. other businesses and households benefiting from the livelihoods activities set up by recipients) or negative (e.g. other businesses being displaced by businesses created as part of the livelihoods activities induced by the program). The scale of the program as well as the program targeting within Kebele based on wealth- and credit preparedness thresholds as well as the randomized selection of 10% of the caseload for the credit track allow us to investigate whether such spillovers exist.

P.4.1: Overall average spillover effect on PSNP recipients:

A key channel through which such spillovers may operate is through market prices and input prices (such as wages or rental rates). In addition, the treatment may affect the availability of goods at markets, as well as local competition of firms. To investigate such general equilibrium effects, we run a regression analogous to Equation (1), but use Kebele-level prices, wages, goods availability and number of sellers in different categories as our outcome variables. These will be collected on market days from a representative set of Kebele-level markets (where both recipients and non-recipients purchase goods and services). β gives the average total effect of the program on these Kebele-level outcomes.

Similarly, we can estimate the overall spillover effect of the program on control households neither eligible for the grant track nor eligible for the credit track by comparing these households across treatment and control Kebele. That is, we estimate Equation (1), including in our regression only households in the white shaded areas (excl. the randomly selected credit track households shaded in blue).

β from Equation (1) is the average total spillover effect on these non-eligible households. **This is our primary coefficient of interest for spillovers.**

Missing middle control households are specially selected. They are neither at the bottom of the wealth ranking (grant track eligible) nor at the top of the credit preparedness score (automatically credit track eligible). Thus, the spillovers they experience may in general be different from the spillovers experienced by those households. In analysis that we consider secondary, to test whether these spillovers are generalizable across the entire wealth and credit preparedness score space, we therefore test for heterogeneity in spillovers based on wealth and credit preparedness:

$$y_{ikw} = \alpha_w + \beta_1 T_{ikw} + \beta_2 T_{ikw} * cscore_{ikw} + \delta cscore_{ikw} + \beta_3 T_{ikw} * wrank_{ikw} + \delta wrank_{ikw} + \delta_{is}^{strata} + \gamma_1 Y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (4)$$

where $cscore_{ikw}$ is an individual's credit score and $wrank_{ikw}$ is their wealth rank. If β_2 and / or β_3 are indistinguishable from zero, the extent of spillovers is not related to wealth or credit preparedness, and we are thus more confident that this average spillover on the ineligible PSNP households is reflective of average spillovers overall. If, however, β_2 and / or β_3 are different from zero, we may use it to linearly extrapolate spillovers to other households, and calculate the estimated average overall spillover effect as:

$$\underline{spillover} = \widehat{\beta}_1 + \widehat{\beta}_2 \underline{cscore} + \widehat{\beta}_3 \underline{wrank}$$

where *cscore* is the average credit preparedness score across ALL households and *wrank* is the average wealth rank across all recipient households (“T1”, “T2”, credit and grant track). This yields the average overall spillover effect on recipient households.

P.4.2: Overall average direct effect:

Since the average total effect estimated in Equation (1) ($\widehat{\beta}_{(1)}$) is equal to the average spillover effect + the average direct effect, our estimate of the average overall direct effect is then: $\widehat{\beta}_{(1)} - \text{spillover}$.

P.4.3: Spillover Effects on market prices and activity

We will analyze the impacts of the program on Kebele-level market prices and activity using Equation (1), which will give the overall average treatment effect on prices and activity in treated vs. control kebeles. We will do so separately over time to trace out dynamic impacts as grant and credit goes out.

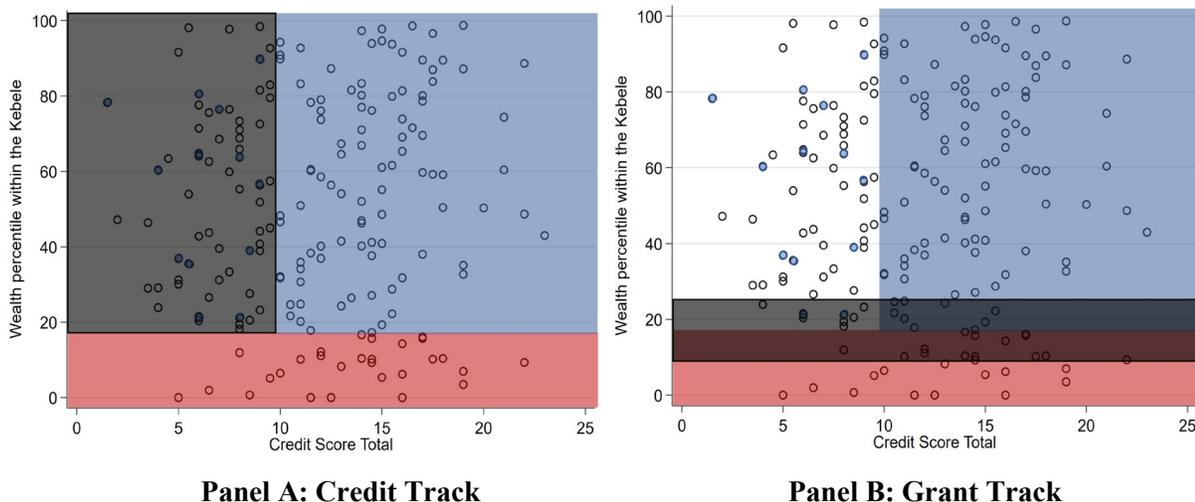
The sections above (P.X) outline our main analyses related to our key research questions. The following sections (S.X) are secondary analyses that we may additionally run, but for which we may be underpowered given the current sampling plan. We therefore view them as secondary analyses. That said, we may increase our sample at Follow-up 2 (relative to the 9,000 households sampled at baseline), allowing us to additionally run the analyses outline in those sections.

S.1: Overall spillover on non-PSNP recipients:

The effects above are estimated only for PSNP recipients who were profiled for livelihoods activities. However, other households in the community – and in particular those who are not eligible for PSNP, and therefore not profiled might also experience externalities from the program (beyond those we already capture in local prices and wages). Budget allowing, we may therefore at follow-up 2 additionally sample households not eligible for PSNP, and thus not profiled to our sample, and analogously estimate within-Kebele spillovers on those households using Equations (1) and (2) for that sample of ineligible households non-PSNP households.

S.2: Spillover vs. Direct Effect of the credit and grant tracks separately: In order to fully characterize direct vs. spillover effects not only overall, but also separately for the grant and credit tracks, we leverage the targeting protocol for selecting beneficiaries within treated Kebeles:

Figure 3. Identification Strategy for direct effects of LH treatment



S.3: Direct effect of the credit track (Figure 2, Panel A):

10% of the LH caseload in each Kebele are randomly selected among households not already selected for grant or credit based on the wealth- and credit score cut-offs. This therefore provides a valid RCT to estimate the direct effect of the credit track on these recipients.. We estimate the following ANCOVA specification:

$$y_{ikw} = \alpha_w + \beta T_{ikw}^{credit} + \gamma_1 y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (5)$$

where T_{ikw}^{credit} is an indicator for being randomly selected for the credit track among the remaining households. All other variables as above. The sample included in this regression are all households not eligible for the 90% of LH cases allocated through wealth- and credit scores respectively (i.e. those in the white shaded area) from both treatment (“T1” and “T2”) and control Kebele. The indicator is 1 for households in treatment Kebeles (“T1” or “T2”) who were randomly selected for the credit track, and 0 for all other households in treatment and control Kebeles.

The estimand of interest is β , yielding the average ‘direct’ treatment effect of being eligible to receive the credit track treatment. Direct effect refers to the effect over- and above any effect operating through spillovers, i.e. the effect of the program on recipients in treated Kebeles beyond the effect experienced by non-recipients in treated Kebeles, or the differential effect of being in a treatment Kebele on recipients vs. non-recipients. The total effect of the credit track treatment (β_1 in Equation (3)) is composed of the ‘Direct Effect’ + the spillover effect. Thus, under the hypothesis that average direct treatment effects for households in the white shaded area and in the blue shaded area are the same, we can again recover the spillover effect on credit track recipients as: $\beta_1^{(3)} - \beta^{(5)}$.

As above, individuals in the gray shaded area are differently selected from those in the blue shaded area. They are in the same upper part of the wealth distribution but have lower credit preparedness scores. If the treatment effects of credit are heterogeneous with respect to the credit preparedness score, then the average direct treatment effect for the randomly selected 10% of cases in the credit track (blue shaded dots) would be different from the average direct effect on ALL credit track eligibles (including the blue shaded area). We test for this by interacting:

$$y_{ikw} = \alpha_w + \beta_1 T_{ikw} + \beta_2 T_{ikw} * cscore_{ikw} + \delta cscore_{ikw} + \gamma_1 y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (6)$$

where $cscore_{ikw}$ is an individual’s credit score. As above, if β_2 is indistinguishable from zero, the extent of spillovers is not related to wealth. If, however, β_2 are different from zero, we calculate the estimated average overall spillover effect on credit-recipient households as:

$$spillover = \widehat{\beta}_1 + \widehat{\beta}_2 cscore$$

where $cscore$ is the average credit preparedness score across credit eligible households (i.e. not grant eligible) across all recipient households (“T1”, “T2”, credit and grant track).

S.4: Direct effect of the grant track (Figure 2, Panel B):

20% of the livelihoods caseload is targeted to the bottom of the wealth ranking within each treatment Kebele. This suggests a regression discontinuity strategy, where we compare households in treated Kebele that were just-eligible for the ‘grant track’ to those that were just-ineligible (gray shaded area). Below the threshold, all households are eligible to receive the grant. Above the threshold, some are eligible to receive credit for sure (blue shaded area), while others are eligible to be randomly selected for the additional 10% of cases assigned

to the credit track (white shaded area). To estimate the effect of the grant track around the threshold, we average across the two thresholds (white vs. red and blue vs. red), by estimating the following:

$$y_{ikw} = \alpha_w + \beta_1 T_{ikw}^{grant} + \beta_2 T_{ikw}^{grant} * elig_{ikw}^{credit} + \gamma elig_{ikw}^{credit} + y_{ikw}^{BL} + \gamma_2 M_{ikw}^{BL} + \varepsilon_{ikw} \quad (7)$$

where T_{ikw}^{grant} is a dummy for being eligible for the grant track (red shaded area), $elig_{ikw}^{credit}$ is a dummy for being eligible for the credit track (blue shaded area). Included in the sample are all households within the gray shaded area, i.e. just above and just below the threshold (excluding the randomly selected credit track households (blue shaded dots within the white shaded area)). β_1 is the direct effect of the grant track on households around the threshold. β_2 is the *additional* effect of receiving the grant (over and above the credit) among households around the threshold (note: we are interested in β_2 directly, as it is a measure of whether the grant – which is significantly more costly than credit facilitation – has a benefit over and above the credit track).

To get the overall direct effect of the grant track, we therefore have the following options:

1. Direct effect on non-credit eligibles $\beta_{non-credit-elig}$: This is just β_1 . However, we may be underpowered to detect effects in this small cell, and it is an effect only among relatively low credit-score households.
2. Direct effect on credit eligibles $\beta_{credit-threshold}$: This is the direct effect of the credit track (β from Equation 5) + the additional effect of the grant track over and above the credit track (β_2 from Equation 7). A caveat is that β in Equation (5) is the direct effect of the credit track on randomly selected credit track recipients (e.g. those from the white shaded area), while β_2 from Equation (7) is the additional effect among those only around the threshold. When treatment effects are heterogeneous, we cannot do much about this, except again trying to emulate the direct effect of the credit treatment for threshold households by evaluating Equation (6) at the average values of credit score and wealth for the threshold households to obtain spillover_{threshold}.
3. The average direct effect of the grant track around the threshold is then: $\beta_{credit-threshold} * selig_{ikw}^{credit} + \beta_{non-credit-elig} (1 - selig_{ikw}^{credit})$, where $selig_{ikw}^{credit}$ is the share of households around the threshold (gray shaded area) that are eligible for the credit track (blue shaded area).

6. Power Calculations

Table 6 presents the expected sample sizes for each Equation and comparison. Color codes refer to Figure 4, and the indicators “T” and “C” refer to which cells we will use as treatment and control groups in each of the comparisons. We conduct power calculations for three of the contrasts described in our evaluation questions: (A) the average overall effect obtained by comparing LH Kebele and Control Kebele (Equation (1)), (B) the overall treatment effect of CREDIT and GRANT separately (Equation (3)), and (C) the average overall spillover effect comparing control households in LH vs control Kebele. Our expected sample sizes are from Table 6.

We begin by calculating our expected effect sizes. For (2), we use estimates of the impacts of TUP in Ethiopia from Banerjee et al. (2015) on household consumption, scaled down by 1/3 (to reflect the smaller size of transfers under LH-grant and LH-credit and the reduced intensity of support). This yields an estimate of a 0.143 SD increase in household consumption caused by LH. To evaluate power for (C), we divide this estimate by 4 – under the assumption that 25% of households receive LH in a community, this would give power to detect an aggregate effect of LH consistent with an aggregate multiplier of zero -- I.e. that the intervention

leads to negative impacts on non-recipients exactly offsetting direct positive effects (e.g. through pro-competitive effects, business-stealing or negative price effects).

Table 6: Expected sample sizes

Expected Sample	Effect Type	Average Total Effect						Average spillover			
		Direct + Spillover						CREDIT	GRANT		
		All recipients	No Soft Skills	With Soft Skills	Grant	Credit	all non-recipients		Direct	Direct	
Equation	(1)	(2)	(2)	(3)	(3)	(1)	(5)	(7)	(7)	(7)	
Method	RCT	RCT	RCT	RCT	RCT	RCT	RCT	RCT	RDD	RDD	RDD
7	GRANT TREAT (marginally eligible + CREDIT)	T	T	T	T				T		T
1.25	CREDIT TREAT (marginally GRANT eligible)	T	T	T		T			C		C
3	GRANT TREAT (marginally eligible + NO CREDIT)	T	T	T	T				T	T	
1.25	MM (marginally GRANT eligible + NO CREDIT)						T	C	C	C	
5	MM CREDIT TREAT	T	T	T		T	C	T			
3.75	MM Control	C	C	C		C	T	C			
3.75	CREDIT TREAT (not marginal)	T	T	T		T					
25	Treatment	4640	2320	2320	2320	2320	1160	1160	2320	773	1547
8700	Control	2755	2755	2755	1160	1595	1160	1160	580	290	290

To calculate minimum detectable effects, we apply an intra-cluster correlation of 0.081, based on the intra-cluster correlation for productive assets from the PSNP4 LH impact evaluation report, and for 80% power and 5% level. This yields minimum detectable effects of (A) 0.11 SD for the overall total effect, (B) 0.15 SD for the effect of the GRANT and CREDIT respectively, and (C) 0.14 SD for the overall aggregate spillover. We are adequately powered for (A) and (B), but currently underpowered for (C); however, power gains from precise measurement of baseline outcomes will plausibly reduce our minimum detectable effect in a specification that controls for baseline values of the outcome variable. Moreover, we will additionally measure detailed prices, number of firms, and firm outcomes to test directly for spillovers on other businesses and market activity as this is likely to be better powered – for example, if 25% of households receive LH, and all start a business, this may imply a larger than 25% increase in the number of businesses (particularly in certain sectors most affected such as livestock). In addition, since spillovers are likely to take time to materialize: if short-run results suggest a large increase in the number of businesses in particular sectors, we may sample additional MM control group households to further increase power. These calculations suggest that our sample size is just sufficient for power for our primary analyses of interest.

7. Primary Outcomes of Interest

We will analyze treatment effects of the various components of LH interventions on a comprehensive list of outcomes. We group these into three groups: A) Outputs (including compliance with the randomization), B) Household-Level Outcomes, and C) Spillovers and Local Economic Activity. On each group, primary outcomes are presented on this section. Details on construction and secondary outcomes are on appendix, to better understand mechanisms underlying potential effects. We apply multiple inference corrections via FDR as outlined above for all primary outcomes overall, and for main outcomes within each family.

For monetary values, we will report outcomes in nominal terms as well as real USD PPP, where we use the price index collected at the closest market to each observation as our deflator back to baseline. We will winsorize monetary values at 1% and 99% for variables that take both positive and negative values, and at

99% for variables bounded (at zero) below. When constructing indices, Anderson (2008). When specific outcomes are listed as index components, we also intend to analyze these outcomes.

Indicators shows the source of the questions from each of our survey questionnaire in parentheses as follows:

- Baseline (BAS)
- CF-DA (CF-DA)
- Follow up 1 (FUP1)
- Enterprise (ENT)
- Market (MKT)
- Follow up 2 (FUP2)

Here, we list only our primary outcomes. Appendix A provides further details on secondary outcomes and variable construction.

A) Outputs / Implementation / Compliance

This group of outcomes concerns implementation fidelity. A sense of the ‘first stage’. These are of interest to program implementers and allow us to test whether implementation varied by local capacity.

1. **Life-skills trainings:** Total life-skills related training hours received (as reported by households) since the start date of the program (FUP1)
2. **Business / technical trainings:** Total business/technical training hours received (as reported by households) since the start date of the program (FUP1)
3. **Grant disbursement:** Total amount of outstanding grants received from any organization since the start of the program (As reported by respondent) (FUP1)
4. **Credit disbursement:** Total amount of credit outstanding with any party since the start of the program. (As reported by respondent) (FUP1)
5. **Coaching:** Total hours of group coaching received from a DA/CF in the Kebele (as reported by respondent) (FUP1)
6. **Business Skills Index**
7. **Aspirations Index**
8. **Business activities:** Number of new agricultural, livestock or non-ag business activities started since the start date of the program (FUP1) (BAS)

B) Household-Level Outcomes

This group of outcomes contains our primary household outcomes.

1. **Household assets (excl. land and housing):**
Total value of household assets: Sum of value of all 53 assets. (BAS) (FUP2)
2. **Household consumption:**
Household consumption expenditure, annualized: food expenditure + expenditure on non-food durables + total expenditure on non-food non-durables. (BAS)(FUP1) (FUP2)

3. Household income:

Household income annualized: Household income from agriculture + Household income from livestock + Household income from non-ag business + Household income from employment + Net transfers + Rental income. (BAS) (FUP2)

Within this family, we are specifically interested in the following ‘secondary’ outcomes, from the perspective of understanding the hypothesized and targeted mechanisms of the Livelihoods program.

3.1. Household income from livestock

3.2. Household income from non-ag business

3.3. Net transfers

4. Household revenue from economic activities:

Household revenue / business activity, annualized: Total revenue from agriculture + Total revenue from livestock + Household revenue from business (BAS)(FUP1)(FUP2)

5. Labor supply:

Household hours worked on productive activities, weekly: Household hours worked on livestock + Household hours worked on agriculture + Household hours worked on own business + Household hours worked on a paid job (BAS)(FUP2)

6. Physical health:

Index composed of self-reported level of health, number of days missed due to poor health, share of members visiting health facility, share of members with any disability (BAS) FUP2)

7. Mental health index:

Index composed of the CESD-10 scale, Rosenthal Self-esteem scale, Cantril Ladder, and Locus of Control Scale (BAS)(FUP2)

8. Social capital index:

Index composed of Social trust index, Community organizations that the household is part of, number of close social connection, and conflict index (BAS)(FUP2)

9. Child wellbeing index:

Index composed of children’s schooling index and children’s health index (BAS)(FUP2)

10. Female empowerment index

C) Spillovers and Local Economic Activity

1. Output price index:

Output price index expenditure weighted.

2. Input prices:

Average wage earned by employed members of the household

3. GDP – Expenditure:

Consumption (HH) + Investment (ENT) + Net Exports

4. GDP – Income:

Wages (HH) + Rental payments (ENT) + Profits (ENT) + Net income transfers

5. Agglomeration:

Total number of enterprises within the Kebele, including enterprises operating from the household (FUP2), in markets (MKT), and from fixed locations (ENT)

6. Migration: Net change in number of household member since Baseline: Number of household members currently in household – number of household members as of baseline date (BAS)(FUP2)

8. Multiple hypothesis testing

The naive p-values on our primary outcomes are correct for readers with an a priori interest in the hypothesis that RHISN affects a particular outcome among them. To control for multiple inference, we calculate sharpened q-values (i) across our primary outcomes within each primary and secondary research question (as defined above) and (ii) within each primary outcome, where the primary outcome is composed of a set of secondary outcomes (e.g. with the mental health index, or total household income) following Benjamini, Krieger, and Yekutieli (2006) to control the false discovery rate (FDR). The FDR controls for the proportion of false positives, which is relevant if one is interested in the proportion of all primary outcomes affected by treatment. Rather than specifying a single q, we report the minimum q-value at which each hypothesis is rejected, following Anderson (2008). We will report both standard p-values and minimum q-values in our analysis. We note that norms around multiple testing are still evolving in economics, and through the above methods seek to follow current best practices.

9. Covariate adjustment

To enhance the precision of our analysis, we will apply Double/Debiased Machine Learning (DDML), as outlined by Chernozhukov et al. (2018), to estimate versions of our primary specifications. This advanced statistical technique integrates machine learning algorithms with econometric models, offering a more robust and accurate estimation by correcting for biases that can arise in traditional regression analyses.

10. Exact tests of treatment effects

In addition to the large-sample approach outlined in Section 3.1, we perform Monte Carlo approximations of exact tests of the treatment effect (Fisher 1935). Randomization inference allows us to test the Fisherian sharp null hypothesis that $y(t)_{ic} = y(c)_{ic}$ for every unit iv . We calculate exact p-values for all our main effects of interest (and all main research questions under the null hypothesis using a Fisher permutation test, taking 2,000 permutations of treatment assignment and roll-out exactly as it was implemented in the actual intervention. We hold fixed household eligibility and total caseloads and calculate the exact p-value as the share of Wald / t-statistics that exceeds the one we find in our sample in absolute value.

11. Treatment Effect Heterogeneity

A key goal is to understand treatment effect heterogeneity, i.e. whether the effects of the program are different for different individuals. This is relevant for all questions and estimands outlined above, but most important for the overall program effect (Question 1). To investigate heterogeneity, we will pre-specify *a priori* dimensions of heterogeneity that we are interested in, including:

- gender of the HH head
- gender of the intended LH recipient (potentially interacted with gender of the HH head, to understand within-household allocation of resources)
- dummy for whether the intended LH recipient is above median age

- dummy for whether the intended LH recipient has children
- baseline wealth score of the household
- baseline credit preparedness score of the household
- above/below median baseline consumption of recipient household
- baseline intended track (on-farm, off-farm, wage employment)
- dummy for whether household runs a self-employed off-farm enterprise at baseline
- dummy for having a CF with above-median skill index
- Any household member with a disability
- By whether know or personally has a position of responsibility in kebele/organisation

We estimate heterogeneity by interacting all regressors in each equation with the heterogeneity dimension, and testing whether interactions are significantly different from zero.

For enterprises, we will look at effects i) by sector: agriculture and livestock, manufacturing, services, non-food retail, food retail, ii) by whether the enterprise existed at baseline, iii) by baseline enterprise revenue (relative to other enterprises in their city/camp and sector). For prices: i) by sector: food, livestock, non-food durables, non-food nondurables, services, ii) tradables and non-tradables.

Beyond predefined dimensions of heterogeneity, we intend to employ machine learning methods to identify groups of individuals that have particularly large treatment effects, and characteristics that predict heterogeneity in treatment effects. We note that this is an active area of research and new tools continue to be developed; we expect to employ approaches such as Chernozhukov et al. (2019) and Athey et al. (2019) but will adopt new approaches if they become standard, or offer other desirable properties for our setting.

12. Dynamic effects

While we will pool all data for our main analyses, we are very interested in understanding treatment effect dynamics, and impulse response functions over time. In particular, we will separately analyze the impacts on household outcomes in the short-run (FUP1) and the medium-run (FUP2). Our analysis here follows the main analyses outlined above, though we will interact / stack all outcomes separately for each survey round.

13. Balance and attrition

To assess whether attrition of households between baseline and follow up survey rounds confounds our results, we conduct the following analyses. Let r_{ikw} be an indicator for whether individual i in kebele k , in woreda is observed at baseline but not at any given follow-up round. First, Equations (1a – 4a) estimate whether the magnitude of attrition varies with treatment status for all our main regression specifications, and we follow equations above for our standard errors:

$$r_{ikw} = \alpha_w + \beta T_k + \varepsilon_{ikw} \quad (1a)$$

$$r_{ikw} = \alpha_w + \beta_1 T_k^1 + \beta_2 T_k^2 + \varepsilon_{ikw} \quad (2a)$$

$$r_{ikw} = \alpha_w + \beta_1 T_k + \beta_2 T_k * grant_{ikw} + \varepsilon_{ikw} \quad (3a)$$

$$r_{ikw} = \alpha_w + \beta_1 T_{ikw} + \beta_2 T_{ikw} * cscore_{ikw} + \delta cscore_{ikw} + \beta_3 T_{ikw} * wrank_{ikw} + \delta wrank_{ikw} + \varepsilon_{ikw} \quad (4a)$$

Second, we run balance tests for a) all household surveyed at baseline, and b) restricting the sample to those observed at each follow-up period, including for all primary estimands, all primary outcomes, and our pre-defined dimensions of heterogeneity (listed above):

$$(X_{ic}^{BL} | r_{ikw} = 1) = \alpha_w + \beta T_k + \varepsilon_{ikw} \quad (1b)$$

$$(X_{ic}^{BL} | r_{ikw} = 1) = \alpha_w + \beta_1 T_k^1 + \beta_2 T_k^2 + \varepsilon_{ikw} \quad (2b)$$

$$(X_{ic}^{BL} | r_{ikw} = 1) = \alpha_w + \beta_1 T_k + \beta_2 T_k * grant_{ikw} + \varepsilon_{ikw} \quad (3b)$$

$$(X_{ic}^{BL} | r_{ikw} = 1) = \alpha_w + \beta_1 T_{ikw} + \beta_2 T_{ikw} * cscore_{ikw} + \delta cscore_{ikw} + \beta_3 T_{ikw} * wrank_{ikw} + \delta wrank_{ikw} + \varepsilon_{ikw} \quad (4b)$$

If we find worrying levels of differential attrition, we will adjust for potential bias by bounding our parameter of interest (Lee 2009) and by using a weighted least squares estimator with the inverse probability of selection as weights.

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Appendix

A – Details on Primary Outcome Construction and Secondary Outcomes

List of primary and secondary outcomes. Primary outcomes within the group are bolded.

ITEMS MARKED WITH * ARE PLANNED INCLUSIONS FOR FOLLOW UP 2 SURVEYS. THESE INSTRUMENTS HAVE NOT BEEN COMPLETED YET, AND WE WILL UPDATE THIS PAP ACCORDINGLY WHEN THEY ARE.

A) Outputs / Implementation / Compliance

- 1. Life-skills trainings: total life-skills related training hours received (as reported by households) since the start date of the program (FUP1)**
 - 1.1. Total life-skills related training hours provided (as reported by DA/CFs) since the start date of the program (CF-DA)
 - 1.2. Indicator variable reporting that household head knows any DA in charge of delivering the LH training in this Kebele after the PSNP training program (BAS) (FUP2)
 - 1.3. Indicator variable reporting that household head knows any CF assisting beneficiaries for the LH training after the training program (BAS) (FUP2)
- 2. Business / technical trainings: total business/technical training hours received (as reported by households) since the start date of the program (FUP1)**
 - 2.1. Total business/technical training hours provided (as reported by DA/CFs) since the start date of the program (CF-DA)
 - 2.2. Indicator variable reporting household head knows any DA in charge of delivering the LH training in this Kebele after the PSNP training program (BAS) (FUP2)
 - 2.3. Indicator variable reporting that household head knows any CF assisting beneficiaries for the LH training after the training program (BAS) (FUP2)
- 3. Grant disbursement: total amount of outstanding grants received from any organization since the start of the program. (FUP1)**
 - 3.1. Indicator variable if received a new grant from any organization since the start of the program (as reported by respondent) (FUP1)
- 4. Credit disbursement: total amount of credit outstanding with any party since the start date of the program (FUP1)**
 - 4.1. Total amount of new credit taken out since the start date of the program (FUP1) (BAS)
 - 4.2. Indicator for taking out any new credit above 100 USD since the start date of the program (FUP1)
- 5. Coaching: total hours of group coaching received from a DA/CF in the Kebele (as reported by respondent) (FUP1)**
 - 5.1. Total hours spent on providing coaching (as reported by DA/CFs) (CF-DA)

6. Skills Index: Business Skills Index (composed of 6.1.1 – 6.1.9)

- 6.1.1. Indicator variable if respondent have visited a competitor's business in the last 90 days to see the products they offer (BAS) (FUP2)
- 6.1.2. Indicator variable if attempted to negotiate with a supplier for a lower price on a raw material (BAS) (FUP2)
- 6.1.3. Indicator variable if respondent have kept written business records (BAS) (FUP2)
- 6.1.4. Indicator variable if respondent knows which goods make the most profit (BAS) (FUP2)
- 6.1.5. Indicator variable if household has a target set for sales over the next year (BAS) (FUP2)
- 6.1.6. Indicator variable is household compare their sales to their target at least monthly (BAS) (FUP2)
- 6.1.7. Indicator variable if respondent knows how to calculate profit or loss (BAS) (FUP2)
- 6.1.8. Indicator variable if respondent knows the need of a general saving fund (BAS) (FUP2)
- 6.1.9. Indicator variable if respondent think is better to ask loans from a bank rather than VESAs MFIs RUSACCOs (BAS) (FUP2)

7. Aspirations index:

All items in the 3 dimensions (Income, Assets and Education) (only income for FUP1) are standardized by removing the sample mean and dividing by the standard deviation of the said dimension. (BAS) (FUP1) (FUP2)

8. Business activities: Number of new agricultural, livestock or non-ag business activities started since the start date of the program.

- 8.1. Indicator if household completed any business plans since the start of the program (FUP1)
- 8.2. Indicator if business plan is approved in that kebele (CF-DA)
- 8.3. Number of new agricultural and livestock activities started since the start date of the program. (FUP1) (BAS) (FUP2)
- 8.4. Number of new non-ag business activities started since the start date of the program (FUP1) (BAS) (FUP2)
 - 8.4.1. Indicator if new business had a business plan (FUP1)
- 8.5. Total amount of money invested to start the business since the start of the program (BAS) (FUP2)

B) Household-Level Outcomes

This group of outcomes contains our primary household outcomes. Primary outcomes within the group are bolded.

1. Household Assets (excl. land and housing)

Total value of all household assets (sum of value of all 53 assets) (BAS) (FUP2)

- 1.1. Value of productive assets: Sum of value of 6 types of business assets (BAS) (FUP2).
- 1.2. Value of the business owned by the household (BAS) (FUP2), including the total value of the physical capital stock of business as reported by respondent (BAS) (FUP2)
- 1.3. Value of livestock: Sum of value of all 14 livestock owned (BAS) (FUP2)
- 1.4. Net financial position (savings 1.4.1 – debt 1.4.3)
 - 1.4.1. Total financial savings: Sum of savings account from bank, MFI, employer, store owner, friend or relative (BAS) (FUP2)

- 1.4.2. Total amount contributed to an account on bank, MFI, Employer, or any savings accounts in the last 12 months (BAS) (FUP2)
- 1.4.3. Total debt: sum of outstanding loans from all sources (BAS) (FUP2)
- 1.4.4. Total number of loans taken by any member in the last 12 months (BAS) (FUP2)
- 1.5. Housing value: Total value of monthly rent the household could receive if renting the dwelling. (BAS) (FUP2)
- 1.6. Adequate Housing Index (AHI): Index based on 7 dimensions. 1. Access to water, 2. Access to sanitation. 3. Adequate living space, 4. Durable Material good Structural Quality. 5. Security of Tenure, 6. Access to electricity, 7. Access to clean cooking. All seven dimensions are coded as dummy variables differentiating adequate access (1) and inadequate access (0). Then, we aggregate that index adding respective weights assigned to each adequacy dimension. (Equal weights). The AHI ranges between 0 (highly inadequate housing unit) and 1 (highly adequate housing unit). (BAS) (FUP2)
 - 1.6.1. Indicator variable if household has access to water (BAS) (FUP2)
 - 1.6.2. Indicator variable if household has access to electricity (BAS) (FUP2)
 - 1.6.3. Indicator variable if household has access to sanitation (BAS) (FUP2)

2. Household consumption

Total household consumption expenditure annualized: Food consumption + Expenditure on non-food non-durables + Total Expenditure on durables. (BAS)(FUP) (FUP2)

- 2.1. Food consumption: Total value of food consumption in the last 12 months: For all food categories
 - (i) calculate the aggregated value of consumption as quantity consumed * value of food category
 - (ii) add the value of food consumed from own-production and gifts. (BAS) (FUP2)
 - 2.1.1. Food expenditure: Total value of purchases of all food categories weekly * 52 (BAS) (FUP2)
- 2.2. Expenditure on non-food in the last 12 months
 - 2.2.1. Expenditure on non-food non-durables: Total non-food expenditures on consumables (BAS) (FUP2) (this includes soap, transport, cigarettes, soap, water, education, medical, etc.)
 - 2.2.2. Expenditure on durables: Total value of non-food expenditures on durables (BAS) (FUP2) (this includes clothes, furniture, building materials, etc.)
- 2.3. Food Insecurity Experience Scale (FIES) (BAS) (FUP2)
- 2.4. Dietary diversity score: Household Dietary Diversity Score (HDDS) (BAS) (FUP2)

3. Household income

Total household income annualized: Household income from agriculture + Household income from livestock + Household income from non-ag business + Household income from employment + Net value transfers + Rental income. (BAS) (END)

- 3.1. Household income from agriculture: Total value of production sold = Quantity sold * price per quantity (BAS)
- 3.2. Household income from livestock (as reported by household) (BAS) (FUP1)
 - 3.2.1. Household income from livestock (calculated 3.2.2 + 3.2.3):
 - 3.2.2. Total value of livestock products sold = Quantity sold of product * Sale price of the product. (BAS) (This refers to meat, milk, eggs, etc.)
 - 3.2.3. Net income from buying and selling livestock in the last 12 months (BAS)(FUP1)
- 3.3. Household income from non-ag business, annualized: Sum of income from business (BAS)

- 3.4. Household income from employment: Sum of income from paid activities (BAS)
- 3.5. **Net** value of transfers: Total value of private transfers received – Total value of private transfers given (BAS)(FUP1) (FUP2)
 - 3.5.1. Value of private transfers received: Sum of value of private transfers from remittances from friends/relatives (BAS) (FUP2)
 - 3.5.2. Value of PSNS transfers received: Value of PSNP transfer. (BAS)(FUP1)
 - 3.5.3. Value of Permanent Direct Support payments in the last 12 months (BAS) (FUP2)
 - 3.5.4. Value of other government transfers received: Value of other government transfers received (BAS) (FUP2)
 - 3.5.5. Value of private transfers given: Sum of value of private transfers given (BAS)(FUP1)
 - 3.5.6. Value of remittances received from temporarily absent HH members (BAS) (FUP2)
- 3.6. Rental Income: Total income from renting out any buildings, land, or equipment (BAS) (FUP2)

- 4. Household revenue from Economic Activities: Total household revenue / business activity, annualized: Total revenue from agriculture + Total revenue from livestock + Total revenue from business (BAS)(FUP1)(FUP2)**
 - 4.1. Revenue from household agriculture (BAS)(FUP1) (FUP2)
 - 4.2. Revenue from selling livestock & livestock products (BAS)(FUP1) (FUP2)
 - 4.3. Revenue of businesses run by the household (BAS)(FUP1) (FUP2)
 - 4.4. Household expenditure on inputs and investment in the last 12 months
 - 4.4.1. Expenditure on agricultural inputs (land, labor, irrigation, seeds, insurance, land, etc.) (BAS)(FUP2)
 - 4.4.2. Expenditure on livestock inputs (livestock, labor, feed, insurance, medicine, etc.) (BAS)(FUP2)
 - 4.4.3. Expenditure on non-ag businesses (labor, capital/investment, intermediate inputs/inventories, operating costs, etc.) (BAS)(FUP2)
 - 4.5. Hours of labor hired in the last 7 days for household agriculture, livestock, and non-ag businesses (BAS)(FUP2)

- 5. Labor Supply: Household hours worked on productive activities, weekly: Household hours worked on livestock + Household hours worked on Agriculture + Household hours worked on own business + Hours worked on a paid job (BAS)(FUP2)**
 - 5.1. Household hours worked in livestock: Sum of total hours members of the household work on livestock related activities during the las 7 days (BAS)(FUP2)
 - 5.2. Household hours worked in agriculture: Total hours members worked during Belg 2014 + Total hours worked during Meher 2015 during the las 7 days (BAS)(FUP2)
 - 5.3. Household hours worked on a paid job: Sum of total hours worked in the household from working age 18-65 in a paid activity during the las 7 days (BAS)(FUP2)
 - 5.4. Household hours worked in non-ag business: Total hours the decision-maker of business works in the last 7 days + Total hours other household members worked on the business in the last 7 days (BAS)(FUP2)
 - 5.5. Share of adult household members that are unemployed. Total number of adult members unemployed / Number of adult members (BAS)(FUP2)

- 5.5.1. Total hours household adults spent looking for jobs: Total hours of all members spent searching for jobs, applying for jobs or interviews in the last 7 days (BAS)(FUP2)
- 5.6. Total hours households' adults spend working on PSNP public works in the last 7 days (BAS)(FUP2)

6. Physical Health: Index composed of self-reported level of health, number of days missed due to poor health, share of members visiting health facility, share of members with any disability (BAS)(FUP2)

- 6.1. Self-reported level of health: Share of members that reported good health. Scale of self-reported health where 1=very poor and 5=very good. Answers 4 or 5. (BAS)(FUP2)
- 6.2. Number of days missed due to poor health: Average of days across members of the household that miss regular activities because of illness or injury in the last 30 days. (BAS)(FUP2)
- 6.3. Share of members that visited a health facility in the last 30 days. (BAS)(FUP2)
- 6.4. Share of household members with any disability. (BAS)(FUP2)
- 6.5. Share of household members suffered any disease or injury in the last 30 days. (BAS)(FUP2)

7. Mental Health Index: Index composed of CESD-10 scale, Rosenthal Self-esteem scale, Cantril Ladder, and Locus Control Scale (BAS)(FUP2)

- 7.1. Depression: CESD-10 scale: 10 item scale. Each item is answer by how often respondent felt a certain way. Total score is calculated by totaling all items scored after reversing the positive mood numbers (item 5 and 8). Continuous measure. Higher values indicate greater degrees of depressed mood. (BAS)(FUP2)
- 7.2. Self-esteem: Rosenthal self-esteem scale (BAS)(FUP2). 10 item scale that measure global self-worth. All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree. The items are then scored and summed all together reversing items 2,5,6,8,9. Higher scores indicate higher self-esteem. Continuous scale.
- 7.3. Happiness: Cantril Ladder: Scale from 1 to 10 with higher values reflecting the best possible life for them. (BAS)(FUP2)
 - 7.3.1. Happiness level as reported by respondent: Scoring from 1 to 4 from not happy as 1 and very happy as 4, as answered by respondent. (BAS)(FUP2)
- 7.4. Locus of Control: Locus of Control scale: All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree (BAS)(FUP2). High values indicate high internal locus.

8. Social Capital Index: Index composed of Social trust index, Community organizations that the household is part of, number of close connection, and conflict index (BAS)(FUP2)

- 8.1. Social trust index: All trust items recoded so that trust completely and trust somewhat is coded as 1 and answers reflecting not trust are coded as 0. The final score is the average of all items. (Items: Bank, Family, Neighbors, People outside and inside kebele, Woreda Officials, CF, Das) (BAS)(FUP2)
- 8.2. Number of community organizations the household is a part of: This includes churches, business, and self-help organizations, Rusacco, vsia, mfi, eqqub, iddir. (BAS)(FUP2)
- 8.3. Number of positions of responsibility held by household members:

8.3.1. Total number of organizations in which the household head hold an official position.
(BAS)(FUP2)

8.3.2. Number of positions of responsibility held in kebele or organization within the household
(BAS)(FUP2)

8.4. Total number of close connections: Relatives + Friends

8.4.1. Total number of close relatives: Total number of close relatives (BAS)(FUP2)

8.4.2. Total number of good or close friends: Total number of close friends + total number of good friends (excluding relatives) (BAS)(FUP2)

8.5. Average wealth of good or close friends: Based on availability of matching close connections to our own data. (BAS)(FUP2)

8.6. Conflict Index*

8.6.1. Conflict attitudes*

8.6.2. Conflict and crime experience*

8.6.3. Conflict participation*

9. Child wellbeing index: Index composed of children's schooling index and children's health index (BAS)(FUP2)

9.1. Children's schooling index

9.1.1. Proportion of school-aged children in school: Number of school-aged children (6-16) in the household attending school / Total number of school-aged children in the household
(BAS)(FUP2)

9.1.2. Share of school-aged children that missed school in the past two weeks (BAS)(FUP2)

9.1.3. Share of children that can read and write (BAS)(FUP2)

9.1.4. Child investment*: education expenditure, childcare, home environment index*

9.2. Children's health

9.2.1. Self-reported child health: Scale of self-reported child health where 1=very poor and 5=very good (BAS)(FUP2)

9.2.2. Under-5 mortality: Indicator variable if household suffer a shock of the death of a child under 5 including miscarriage or stillbirth in the past 12 months (BAS)(FUP2)

9.2.3. Ante- and post-natal care, including immunization*

9.2.4. Child food security index*

9.2.5. Anthropometrics*

10. Female Empowerment Index: Index composed of decision making within the household index, violence and conflict index, attitude index, and fertility control (BAS)(FUP2)

10.1. Decision making within the household:

10.1.1. Indicator variable if women participate in decisions related to health care, money, and purchases in the household (BAS)(FUP2)

10.1.2. Indicator variable of control on production decisions*

10.1.3. Indicator variable of control on decisions on children education (if child in household) *

10.1.4. Gender norms*

10.2. Violence and conflict*

10.3. Attitudes*

- 10.3.1. Justifiability of domestic violence: Indicator variable if respondent believe a husband is justified in beating his wife (BAS)(FUP2)
- 10.4. Fertility Control by Women Index
 - 10.4.1. Difference between **number** of children they would choose to have, and the number of children women have. (BAS)(FUP2)
 - 10.4.2. Indicator variable if husband wants same number of children as spouse (BAS)(FUP2)
 - 10.4.3. Indicator variable is women use any form of contraception if not wanting anymore kids. (BAS)(FUP2)
- 10.5. Number of pregnancies since Baseline: Number of pregnancies since Baseline (Note: for male respondents, this is the number of pregnancies of all their partners) (BAS)(FUP2)
- 10.6. Mental health indicators for women in HH (Self-esteem, locus of control, etc.) *
- 10.7. Female mobility*

C) Spillovers and Local Economic **Activity**

A lot of this analysis is inspired by and will follow Egger et al. (2022).

1. Output prices

Output price index expenditure weighted. Aggregate (Stone) price index: $p_{mt} = \sum_j \omega_j \log p_{mjt}$, where p_{mt} is the median price in market m for good j in month t based on quotes collected from three vendors. The log-prices are weighted by household expenditure, where ω_j are the expenditure shares for good j from the official Ethiopian CPI. Alternatively, we will also use expenditure weights obtained from our own consumption surveys (at the category level) and assign weights within category using the 2021 Ethiopian LSMS.

- 1.1. Output price index by sector (MKT): We will separately construct sectoral price indices, where sectors are defined in Table C1.
- 1.2. Output price index by tradability (MKT): We will separately construct sectoral price indices, where sectors are defined in Table C1. A secondary approach to defining tradability is the local labor content of products, which we will define as the labor + profit share of enterprises selling this good, from our household, enterprises, and market seller surveys.

2. Input prices: Wages

- 2.1. Wages: Average wage earned by employed members of the household (BAS)(FUP2)
 - 2.1.1. Average wage paid by enterprises (ENT)
- 2.2. Interest rates: Average interest rate paid on outstanding loans (BAS)(FUP2)
- 2.3. Rental rates: Average rental payment for house and land (as a fraction of asset value) (BAS)(FUP2)

3. GDP: Expenditure

- 3.1. Consumption (BAS)(FUP2)
- 3.2. Enterprise investment (ENT)
- 3.3. Net Exports (FUP2, ENT, MKT)
 - 3.3.1. Exports (sales to outside the kebele)
 - 3.3.2. Imports (imports of intermediate goods from outside the kebele + purchases of household goods from outside the kebele)

4. GDP: Income

- 4.1. Total wage income form households (BAS)(FUP2)
- 4.2. Total rental payments by businesses and households (BAS)(FUP2)
- 4.3. Total enterprise profits (ag + livestock + non-ag) (BAS)(FUP2) (ENT)
- 4.4. Net income from abroad (remittances + net government transfers) (BAS)(FUP2)

5. Agglomeration

- 5.1. **Number of enterprises within the kebele (ENT), including enterprises operating from the household (FUP2), in markets (MKT), and from fixed locations (ENT)**
 - 5.1.1. Number of enterprises operated by households (FUP1)(FUP2)
 - 5.1.2. Number of sellers at kebele weekly market (MKT)
 - 5.1.3. Number of workers in enterprises (ENT)
- 5.2. Local revenue: household enterprises, market enterprises, fixed enterprises (BAS)(MKT)(ENT)
 - 5.2.1. Revenue of enterprises operated by households (FUP2)
 - 5.2.2. Revenue of sellers at kebele weekly market (MKT)
 - 5.2.3. Revenue of workers in enterprises (ENT)
- 5.3. Local costs of household enterprises: Total wage + rental costs and equipment + interest payments + expenditures on supplies and materials + average monthly utility costs + average monthly taxes and fees (BAS) (FUP2)
- 5.4. Herfindahl index of enterprises within the kebele (BAS)(MKT)(ENT): Calculate an index for each sector and average the indices with weights according to share of total revenue by sector. We will define the market each enterprise competes in as the entire kebele / main weekly market.
 - 5.4.1. Herfindahl index for sellers at the kebele weekly market (MKT)
 - 5.4.2. Distance to the enterprise's nearest competitor: Distance in Km to the enterprise's closest competitor (ENT)
- 5.5. Product availability / diversity: Share of products that are available at the kebele weekly market (MKT)

6. Migration: Net change in number of household member since Baseline: Number of household members currently in household – number of household members as of baseline date (BAS)(FUP2)

- 6.1. Share of household members who were temporarily absent/migrated in the last 12 months. (BAS) (FUP2)
 - 6.1.1. Total amount of remittances received from temporary migration. (BAS) (FUP2)
 - 6.1.2. Average distance of household members who were temporarily absent. (BAS) (FUP2)
 - 6.1.3. Average number of weeks of temporary absent of a member (BAS) (FUP2)

B – Survey Instruments

B1. Baseline Survey Instrument

B2. Midline Household Follow-up Survey Instrument

B3. Midline Price Survey Instrument

B4. Midline Market Activity Instrument

C - List of Products and Services

PRODUCT	UNIT	SECTOR	TRADABLE?
CEREALS			
Maize grain	1 Kg	food	YES
Rice local	1 Kg	food	YES
Finger millet	1 Kg	food	YES
Sorghum	1 Kg	food	YES
Bread wheat (ye dabo sinde)	1 Kg	food	YES
Food barley	1 Kg	food	YES
Teff red/mixed	1 Kg	food	YES
Oats	1 Kg	food	YES
Pasta, Macaroni/Maccheroni		food	YES
ROOTS, TUBERS			
Kocho	1 Kg	food	YES
Potato	1 Kg	food	YES
Bula of any type	1 Kg	food	YES
NUTS AND PULSES			
Bean, brown	1 Kg	food	YES
Groundnut	1 Kg	food	YES
Cowpea		food	YES
Horse beans (medium grain)	1 Kg	food	YES
Haricot Beans	1 Kg	food	YES
Chickpeas	1 Kg	food	YES
Pees Split		food	YES
Lentils (whole)	1 Kg	food	YES
Linseed	1 Kg	food	YES
Sesame	1 Kg	food	YES
Niger Seed	1 Kg	food	YES
Soya beans (whole)	1 Kg	food	YES
VEGETABLES			
Cabbage	1 Kg	food	YES
Onion	1 Kg	food	YES
Garlic	1 Kg	food	YES
Tomato	1 Kg	food	YES
Ethiopian Kale	1 Kg	food	YES
Green pepper		food	YES
Carrot	1 Kg	food	YES
Pumpking indigenous	1 Kg	food	YES
FRUIT			

Mango	1 Kg	food	YES
Papaya	1 Kg	food	YES
Banana	1 Kg	food	YES
Orange local	1 Kg	food	YES
Lemon	1 Kg	food	YES
Avocado	1 Kg	food	YES
MEAT, POULTRY, EGGS		food	YES
Eggs/indigenous	1 Dozen	food	YES
Fish	1 Kg	food	YES
Beef	1 Kg	food	YES
Goat meat	1 Kg	food	YES
Chicken		food	YES
Sardines imported	125 gm	food	YES
Sheep meat		food	YES
DAIRY AND RELATED PRODUCTS			
Fresh milk/unpasteurized	1 Lt	food	YES
Powdered milk	450 gm	food	YES
Butter Unrefined	1 Kg	food	YES
Cottage cheese	1 Kg	food	YES
Infant feeding formula (for bottle)		food	YES
SUGAR, HONEY, OTHERS			
Sugar	1 Kg	food	YES
Tea leaves	100 gr	food	YES
Raw Coffee	1 Kg	food	YES
Sugar cane		food	YES
Honey	1 Kg	food	YES
Cooking oil (Niger/palm/soybean oil)		food	YES
Candy		food	YES
Enjera (teff mixed)	325 gm	food	YES
Bread (bakery)	350 gm	food	YES
BEVERAGES			
Soft drinks (Coca-cola, Fanta, Sprite, etc)	300 cc	food	YES
Cup of coffee		food	YES
Cup of tea		food	YES
Bottled water	1l any brand	food	YES
Beer any brand (bottled, canned, draft)	300 cc	food	YES
Tella	1 Lt	food	YES
Tej	1 Lt	food	YES
Kineto		food	YES
Caticalla (local liquor prepared at home)	1 Lt	food	YES
Mango juice		food	YES
Gin (local)	900 cc	food	YES
Nyala (cigarette)	1 packet	food	YES
Chat (khat)	1 Kg	food	YES
SPICES, FLAVOURINGS			
Salt (unpacked)	1 Kg	food	YES
Yeast, baking powder,	350 gm	food	YES
Tomato sauce	1 bottle	food	YES
LIVESTOCK			
Camel		livestock	YES
Oxen (4 years and above)		livestock	YES
Cow (4 years and above)		livestock	YES
Heifers (2-4 years)		livestock	YES
Calves		livestock	YES

Sheep (10-15 Kg)		livestock	YES
Goats (10-15Kg)		livestock	YES
Donkeys		livestock	YES
Horse		livestock	YES
Mule		livestock	YES
Poultry (chicken)		livestock	YES
Beehive (kefo)-having bees		livestock	YES
CLOTHING			
‘Kashmir’		non-food durables	YES
Shirts (Long Sleeved Imported) For Adult Women	1 unit	non-food durables	YES
Jeans Trouser Women (Imported)	1 pair	non-food durables	YES
Mekermia / Yeaderye Netela Mutsen		non-food durables	YES
FOOTWEAR			
Sandals Plastic Adult	1 pair	non-food durables	YES
Shoes Leather for men (Local)	1 pair	non-food durables	YES
FURNITURE			
Beds	120cm	non-food durables	YES
Mattress-Sponge	120cm x 16cm	non-food durables	YES
Blanket - (Local/Debre Birhan)	160cm x 220cm	non-food durables	YES
Bed Sheets Non-Patterned	160cm x 250cm	non-food durables	YES
Plastic Mats Used to Cover Floor	1 meter	non-food durables	YES
Household utensils		non-food durables	YES
Cooking Pan (Medium Size)	1 unit	non-food durables	YES
Kettles (2 Lt)	1 unit	non-food durables	YES
Tray medium (stainless steel): No 555/40 China	1 unit	non-food durables	YES
Electric mitad		non-food durables	YES
Jerrycan	20 Litres	non-food durables	YES
JEWELRY			
Umbrella For Women (Imported)		non-food durables	YES
Flashlight (Plastic)	2 big dry cells	non-food durables	YES
HYGIENE			
Laundry Soaps, Local	200 gram	non-food non durables	YES
Detergent Soaps, Local	80 gram	non-food non durables	YES
Toilet Soaps	80 gram	non-food non durables	YES
Zenit/Samra (Liquid Hair Oil)	330 cc	non-food non durables	YES
ELECTRICITY/LIGHT			
Dry Cells (Big)		non-food durables	YES
Candles (Big)		non-food non-durables	YES
FUEL			
Charcoal		non-food non-durables	YES
Firewood (Chopped)		non-food non-durables	YES
Kubet (Dung Cake)		non-food non-durables	YES
OTHER NON-DURABLE			
Exercise Books 50 Page (Radical or Sinarline)		non-food durables	YES
BUILDING MATERIAL			
Cement (Local), PPC	50 Kg	manufacturing	YES
Corrugated Iron Sheets (.2mm)		manufacturing	YES
Nails with cup	1 Lg	manufacturing	YES
SERVICES			
Milling	1kg of teff	services	NO
Fixing a small hole in a dress (tailor)		services	NO

Fixing a puncture in a bike tire		services	NO
Women's hair braiding		services	NO
Men's haircut		services	NO
Mobile phone charging	once	services	NO
Phone call (local)	1 min	services	NO
Ox-plough rental	Birr/1 day/pair of oxen	services	NO
Donkey cart	Birr/km/person	services	NO
Transportation (taxi/bajaj)	Birr/km/person	services	NO
Loading and unloading of grains	Birr/quintal	services	NO