2019년 제10차 콜로키움
October 11, 2019

Role of Social Enterprises to overcome Food Insecurity: Evidence from East *Shoa* Zone, Ethiopia.
식량 불안을 극복하기위한 사회적 기업의 역할:
에티오피아 East *Shoa* Zone에서의 증거

에세투 테페라 베케레 (Eshetu Tefera Bekele)

목차 (Contents)

1. Background and Justification

1.1. Introduction

✓ Agriculture has been the main source of livelihoods for LDCs
✓ Provides employment opportunities:
  ☛ 70% of the rural population
  ☛ largest share of GDP (Abegaz, 2017; FAO, 2017).

☛ Both exogenous and endogenous shocks affects its productivity,
☛ These shocks arise from climate changes as well as man-made calamities.
☛ In consequence it has resulted in:
  - *lower agricultural outputs putting rural people at greater risks of food insecuritie*s.

In LDCs, the agricultural sector is characterized by:
✓ Traditional farming technologies
✓ Poor infrastructural Development
✓ Poor Productivity
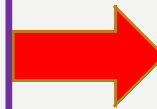
➢ Population growth has been increasing
➢ In the twenty-first century, this gap has reached intolerable levels:
  ☛ **securing food supply** to the most rural destitute is the most challenging part of social welfare objectives (FAO, 2017).

...Cond...

- ➢ Globally, food insecurity status is increasing.
- ➢ The absolute number of undernourished people has increased from:
- ☛ 804 million in 2016 to 821 million in 2017 FAO (2018)

☛SSA countries are the most vulnerable groups to food insecurity:
- ☛*Poor agricultural production* and *poverty* are taken as the major factor.

As part of the SSA countries, the FDRE:
- ✓ 100 million people.
- ✓ In 2015, total GDP, 61.54 billion USD
- ✓ GDP per capital, 619.1 USD.
- ✓ Agriculture dominates the Economy:
    - 46.6 % of the total GDP,
    - employs 80 % of the population and
    - 60% of Exports (World Bank, 2015).
- ✓ Service Sector43.4% and
- ✓ Industry accounts 10% of the GDP.
- ✓ Ethiopia is one of the most food-insecure and famine affected countries.

- ➢ A large portion of the country's population has been affected by chronic and transitory food insecurity (ADB, 2014).
- ➢ The food security situation in Ethiopia is highly linked to **recurrent drought** (Mohamed, 2017a).

...cond...

- ☛ More than 41% of the Ethiopian population lives below the poverty line
- ☛ Above 31 million people are undernourished. (Mohamed, 2017a).
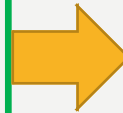
- ➤ To address food insecurity problem, the government of Ethiopia:
  - ☛ is taking a strong leadership role with programs that meet the varying needs of vulnerable households.
- ✓ The expected result is not achieved.
- ✓ This situation is also true in the *Oromiya* Regional State, East *Shoa* Zone.
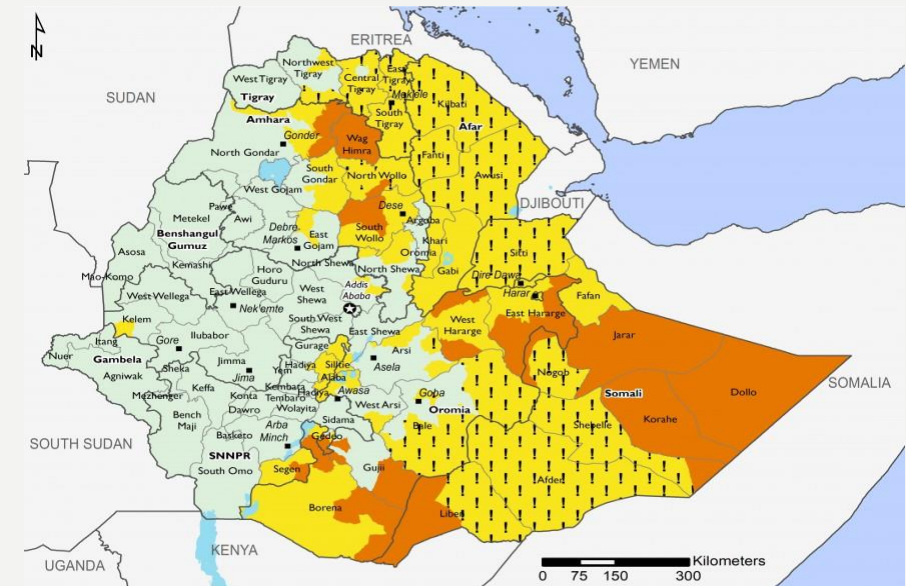
...Cond...

☛In view of this, social enterprises have significant contributions:
- ✓ to *empower their members economically and socially*

✓ Empirical evidences revealed that, in the study area:
- ☛ there is no adequate research held so far regarding:
  - the causes of food insecurity,
  - the roles of social enterprises and
  - coping strategies of the community.
- ☛ Moreover, knowledge about the roles of social enterprises to overcome food insecurity is also limited.

1.2. Purpose of the Study

Major objective:
☞ to assess the role of social enterprises to overcome food insecurity in *East Shoa* Zone, Ethiopia.
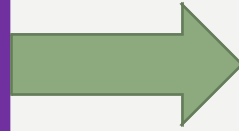
Specific objectives:
1. To analyze the major causes of food insecurity in the study area,
2. To identify the roles of social enterprises to overcome food insecurity,
3. To assess coping strategies of households' to overcome food insecurity and suggest policy options to solve the problem.
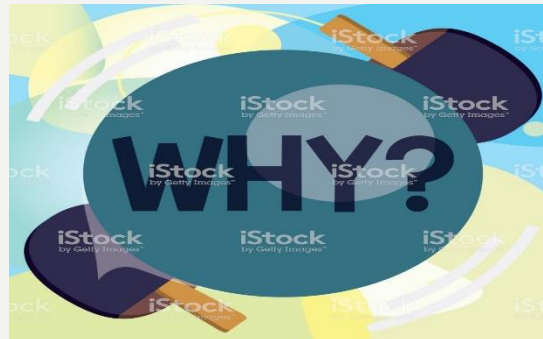
1.3. Scope of the Study

- This study is limited to address the stated objectives
- Since in Ethiopia, there is no a separate national social enterprise ministry, cooperatives are playing the roles of social enterprises.
- Identifying the roles of social enterprises to overcome food insecurity typically focuses on:
    - ☛the roles played by cooperatives to overcome food insecurity.

1.4. Significance of the Study

- ✓ Help policy makers and development practitioners to formulate a new policy and strategy to ensure food security.
- ✓ Provide insights for Governments of LDCs to incorporate the promotion of social enterprises in their development agenda.
- ✓ Findings of this study will also give insight and used as reference materials for researchers to conduct further investigation in other areas.

2. Definition of Basic Concepts

2.1. Basic Concepts of Food Security

✓ A situation where all people:

at all times, *have physical and economic access to sufficient, safe, and nutritious food* that meets their dietary needs and food preferences for an active and healthy life is known as food security (FAO, 2015).

☞ *Food Access, Food Availability, Food Utilization and Sustainability*

☞ **Food insecurity, in contrast, is viewed as the denial of the above rights either at household, individual, or community levels**

2.2. Basic Concepts of Social Enterprises

A social enterprise is defined as:
☞ an organization that exists for a social purpose and engages in trading to fulfill its mission, using market-based techniques to achieve social ends (Barraket, Collyer, O'Connor, & Anderson, 2010).
☞ *Integrating social aims with profit making*

✓ SE selling goods and services, reinvests the money they make back into the local community.
☞ *When a social enterprise benefits, society benefits*.

✓ Social entrepreneurship is entrepreneurship with a social goal and objectives
✓ *Social entrepreneurship is regarded as a more innovative way of addressing social needs by developing new and creative solutions* (Weerawardena & Mort, 2006).
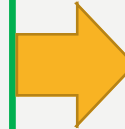
✓ *Social entrepreneurs are innovators or change transformers.*
✓ *Today the success of organizations are not only judged by the financial performance or the quality of their products or services, rather they are being evaluated:*
   - on the basis of their impact in solving social and environmental problems of the society
   - They are evaluated on their impact to transform society from business enterprises to social enterprises.

www.shutterstock.com • 452786350

10

3. Research Model and Hypotheses ((연구의 모형과 가설)

3.1. Research Model (연구의 모형)
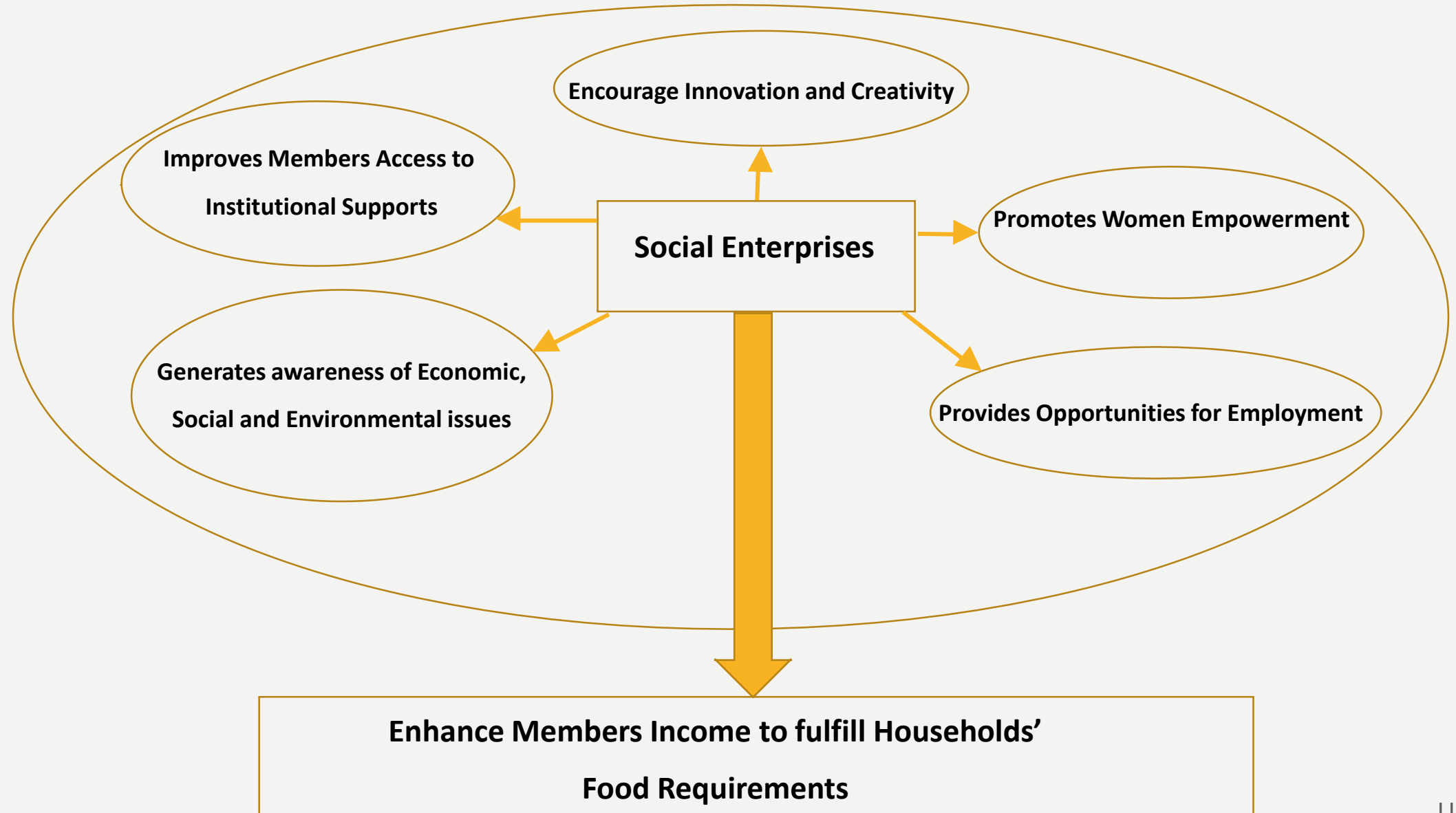
3.2. Hypotheses (가설)

H1: Various socioeconomic, household, institutional, climatic and personal variables affect household food Security.

➡️

Household food security (HHFS):
☛is a ***dichotomous dependent variable*** in the logit model taking a value of 1, if a household is food secure and 0, otherwise.

✔ Information to identify food secured and food insecure group is obtained by comparing:
  ☛ the total food calorie available for consumption in the household per adult equivalent (2550 kcal)
  (Mohamed, 2017a); (WFP and CSA, 2014).

➡️

✔ ***Household beyond this threshold is said to be food secured, otherwise not.***

Independent variables

N0	Hypothesized Independent Variables	Variable Type	Expected Sign
1	Educational status (**H1a**)	Dummy	+
2	**Family Size (H1b**)	Continuous	-
3	**Distance from market centers (H1c)**	Continuous	-
4	Perception on achievement motivation (**H1d**)	Dummy	+
5	Active participation in cooperatives affairs (**H1e**)	Dummy	+
6	Size of cultivated land (**H1f**)	Continuous	+
7	Access to Irrigation (**H1g**)	Dummy	+
8	Access to credit (**H1h**)	Dummy	+
9	Off-farm income (**H1i**)	Dummy	+
10	**Noticed Frequent drought (H1j)**	Dummy	-
11	**Noticed frequent flood occurrence (H1k)**	Dummy	-
12	Total Annual Income (**H1l**)	Continuous	+
13	Availability of other supporting organizations (**H1m**)	Dummy	+
14	Use of agricultural inputs (**H1n**)	Dummy	+
15	Access to Agricultural Extension Service (**H1o**)	Dummy	+

Hypotheses 2: After joining multipurpose agricultural cooperatives, households'
Income has been improved to ensure food security

The contribution of cooperatives to ensure food security is analyzed using a multiple regression model, by taking:
"Income" as a dependent variable as a function of:

1. Membership Period

   ☛ *H2a: The longer the membership period households' have in their cooperatives, the better the income to ensure food security.*

2. Access to Agricultural Inputs

   ☛ *H2b: By getting agricultural inputs through their cooperatives, households' income have been improved to ensure food security.*

3. Access to credit

   ☛ *H2c: By getting access to credit through their cooperatives, households' income have been improved to ensure food security.*

4. Access to extension advisory services

   ☛*H2d: By getting access to extension advisory services through their cooperatives, households' income have been improved to ensure food security.*

5. Dividend Payment

   ☛*H2e: By getting access to dividend payment through their cooperatives, households' income have been improved to ensure food security.*

6. Employment opportunity

   ☛*H2f: By getting access to employment opportunity through their cooperatives, households' income have been improved to ensure food security.*

7. Women empowerment

   ☛*H2g: Because of the cooperatives, women are empowered economically to ensure food security.*

4. Research Methods

4.1. Description of the Study Area

- ✓ East *Shoa* zone is one of the 20 zones in the *Oromiya* region, Ethiopia.
- ✓ 12 districts found in the Zone
- ✓ Three districts (*Boset, Fentale and Ziway*) food insecure districts
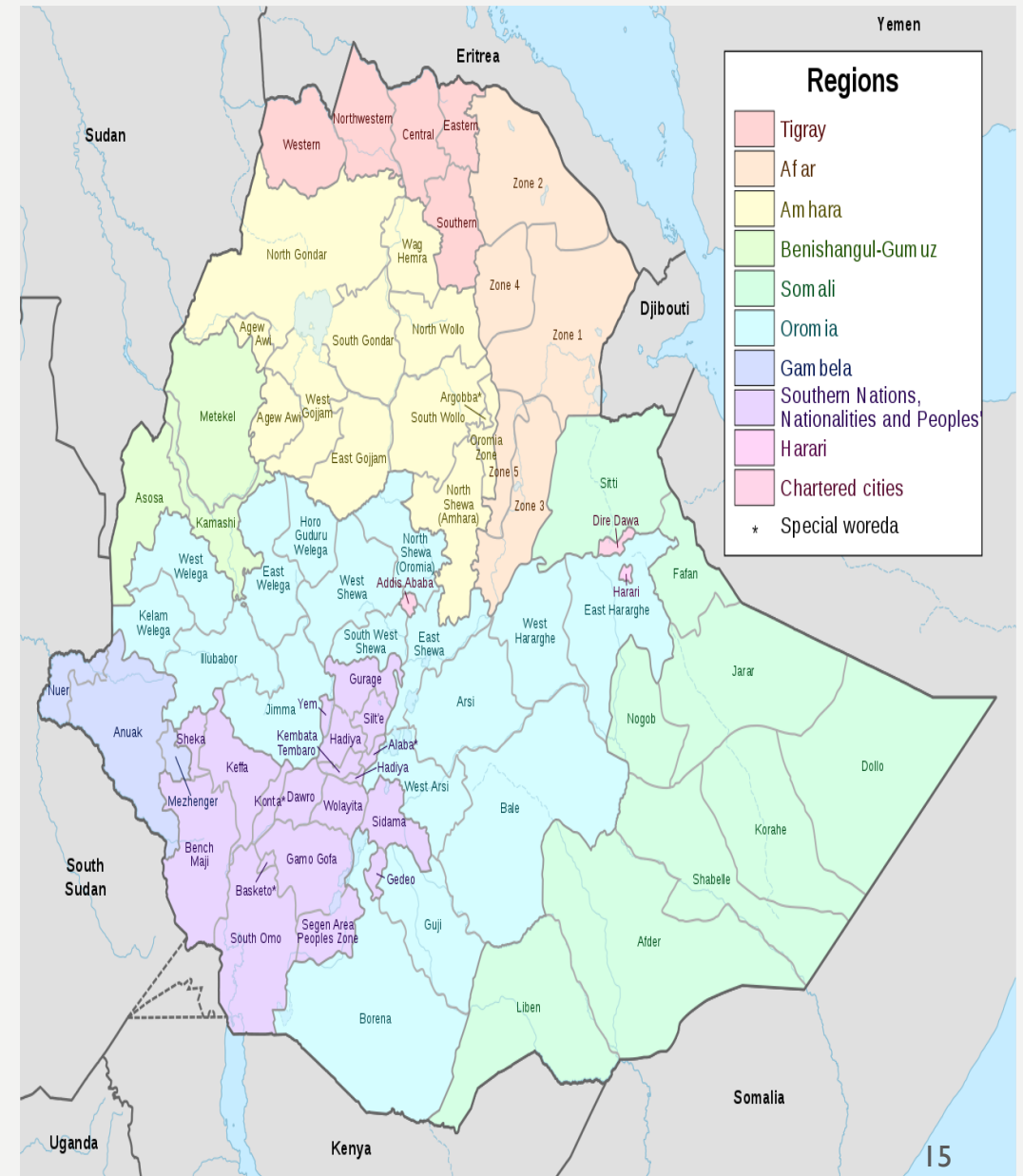
4.2. Methods of Data Collection

☞Both qualitative and quantitative types of data was collected from primary and secondary sources.
Primary data:

☞Preparing semi-structured questionnaire and checklists,
☞ Sample respondents interview
☞ Participatory focus group discussions

Secondary data:
☞Collected from published and unpublished sources
✓ Success story of countries in reducing hunger is reviewed as a lesson.
✓ The experience of Korea in the development of Social enterprises was reviewed as a lesson.
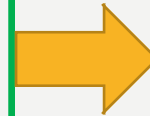
4.3. Sampling
✓ Three food insecure districts were purposively selected.
✓ The list was stratified in to two groups (food secure and insecure).
✓ Sample taken from each group were selected randomly using the method of sampling with PPS.
✓ 400 sample households were used for this study (160 from food secure group and 240 from food insecure group).

4.4. Method of Data Analysis

✓ Descriptive Statistics (Percentage, Mean, SD)
✓ Econometric Model (logit model)
✓ Test Analysis (t-test and Chi-square test)
✓ Multiple Regression Model
✓ Qualitative Analytical tools
☞ SPSS version 23

5. Research Results

5.1. Major Causes of Food Insecurity in the Study Area

5.1.1. Descriptive Analysis (Means of continuous explanatory variables)

Variables	Total Sample (n=400)		Food Secure Group (n=160)		Food Insecure Group (n=240)		T-Value
	Mean	**St.Dv.**	**Mean**	**St.Dv.**	**Mean**	**St.Dv.**	
Family Size	6.12	2.19	**5.64**	2.21	**6.41**	2.14	-1.974*
Distance from market centers (km)	2.25	1.19	**1.5**	1.10	**3**	1.33	2.184**
Size of cultivated land (ha)	1.15	0.86	**1.44**	1.09	**0.97**	0.61	3.151***
Total annual income (ETB)	8454.66	9826.60	**12711.11**	13191.88	**4198.21**	4287.48	9.865***

***.** and * significant at 1%, 5% and 10% probability levels respectively. 1USD=28.30 Ethiopian Birr (ETB).

Description of Discrete Explanatory Variables

Variables	Score	Food Secure (n=160)		Food Insecure (n=240)		Total Sample (n=400)		Chi-square
		No	%	No	%	No	%	
Education	1(educated)	100	62.5	120	50	220	55	5.481**
	0(uneducated)	60	37.5	120	50	180	45	
Perception on achievement motivation	1(Higher AM)	110	68.75	140	58.33	250	62.5	5.492**
	0(Lower AM)	50	31.25	100	41.67	150	37.5	
Active Participation in Coop. affairs	1 (participant)	60	37.5	95	39.58	155	38.75	0.04ns
	0 (Non participant)	100	62.5	145	60.42	245	61.25	
Access to irrigation	1 (access to irrigation)	20	12.5	13	5.42	33	8.25	7.185*
	0 (no access)	140	87.5	227	94.58	367	91.75	
Access to Credit	1 (access to credit)	80	50	60	25	140	35	8.438***
	0 (no access to credit)	80	50	180	78	260	65	
Off-farm income	1 (off-farm income)	110	68.75	102	42.5	212	53	6.728***
	0 (no off-farm income)	50	31.25	138	57.5	188	47	
Noticed frequent drought	1 (noticed drought)	150	93.75	220	91.67	370	92.5	0.03ns
	0 (never)	10	6.25	20	8.33	30	7.5	
Noticed frequent flood	1(noticed flood)	50	31.25	75	31.25	125	31.25	0.01ns
	0 (never)	110	68.75	165	68.75	275	68.75	
Other supporting organizations	1 (getting support)	80	50	120	50	200	50	0.02ns
	0 (never)	80	50	120	50	200	50	
Use of Ag. inputs	1 (use inputs)	112	70	98	40.83	210	52.5	6.638***
	0 (never)	48	30	142	59.16	190	47.5	
Access to agricultural extension service	1 (yes)	108	67.5	116	48.33	224	56	6.828***
	0 (no)	52	32.5	124	51.67	176	44	

5.1.2. Econometric Results

Multicollinearity test
✓ Variance Inflation Factor (VIF)
✓ Correlation coefficients

→

✓ For association of continuous Independent Variables
✓ For dummy variables

Variable inflation factor for continuous explanatory variables

Variables	Tolerance (R^2_i)	Variance Inflation Factors (VIF)
Family Size	0.788	1.268
Distance from Market Centers	0.742	1.347
Size of cultivated land	0.624	1.603
Total annual income	0.869	1.151

Correlation coefficients for dummy explanatory variables

Variables	Edu	Mot	Part	Irri	Credit	Off-farm	Drought	Flood	Other	Inputs	Extn
Education	1	0.160	0.084	0.117	0.129	0.152	0.116	0.142	0.151	0.162	0.171
Motivation		1	0.091	0.266	0.058	0.304	0.256	0.141	0.152	0.161	0.166
Participation			1	0.285	0.103	0.326	0.321	0.364	0.385	0.421	0.121
Irrigation				1	0.027	0.250	0.029	0.027	0.412	0.231	0.210
Credit					1	0.175	0.165	0.141	0.152	0.161	0.166
Off-farm income						1	0.308	0.214	0.312	0.221	0.161
Drought							1	0.258	0.259	0.321	0.341
Flood								1	0.355	0.321	0.385
Other organization									1	0.412	0.131
Inputs										1	0.308
Extension											1

Results of the Logistic Regression Analysis

Explanatory Variables	Estimated Coefficient	Odds Ratio (Exp. (β))	Wald Statistics	Significant level
Education	1.795	0.170	2.299	0.097*
Family size	-1.351	0.304	8.134	0.000***
Distance from market center	-1.676	0.258	7.630	0.006***
Size of cultivated land	2.456	0.165	4.497	0.019**
Total annual income	0.148	0.070	4.400	0.036**
Achievement motivation	0.065	0.112	3.351	0.067*
Participation in cooperative affairs	0.568	1.759	0.228	0.633
Access to Irrigation	1.544	4.683	0.681	0.113
Access to credit	0.051	0.141	4.251	0.049**
Off-farm income	0.007	0.137	3.694	0.010**
Noticed frequent drought	- 1.354	0.340	7.029	0.000***
Noticed frequent flood occurrence	-0.265	0.022	0.558	0.535
Other supporting organizations	1.021	0.360	0.781	0.409
Use of agricultural inputs	1.680	0.165	2.151	0.081*
Agricultural extension services	2.198	0.319	8.379	0.000***
Constant	-5.570	0.002	3.055	0.080

*Notes: Exp (B) shows the predicted changes in odds for a unit increase in the predictor *Omnibus Tests of model coefficients: Chi-square=127.824***, Sign 0.000; -2log likelihood=69.321* Percentage of correct prediction (count R^2=90.8; and *, **and ***Significant at 10%, 5%, and 1% probability level).*

5.2. Roles of Social Enterprises to Overcome Food Insecurity

5.2.1. Household welfare situation

Comparison of Income and Expenditure before and after membership of the respective cooperatives

Welfare Indicators	Before Joined	After Joined	T-value
Average annual Income (in ETB/USD)	9912.00 (352USD)	14,454.66 (513 USD)	10.021***
Average annual Expenditure (in ETB/USD)	7990.00 (283USD)	12,000.00 (426USD)	8.499***

5.2.2. Descriptive Results on the Perceived Roles of Cooperatives to overcome food insecurity

Items	S. disagree	Disagree	Neutral	Agree (n=400)		Strongly Agree (n=400)	
				No	%	No	%
Cooperatives increased members access to ag.inputs?	-	-	-	40	10	360	**90**
Cooperatives increased members access to credit?	-	-	-	80	20	320	**80**
Cooperatives increased access to extension services?	-	-	-	80	20	320	**80**
Cooperatives play significant role to empower women?	-	-	-	72	18	328	**82**
Cooperatives create job opportunities to members?	-	-	-	112	28	288	**72**
Cooperatives pay dividend to their members?	-	-	-	112	28	288	**72**

5.2.3. Results of the regression Model

Explanatory Variables	Regression Coefficient	Standard Error	Significant level
Membership period	0.3132	0.0287	0.034**
Access to agricultural inputs	0.7827	0.2533	0.002***
Access to credit	0.457	0.165	0.011**
Access to extension advisory service	0.436	0.172	0.045**
Dividend payment	0.1809	0.1321	0.100*
Employment opportunity	0.0842	0.0432	0.062*
Women empowerment	0.426	0.0785	0.034**

*, **and ***Significant at 10%, 5%, and 1% Significant level. R^2 =0.669

✓ Coefficient of determination (R^2) results i.e. 0.669 shows that 66.9% of the total variation of the dependent variable "Y" (post membership income of the respondents) is explained by the independent variables included in the regression analysis.

5.2.4. Major Challenges of Cooperatives to achieve their goal

✓ Shortage of Internal Capital (76%);
✓ Low Support from Government (75%)
✓ Low Participation of members in Cooperatives affairs (59%)
✓ Limited capacity of the cooperatives board members (56%);
✓ Poor cooperatives financial management (44.5%)

5.3. Coping Strategies of Households' to overcome food shortfall

5.3.1. Distribution of HHs by Food deficit months from own farm production

Food Deficit Months	Food insecure HHs (n=240)		Food secure HHs (n=160)		Total (n=400)	
	No	%	No	%	No	%
0	0	0	68	42.5	68	17
1-3	70	29.17	56	35	126	31.5
4-7	150	62.5	36	22.5	186	46.5
8-10	20	8.33	0	0	20	5
Total	240	100	160	100	400	100
Mean	**4.83**		**1.97**			
St. Deviation	2.18		1.59			

5.3.2. Coping strategies during initial stage of food insecurity

S.No	Coping Strategies	Food insecure households (n=240)		Food secure households (n=160)	
		No	%	No	%
1	Reduce type/number of meal	220	91.67	92	57.5
2	Reducing size and frequency of meal	210	87.5	75	46.87
3	Borrow grain or cash from relatives	195	81.25	66	41.25
4	Sale livestock	140	58.33	62	38.75
5	Food aid	135	56.25	60	37.5
6	Participation in food for work programs	131	54.58	49	30.62
7	Wage from daily labor work	105	43.75	44	27.5
8	Rent out land	46	19.17	26	16.25
9	Mortgaging land	41	17.08	21	13.12
10	Pity Trade	38	15.83	64	40

5.3.3. Coping strategies of households during severe stage of food insecurity

S.No	Coping Strategies	Food insecure Households (n=240)		Food Secure Households' (n=160)	
		No	%	No	%
1	**Selling of charcoal and firewood**	210	87.5	74	46.25
2	Relying on less preferred and less expensive food	200	83.33	80	50
3	Depend on food aid	199	82.92	66	41.25
4	Sales of livestock and other household items	185	77.08	64	40
5	**Reduction in non-food expenditures**	135	56.25	25	15.62
6	**Seasonal migration to other places**	111	46.25	32	20

6. Conclusion and Policy Implications

✓ The rapidly growing number of population of the country should be controlled through:

➤ *the application of continuous family planning practices,*
➤ *provision of health extension service,*
➤ *awareness raising of people using formal and informal education systems.*

✓ Regional and Federal Governments should facilitate options which enhance access to land
☛ *expansion of soil and water conservation*
☛ *reclamation of degraded land.*

✓ Government should support innovative social enterprises to work on soil and water conservation activities

✓ Government and all rural development actors should give prior attention to provide adequate support to the *country's agricultural extension system.*

27

...Cond...

✓ Food security can be improved by expanding:
☛ *income diversification opportunities (off-farm activities),*
☛ *promoting education,*
☛ *improving crop and livestock productivity*
☛ *rural-based credit and*
☛ *market accessibility*

✓ The Ethiopian government should design appropriate mechanisms through formulating policy to address the credit, education and income diversification initiatives of food insecure households' to uplift them from the depth of poverty and food insecurity.
✓ All development actors should work in close harmony and synergy.
✓ Promoting agricultural based industries in rural areas can be considered as one means to diversify income sources of rural households'.

✓ In order to solve food insecurity problem, social enterprises as cooperatives have played a significant role in:
☛ *employment creation,*
☛ *empowering women,*
☛ *improve access to credit*
☛ *Provision of Agricultural technologies*
☛ *enhance members' awareness to do business.*

They face different Challenges:
✓ Shortage of capital
✓ Low support from the Government
✓ Poor capacity of the board members and
✓ Poor financial management system

✓ Government, development actors, academic institutions and private companies should support cooperatives technically, financially and materially.
✓ The Ethiopian Government should sign MoU with the **Korean Social Enterprise Promotion Agency and Universities** to have technical, material and financial cooperation.

...Cond...

To mitigate food insecurity households:
- ✓ Intensively selling fire woods and charcoal
- ✓ Migration to other places and withdrawing children from school
  - ☛ impact on the environment and the development of human capital
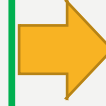
- ✓ Government and all concerned bodies should think other income sources for the affected people
- ✓ To reduce school dropouts of children, the government in collaboration with the World Food Program and other concerned bodies should serve *school children with a feeding program.*

7. Limitations and further research of the study

- ❑ Though results of this study have its own contribution to give policy direction on the food security situation of the country
  - ☛further study should be undertaken at the national/SSA level with a higher number of sample size.
- ❑ Moreover, due to the seasonal nature of food insecurity, future research may be conducted using longitudinal data
- ❑ To get a holistic view, further research may focus on the roles of social enterprises to overcome poverty and related problems taking into consideration both urban and rural contexts.

Appendixes

Appendix 1: Success case story of Thailand, Vietnam and Ghana in reducing hunger

I) Thailand

Undertakes strategical policy reforms:
- ✓ successful family planning program
- ✓ gives special focus on research and development to boost agricultural production
- ✓ undertakes nutrition-sensitive agriculture through producing and disseminating community based complementary foods for infant, young children and pregnant women
- ✓ promoting school lunch and school milk programs
- ✓ gives special attention on the empowerment of Women
- ✓ special focus on water, sanitation and hygiene programs
- ✓ provision of education and training to all community members regarding food security.

II) Vietnam

Undertakes strategical policy reforms:
- ✓ undertakes land use reform, which focus on the egalitarian principle
- ✓ formulation of market-based crop pricing policy,
- ✓ government support in the use and application of agricultural technologies and inputs,
- ✓ gives special focus for agricultural research and
- ✓ gives special attention to social security system.

III) Ghana

Undertakes strategical policy reforms:
- ✓ diversifying income sources of rural communities
- ✓ gives special focus on the growth of agriculture through the dissemination of high yielding crop varieties,
- ✓ government's support in the production increment of cocoa,
- ✓ agricultural inputs subsidies and the provision of guaranteed market to cocoa producer farmers.

30

Appendix 2: Support of the Korean Government to Social Enterprises

Through the KSEPA, the Korean Government supports preliminary social enterprises:
- ✓ *business administration consultations,*
- ✓ *subsidy of the costs of business development,*
- ✓ *payment of labor costs associated with job-creation projects, and*
- ✓ *recommendations to public institutions to purchase the organization's products on a preferential basis*
- ✓ *Concerns on entrepreneurship with substantial incentives, in the hope that this may contribute to reducing youth unemployment*

The Korean Government support for young people includes:
- ✓ *provision of working space for business venues,*
- ✓ *financial support (covering different costs used to acquire market information, purchasing different relevant literature, meetings, travel expenses, public utility charges, etc.),*
- ✓ *education support and help with consultancy fees,*
- ✓ *help with the costs of Public Relation (PR) activities, and*
- ✓ *financial help with the creation of sample test products*

감사합니다
Thank You