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***Effects of Non-Governmental Organizations on Livelihoods of  
Itang Community, Gambella Regional State, Ethiopia***

***A Thesis Submitted to School of Graduate Studies of Jimma University  
in Partial Fulfillment of the Requirements for the Award of Degree of  
Masters of Development Economics***

**BY:**

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**JIMMA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF ECONOMICS**

**July 13, 2021**

**Jimma, Ethiopia**

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**BY:**

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Under the Guidance of

Tesfaye Melaku (Assistant professor)

And

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**DEVELOPMENT ECONOMICS**

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## CERTIFICATE

This is to certify that the thesis entitles “Effects of Non-Governmental Organizations on Livelihoods of Itang Community, Gambella Regional State, Ethiopia”, submitted to Jimma University for the award of the Degree of Master of Economics (Development Economics) and is a record of bona-fide research work carried out by Mr. Geng Chuol Nyoach under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

Main Adviser’s Name	Date	Signature
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Co-Advisor’s Name	Date	Signature
Lemma Urge (MSc)	_____	_____

## **DECLARATION**

I hereby declare that this thesis entitled “Effects of Non-Governmental Organizations on Livelihoods of Itang Community, Gambella Regional State, Ethiopia”, has been carried out by me under the guidance and supervision of Tesfaye Melaku (Assistant professor) and Lemma Urge (MSc).

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher’s Name

Date

Signature

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## **ABSTRACT**

*NGOs are increasingly becoming important development partners almost everywhere in the world. They have appeared as the savior of countless number of people without food, cloth, education and basic health facilities. But due attention is not given to their role at grass root level especially in developing countries like Ethiopia. This study examines the effects of NGOs focusing on the experience of ZOA and GCCDO in the livelihood improvement of Itang special woreda communities, Gambella region, Ethiopia. The study use both quantitative and qualitative types of data collected from both primary and secondary sources using questionnaires, interviews, and documents analysis. The data were analyzed using both descriptive and inferential method with the help of STATA 14 version software. The study used stratified random sampling and purposive selection to select sample from the respondents and key informants of the study. A total number of 306 respondents from three kebele and 10 key formants from NGOs staff, government official and local community leaders were selected. The study results show that the programs carried out by those NGOs brought a number of positive contributions to household livelihood improvement, such as income diversification and employment opportunities. The programs executed by ZOA specially enabled the communities of Itang woreda to engage in different income generating activities, markets development, promote the saving practice. These programs boom up the capacity of Itang communities to cover their basic expenditure. The multivariate OLS regression model for log income of household satisfied all economic, statistical, and econometric criteria. From the analysis results we found that most of the explanatory variables were significantly different in affecting the log income of household. The study result indicated that the programs were participatory and encourages both the communities and government to participate in the programs. Despite the achievements, NGOs have come across different challenges in their programs implementation period, such as lack land for income generating activities, less confidence and respect from the local communities, limited access of fund from International donors, cooperation of with other development partners, and poor regulatory framework for NGOs activities by the government. The study recommended the NGOs to develop a strong tie with the local communities by increasing their participation at the community level. Local NGO must begin to rely more on their own efforts and resources and learn from local NGOs in other countries about how to tap local sources. The government should ensure the independence legal issue of NGOs for their development activities from both internal and external interferences. Finally, the researcher recommend other researchers to use this study as stepping stone for further studies on the contribution of NGOs' in poverty reduction as well as development of the region in general.*

**Keywords:** *Development partner, Itang special woreda, Legal/Regulatory Framework, Livelihood Improvement, Non-Governmental Organization, Donor access*

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## Table of Contents

CERTIFICATE.....	III
DECLARATION .....	IV
<i>ABSTRACT</i> .....	V
ACKNOWLEDGMENT.....	VI
List of Tables .....	IX
List of Figures .....	X
List of Acronym/Abbreviation.....	1
CHAPTER ONE.....	2
INTRODUCTION .....	2
1.1 Background of the Study .....	2
1.2 Statement of the problem.....	3
1.3 Research Question versus Hypothesis Tests.....	4
1.3.1 Hypothesis Tests in Multiple Regression Analysis.....	5
1.4 Objectives of the Study .....	5
1.4.1 General Objective of the study.....	5
1.4.2 Specific Objectives of the Study .....	5
1.5 Significance of the Study .....	6
1.6 Scope of the Study .....	6
1.7 Limitations of the Study.....	6
1.8 Organization of the Study .....	7
CHAPTER TWO .....	8
REVIEW OF RELATED LITERATURE .....	8
2.1.1 Definition and Concepts of Non-Governmental Organizations.....	8
2.1.2 Emergence of Non-Governmental Organizations (NGOs) .....	9
2.1.3 NGOs as an Alternative Development Institution .....	10
2.1.4 Meaning and Concepts of Livelihood.....	11
2.2 Empirical Reviews.....	17
2.3 Conceptual Model.....	20
CHAPTER THREE .....	23
RESEARCH DESIGN AND METHODOLOGY .....	23
3.1 Description of the Study Area.....	23
3.2 Research Design and Approach .....	25
3.3 Sources and Types of Data .....	25
3.4 Sampling Design.....	25
3.4.1 Target Population of the Study .....	26
3.4.2 Sampling Size and Technique.....	26

3.4.3 Sampling Frame .....	27
3.5 Data Collection Tools .....	27
3.6 Methods of Data Analysis and Presentation .....	27
3.6.1 Descriptive Statistics.....	28
3.6.2 Econometrics Model .....	28
3.7 Model Specifications and Description of Study Variables .....	28
3.7.1 Multi Linear Regression Model Assumption.....	29
3.7.2 Potential Glitches .....	29
3.8 Descriptions of the Study Variables and Expected Signs .....	30
3.9 Ethical Considerations of the Study.....	32
CHAPTER FOUR.....	33
RESULTS AND DISCUSSION .....	33
4.1 Descriptive Analysis .....	33
4.1.1 Demographic Characteristics of the Respondents.....	33
4.1.2 NGOs Programs on Household Financial Assets.....	35
4.1.3 NGOs Programs on the Household Physical Assets.....	38
4.1.4 Non-Financial Services of Household .....	41
4.1.5 Empowerment of Women in the Household Livelihood Activities.....	45
4.1.6 Local Community Participation in NGOs Programs .....	47
4.1.7 The Challenges Facing NGOs in their Development Activities .....	47
4.2 Econometrics Results and Discussion.....	50
4.2.1 Model Fit.....	50
4.2.2 Data Checking in the Multivariate OLS Linear Regression Model.....	51
4.2.3 Validity of the Assumptions of OLS Multivariate Regression Model.....	52
4.2.4 Results of OLS Regression Model Estimations.....	55
CHAPTER FIVE .....	60
CONCLUSION AND RECOMMENDATION.....	60
5.1 Conclusions.....	60
5.2 Recommendations.....	61
5.3 Future Research Direction .....	62
BIBLIOGRAPHY .....	63
APPENDICES .....	73



## **List of Tables**

Table 3.1 Population of Study and Sample Distribution .....	27
Table 4.1 Response Rate.....	33
Table 4.2 Distribution of Respondents by their Sex, Age, and Marital status.....	34
Table 4.3 Education and Occupation Status of Respondents .....	35
Table 4.4 Household Access to Cash/Grain through IGA.....	36
Table 4.5 Household Source of Income and Livelihood Strategies.....	37
Table 4.6 Household Saving and Saving Institutions .....	38
Table 4.7 Projects Impacts on Households Asset Ownership.....	39
Table 4.8 House ownership and housing improvements .....	40
Table 4.9 Household Diet Condition .....	41
Table 4.10 Household Educational Access.....	42
Table 4.11 Household Health Access .....	43
Table 4.12 Training for households .....	44
Table 4.13 Market Chain .....	45
Table 4.14 Married Women Empowerment in the Household Decision Making .....	46
Table 4.15 Local Communities Level of Participation in the NGOs Projects.....	47
Table 4.16 Respondents' Views on the Challenges against NGOs Activities.....	48
Table 4.17 Respondents' Views on the Independence of NGOs in their Activities....	49
Table 4.18 Respondents' Views on Inter-organizational Challenges of NGOs .....	49
Table 4.19 Results of OLS Regression Estimations .....	55

## **List of Figures**

Figure 2.1 Sustainable Livelihood Frameworks .....	22
Figure 3.1 Map of the Study Area .....	25

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## **List of Acronym/Abbreviation**

AU	Africa Union
BAC	Business Administration Certificate
BRAC	Bangladesh Rehabilitation Assistance Committee
SAPs	Structural Adjustment Policies
CRDA	Christian Relief and Development Associations
CSA	Central Statistical Agency
CSO	Civil Society Organization
CSR	Corporate Social Responsibility
DFID	Department For International Development
DPPC	Disaster Prevention and Preparedness Commission
DRR	Disaster Risk Reduction
EKHC	Ethiopian Kale Heywood Church
EKHCDP	Ethiopian Kale Heywood Church Development Program
FAO	Food and Agriculture Organization
FMO	Financial Management Office
GB	Grameen Bank
GCCDO	Gambella Children and Community Development Organization
GONGOs	Government-Organized Non-Governmental Organizations
GRSC	Gambella Regional State Constitution
GSOs	Grassroots Services Organizations
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome
INGOs	International Non-governmental Organizations
MEDAC	Ministry of Economic Development and Cooperation
MSMEs	Ministry of Small and Medium Enterprises
LNGOs	Local Non-governmental Organizations
NGO	Non-Governmental Organizations
NNGOS	North Non-Governmental Organizations
NORAD	Norwegian Agency for International Development
OLS	Ordinary Least Square
PSNP	Productive Safety Net Program
SAPs	Structural Adjustment Programs
SES	Socio-Economic Status
SNGOs	South Non-Governmental Organizations
SNNPRS	Southern Nation and Nationalities and People Regional State
WV	World Vision
ZOA	Zoo Organization Agency

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Globally, almost two-thirds of the world's poor people reside in the rural areas of low-income countries, mainly depending on subsistence farming and other natural resources for their livelihood (World Bank Group, 2015). Rigg (2006) claimed that low productivity in farming and limited accessibility to non-farm income sources increase the vulnerability of people who are often poor and deprived with a minimum standard of life.

Non-Governmental Organizations (NGOs) play an important role in the economic development of developing countries. They provide services to society that encourage community development, provides assistance in national disasters and sustainable system development (Roy et al, 2017). NGOs can act many roles such as service delivery, catalyst, and partnership which bring a numbers of positive impacts in the development. By delivering services, campaigning advocacy and cooperating with other organizations, NGOs have a complex relationship with government which may be conflicting or collaborations (Hossain and Philips, 2016).

The note rooted in USAID's 2014 Local Systems Framework paper, establishes that achieving sustained improvement in development results depends on the contributions of multiple and interconnected local actors. The document also states that to strengthen the local systems more effectively and to realize sustained results more consistently; USAID needs to engage the local actors (USAID, 2017).

The government and the people of Pakistan recognized and appreciated the role of many non-governmental organizations during 2005 earthquake and flood of 2010. These non-governmental organizations not only create disaster risk awareness but also prepare the people for DRR and management through exercise, skill enhancement, providing tools, infrastructure, and developing networks (Ocal and Altnok, 2016). It was confirm that the impact of NGOs on sustainable livelihood strategies in Sri Lanka through the community resettlement and livelihood assistance strengthened the local communities' capacities and increase their access to livelihood resources (Kilaman and Ummah, 2017).

After many African nations achieved their independence in the late 1950s and 1960s, the continent's surplus of wealth has failed to eradicate hunger and it became evident that governments alone could not make the continent recover from its economic gloom. This reason leads to influx of non-governmental organization in to the continent (Mosweunyane, 2009).

In the Ethiopia, the history of non-governmental organizations traces its origins back to the creation of self-help organizations such as Debo, Idir, and Ikub. These are traditionally established bodies facilitate mutual support among their community members (Clark, 2000). Besides, the famine of the 1970s and 1980s contributed to the influx and emergence of NGOs in Ethiopia (CRDA, 2004).

Like other NGOs, WVE begun operation in Ethiopia as a response to the famine crisis in the country in 1971 and opened office in 1975. However, for about a decade its contribution was limited in the areas of relief, rehabilitation and small community development projects (World Vision Ethiopia, 2012). Later on, like other second generation NGOs, it begun to shift its approach and engagement towards integrated development approach which aims at empowerment and transformation by supporting more sustainable development (Annual Report, 2012).

The aim of this study was to examine the role of ZOA (projected on Improving Food Security and Strengthening Community Cohesion) and GCCDO (Project on Empowering Disadvantaged Community) in improving livelihood and access to basic services in Itang special woreda, Gambella region.

## **1.2 Statement of the problem**

NGOs have had significant impacts on individual, social, national, and global levels by cooperating with other development actors. They have numerous positive achievements in practice such as offering new approach to solve problems, meeting need more effectively, and keeping the policy honest. However, there are some criticisms about the role of NGOs such as lack of sustainable measures and transferring of the western concept (Hossain and Philips, 2016).

The study finding on the economic impacts of massive presence of South Sudanese refugees on the host communities of Itang special woreda, reveal that the presence of refugee in woreda increase the number of international aid agencies.

The research finding economically revealed a number of positive outcomes such as job creation, diversification of production and commercialization of local goods and services sectors, and infrastructural development by the aid agencies. In contrast, the presence of NGOs drive up the price of house rent, increasing price of restaurants, demand for food and other commodities rise in the market and the price of some products to rise beyond capacity of the local people (Endalkachew, 2018).

Wuhibe (2019) in the study that explore the impacts of South Sudanese refugee camps of Tirkidi on the rural livelihoods of the host community in Itang, claimed that the presence of the camp brought a numbers of NGOs and result in both negative and positive impacts to different sectors of the host communities. Positively, the NGOs contributed to socio-economic development of the host communities, but the natural environment of the host community has been negatively affected.

There were only few studies on the NGOs sector in the Itang Special Woreda, Gambella Regional state. However, the existing studies were mainly focused on the role of NGOs in improving the livelihood of refugees and their relationship with host communities regarding the use of resources. Almost all of those studies use only the descriptive statistics method that was very shallow to analyze the contribution of the NGOs in the livelihood improvement of both refugees and host communities.

This study examined the impacts of ZOA and GCCDO programs in improving the livelihood of local communities in Itang special woreda without involved the refugees. The meaning of the term livelihood in this was based on how the beneficiaries have perceived for the requirement of their livelihood and to what level that the concerned NGOs functions were able to meet their needs at their local level.

This study also unlike the other studies, applied both descriptive statistics and inferential using econometrics model of multivariate OLS to examine the impacts of NGOs programs in improving the livelihood of local communities.

### **1.3 Research Question versus Hypothesis Tests**

Taking into account the above practical role of NGOs, the main research question for this study was: what is the impact of NGOs development programs for the livelihood improvement of local communities' in Itang special woreda, Gambella region.

To address this query, the following particular research questions were asked:

1. Do the NGOs development programs boost the income level of communities in Itang Special Woreda?
2. Do the Itang communities especially women participate in the programs?
3. What are the obstacles facing by NGOs in their attempts to boost the livelihood of households in Itang special woreda?

### 1.3.1 Hypothesis Tests in Multiple Regression Analysis

Multiple regression model:  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon$  where  $k$  represents the total number of variables in the model.

Question of interest: Is the regression relation significant/Are one or more of the independent variables in the model useful in explaining variability in  $Y$ ?

- ✚ Null Hypothesis: The initial assumption is that there is no relation, which is expressed as:  $H_0: \beta_1 = \beta_2 = \dots = \beta_{k-1} = 0$ .
- ✚ Alternative Hypothesis: At least one of the independent variables is useful in explaining/predicting  $Y$ , expressed as:  $H_1: \text{At least one } \beta_i \text{ is } \neq 0$ .

## 1.4 Objectives of the Study

This section was presented the general objectives and specific objectives of this study.

### 1.4.1 General Objective of the study

The overall objective of this research was to examine the impact of the NGOs development programs in enhancing the livelihood of local communities' households in Itang special woreda, Gambella regional state.

### 1.4.2 Specific Objectives of the Study

From general objective, this study has the following specific objectives to accomplish the general objective of this study. These were to:

1. Analyze the impact of NGOs' interventions on improving the income level of Itang communities,
2. Evaluate the level of community households participation particularly women in the programs intervention and,
3. Identify the difficulties faced by NGOs working to enhance the livelihood of the local communities.

### **1.5 Significance of the Study**

In addition, to its significance as a partial fulfillment for the achievement of Masters of Science in Economics (Development Economics), this study findings were beneficial to different stakeholders including NGOs leaders, policy makers, academicians and researchers.

The findings help the NGOs to overcome their weakness in their develop activities and allow them to develop strong tie with the local communities where they work by increasing the participation of the local communities. The findings will allow the NGOs to manage their time wisely in order to ensure effectively and efficiency of their development programs. Also it will help Local NGOs like GCCDO to rely on their own efforts and resources by learning from the experience of LNGOs in other countries.

The study results will help the government to apply the most appropriate policy issue in monitoring and evaluating the NGOs development activities. The government will set policies that ensure the independence legal issue of NGOs in their development activities; that policies will protect them from both internal and external interferences.

Finally, the study results fills the expertise gap in developing relationship between scholars and researchers and makes guidelines for more studies in the area of NGOs development programs in the Itang special woreda, Gambella region. Therefore, the study findings are essential for other researchers to use them as stepping stone to evaluate the contribution of NGOs' in livelihood and poverty reduction as well in the regional development in general.

### **1.6 Scope of the Study**

This study was limited to the impact of ZOA and GCCDO development projects in Itang special woreda although they have variety of programs implemented at various locations in the Gambella region. Also this study only examine impact the of NGOs development projects in the livelihood improvement of the local communities in the Itang woreda.

### **1.7 Limitations of the Study**

During the investigation period of the study, several limitations were faced by the researcher. Firstly, the global pandemic disease (COVID-19) that restricted the



movement delayed the researcher to get the data on time from respondents in the Itang woreda. Secondly, the lack of adequate secondary data due to poor recording and the lack of cooperation between certain key informants and government officials were other constraint faced the researcher. Thirdly, the distance between the area of field study (Itang special woreda, Gambella) and the position of the University (Jimma, Ethiopia), which is more than four hundred and fifty kilometers (470.6 KM) was also contribute. Finally, the lack of good analysis skills in software application was another restriction that delayed the study.

Nevertheless, while the above-mentioned problems were faced, the researcher made his utmost effort by using time management, going to the field of the study always, allotted enough time to learn the software in you-tube and consult other experts to mitigate the impact of these limitations on the outcome of this study.

## **1.8 Organization of the Study**

The study was organized in the following five chapters; chapter one consist of the introduction parts, the second chapter deals with the study's literature review and conceptual framework whereas the third chapter deals with methodological part. The study's fourth chapter deals with the data presentation and analysis process, besides, chapter 5 further discuss the lessons taken from the study results. The bibliography and appendices list all the referenced material used in the study.

# CHAPTER TWO

## REVIEW OF RELATED LITERATURE

### 2.1 Theoretical Framework

This chapter was prepared to give some background studies about the role of NGOs programs and its' impact on households' livelihood and the factors affecting them to make sound participation in line with the improvement of households' livelihood. It introduces theoretical, conceptual framework and empirical work on the developmental methods of NGOs.

#### 2.1.1 Definition and Concepts of Non-Governmental Organizations

Non-governmental organizations (NGOs) are defined as organizations that do not belong to the private sector or the government. Being non-state and non-market, they are often referred to as the third sector and delivering the service to civil society (O'Dwyer and Unerman, 2006). They work in the fields of education, health, service access, microfinance, pressure groups, activism, social movements, and grassroots organizations (Werker and Ahmed, 2008). NGOs are defined as private organizations pursuing activities to alleviate suffering, promote the interests of the poor, protect the environment, and provide essential services to develop the community (AU, 2013).

NGOs and civil society are sometimes used synonymously, but civil society encompasses not only non-governmental organizations, but also religious organizations, grassroots organizations, religious parties, informal and cultural groups engaging in activities that serve the interests of the poor (Ibrahim and Hulme, 2010). Civil society organizations (CSOs) are organizations that are set up voluntarily to support the public and are most commonly set up as non-profits. Whereas, NGOs are one of the key development players and, if they play their position well, they are a good support arm for the government and they will play an important role in mitigating poverty and sustainable development (Riddell, 2007).

Some NGOs are well-resourced and rich, while others lead a hazardous life of hand to mouth, trying to live from 1 year to the next. A variety of reasons and beliefs influence NGOs that mean both secular and faith-based organizations exist. Some NGOs seek to meet the immediate needs of people only, while others take a longer-term perspective and seek to develop alternative ideas and approaches to problems also a single NGO could combine several of these different elements (Lewis, 2009).

NGOs can be big or small, formal or informal, hierarchical or versatile in terms of structure and financing; many are externally funded, while others depend on capital mobilized locally. Another fundamental distinction is common between Northern NGOs (NNGOs) which originate in industrialized countries and Southern NGOs (SNGOs) which originate in less developed regions of the world. Another main contrast is between NGO membership forms, such as community-based organizations, individuals organizations, and proxy forms of NGOs that interact with communities from outside often referred to as grassroots service organizations (GSOs). There are also several instances of fake NGOs, such as those set up as government fronts (government-organized GONGOs) or briefcase NGOs set up by people for solely personal gain (Lewis, 2009).

It is possible to condemn definitions of NGOs for not being comprehensive: they frequently inevitably exclude one of the several fields of NGO development or rule out legal ramifications in different countries. NGOs are described as autonomous, non-profit, developmental, charitable organizations operating at the local level and engaged in poverty reduction at local and international levels (Lewis, 2009).

### **2.1.2 Emergence of Non-Governmental Organizations (NGOs)**

Non-governmental organizations (NGOs) have risen in numbers and have been able to position themselves in society and almost every country in the world as significant development actors. They are self-governing and voluntary, which suggests that NGOs are impartial and dedicated to voluntary practices (Lewis and Kanji, 2009).

Many developmental theories established by various scholars can be related to the notion of NGOs in development. The idea of Neoliberalism was dominated in the 1990s through infamous 'Structural Adjustment Policies (SAPs) imposed by the World Bank and the IMF on poor countries. As a part of their credit, poor countries were conditionality nominated to compel to open their markets to foreign competition and forcing dramatic cutbacks in public spending and social services (Lewis and Kanji, 2009).

The Neoliberal Economic and Political Agenda, and the multi-dimensional of neoliberalism idea was greater role has to be played by NGOs and diminish the role of the state in things such as health and education. Neoliberal ideology and its policies have been strongly criticized in recent years across the globe that includes mass

demonstrations in many developing countries because of their crippling social impacts. As a result, in both developed and developing countries, a number of grassroots forms of NGOs have emerged, campaigning and researching issues related to globalization, social justice and the environment (Shah, 2005).

The emergence of NGOs in general and INGOs in particular, in Ethiopia is a recent phenomenon, even compared to other African nations. There were only a few NGOs until the 1970s those were ecumenical in orientation, foreign-based and mainly engaged in limited-scale of social welfare and community development programs. In addition to their limited reach, these 'first-generation' NGOs in Ethiopia were also largely geographically confined to Addis Ababa and only operated in compliance with the will of government officials (Kassahun, 2002).

In the Ethiopia, massive influx of NGOs has been closely linked to two major famines in the country's recent history. Firstly, the early 1970s tragic drought that was beyond the state's ability to control, forced the imperial government to open its doors to NGOs. Also in the mid-1980s, a similar famine forced the Derg regime to react similarly and allow the number of NGOs to rise in the country. The total number of NGOs employed on relief in the country during the first famine was not more than twenty-five and the majority were church-based and their number increased to 70 in the latter part of the 1980s (Dessalegn, 2002).

### **2.1.3 NGOs as an Alternative Development Institution**

Development is a deliberate attempt to secure meaningful economic, social, and political improvements in people's quality of life. NGOs development relief and emergency work take place not only in Asian, African, and Latin American countries where poverty is the most extreme and needs are greatest, but also in the oppressed communities of the United States, Mexico, India, and Japan (Lewis, 2007). Generally, NGOs can play the following roles of implementers, catalysts, and partners

#### ***2.1.3.2 NGOs as implementers***

In the task of implementing, NGOs role is defined as the mobilization of resources to provide goods and services as part of its project or program. As NGOs try to provide goods and services that are required and available, service delivery is perhaps the most measurable and noticeable function.

### ***2.1.3.2 NGOs as Catalysts and Facilitators***

Many NGOs talk of motivating their customers and beneficiaries, starting from the community stage. Empowerment has many meanings; is a process that includes becoming aware of the power dynamics of one's life developing skills and capacity for greater control, exercising control without infringing the rights of others, and supporting the empowerment of others in the community. As a catalyst and facilitator, NGOs play this role in educating and later withdrawing individuals for collective action.

### ***2.1.3.3 NGOs as partners***

Among policy-makers and practitioners, the definition of collaboration is increasingly unclear. It is not easy to describe the collaboration between nations, donors, governments, NGOs, and business partnerships. Partnership refers to an agreed relationship based on a set of links within a development project between two or more agencies, usually involving a division of roles and responsibilities, risk-sharing, and the pursuit of common goals between government agencies, NGOs, donors, and customers.

## **2.1.4 Meaning and Concepts of Livelihood**

Following the Chambers and Conway's working definition, de Silva forwarded that the interpretation of livelihood can be complex and may necessitate access to health care, education, land and other natural resources, and even services that secure one's legal rights to employment and wages (de Silva, 2013). Carswell (1997) argue that the definitions of livelihoods are often unclear, inconsistent, and relatively narrow, therefore, an accurate operational definition of livelihood remains elusive.

In simple words, livelihoods means the way of making a living, the different activities and services that allow people to live. Related to food protection and access, different people have different lifestyles and ways to meet their needs. Livelihoods for groups of individuals doing similar things are comparable and a group of people who access similar resources, share similar social and cultural values, and have a comparable economic status is called a livelihood group. In Benin, for example, an FAO study has divided artisanal fishermen into four sub-groups: inland, lagoon, coastal migrants, and sedentary fishermen, the same kinds of behaviors and services are used by each of these sub-groups to survive (FAO, 2007).

The focus of livelihoods in emergency programming originates from the late 1980s following the African famines in the middle of that decade. At that time, when people were destitute, malnourished, and had migrated to famine camps (FAO, 2007).

A livelihood comprises the capabilities, which comprised of assets (including both material and social resources) and activities used by a household for means of living (ACF International, 2010). Protecting and promoting livelihoods requires a more holistic approach that addresses the causes of vulnerability to food insecurity as well as the consequences. In doing so, it needs to pay attention to what people are doing for themselves (World Food Program, 2010).

Livelihoods are determined by multiple factors therefore, a combination of different types of information is needed to understand them.

This information includes:

1. Vulnerability context
2. Livelihood resources or assets
3. Policies, institutions and processes
4. Livelihood strategies
5. Livelihood outcomes or goals

#### ***2.1.4.1 Vulnerability Context***

The context of vulnerability refers to seasonality, patterns, and shocks that impact the livelihoods of people and the main feature of these factors is that, at least in the short and medium-term, they are not likely to be managed by local people themselves (DFID, 1999). Vulnerable categories represent persons who shortly are expected to slip or stay below a certain welfare level and most of those already below the threshold may face a high risk of doing so in the future as well (Lovendal et al., 2004). It entails the following variables over which entities have little or no control:

- Long-term developments such as soil population pressures, land depletion, climate change, inflation of prices, and HIV spread.
- Shocks impacting livelihoods such as drought, floods, pest attacks, failure of the economy, and conflict/insecurity.
- Seasonal pressures in the hungry season, such as disease burden, water scarcity, or food shortages.

#### **2.1.4.2 Livelihood Assets**

Resources are referred to as power or capitals in the survival policy (Ellis and Allison, 2004). Livelihood assets are the assets people depend on to execute their livelihood strategies (Farrington et al., 2002).

Various authors and organizations have classified livelihood resources in different ways. Chambers and Conway (1992) classified livelihood assets into three: tangible, intangible, and resource access opportunities. The Development Program of the United Nations (UNDP, 1998) grouped livelihood assets into six capital: human, social, natural, physical, economic, and political. Here, a brief review of the six often clarified livelihood assets/capitals is presented below to better understand the livelihood assets.

**Human capital (H):** the skills, knowledge, labor capacity, and good health necessary to pursue various livelihood strategies and achieve their livelihood goals. The human capital of a household consists of individual characteristics, both qualitative and quantitative, of its members that help them to generate income.

**Physical capital (P):** Physical capital includes the fundamental resources required to sustain livelihoods by manufacturing products. The infrastructure consists of physical environment improvements that enable people to meet and be more efficient in terms of their basic needs.

**Social capital (S):** There is a lot of debate about what the expression 'social capital' means exactly. In the context of the framework for livelihoods, it is taken to mean the social resource on which people draw in pursuit of their livelihood goals. It is possible to use different proxies for social capital, such as membership in agricultural cooperatives, the incidence of mutual assistance in hard times, etc.

**Financial capital (F):** Financial capital refers to the financial instruments that individuals use to accomplish their livelihood goals and requires the substantial availability of cash or alternatives that allows individuals to pursue various livelihood strategies. Household investments, credit (borrowing), and remittances from family members working outside the home are sources of financial resources.

**Natural capital (N):** Natural capital is the stock of natural resources from which the supply of resources and services useful for livelihoods is extracted. The commodities

that make up natural capital range greatly, from intangible public goods such as the environment and wildlife to divisible properties specifically used for development (trees, land, etc.). It includes the stocks of natural resources from which subsistence-useful resource flows are derived (e.g. soil, water, animals, biodiversity, environmental resources).

Political capital: is broadly defined as the ability to use power to support political or economic positions and thus improve livelihoods; it refers to both the legitimate distribution of rights and power as well as the illicit operation of power that usually frustrates the poor's efforts to access and defend rights and use them to build capital assets. The definition of political capital is one way of looking at disadvantaged men and women's access to justice (UNDP, 1998). In recent years, political capital has received attention as a key asset in accessing other assets (Farrington et al., 2002).

This is not a definitive division into these six types of livelihood assets; it is just one way to divide up livelihood assets. Depending on local circumstances, other ways may be developed.

#### ***2.1.4.3 Mediating Factors***

Institutions, strategies, and procedures mediate the access and control of capital by rural households (DFID, 1999). In the absence of appropriate public policies, well-functioning markets, effective local governments, and the official provision of safety nets for vulnerable people, the mediating factors provide essential goods and services to the rural poor (Messer and Townsley, 2003).

#### ***2.1.4.4 Livelihood Strategies***

The term livelihood strategies, according to DFID (1999), are defined as the range and combination of activities and choices that individuals make to achieve their life goals, including productive activities, investment strategies, reproductive choices, etc.

Livelihood strategies include: how individuals integrate their revenue-generating activities; how they use their savings; what assets they want to invest in; and how they continue to sustain current assets and income (DFID 2000). Livelihood strategies are generally understood as strategies usually used by individuals in peaceful and stable times to enable them to meet basic needs and contribute to future well-being (Ellis, 2000).



#### 2.1.4.4.1 Typologies of livelihood strategies

Livelihood strategies can be categorized according to various criteria. Rural livelihood strategies have been divided into three broad types, depending on the nature of the activities undertaken, such as agricultural intensification and extension, diversification of livelihoods, and migration (Scoones, 1998).

Agricultural intensification refers to the use of a greater quantity of non-land resources for a given land area to produce a higher output. In general, it focuses on increasing the production of crops and agricultural commodities that are best suited to the region's agro-ecological conditions, as well as to agricultural and existing market outlets (Hussein and Nelson, 1999). Intensification often involves substituting traditional crops for new high-yield varieties or agricultural commodities, requiring improved technology (Warren, 2002).

On the other hand, agricultural extensification brings more land into cultivation or grazing (Scoones, 1998). As agricultural specialization can start from an initial move to diversify, diversification of livelihoods can also eventually lead to some form of household specialization (ODI, 2003).

Diversification of livelihoods: is an increasing multiplicity of activities (irrespective of the sector) or may refer to a shift away from traditional rural sectors such as agriculture to non-traditional rural or urban space activities (DFID, 2000). Ellis defined rural diversification of livelihoods as 'the process of building an increasingly diverse portfolio of activities and assets for rural households to survive and improve their living standards' (Ellis, 2000). Diversification here may therefore be to broaden the range of on-farm activities or to diversify off-farm activities by taking on new jobs (Deb et al., 2002; Start and Johnson, 2004).

For individuals or families in various economies, but for different reasons, diversification of income sources, properties, and occupations is the rule. Sub-Saharan African households whose livelihoods depend heavily on agriculture and associated practices are no exception to this phenomenon (Adugna, 2005). Rural residents of developing countries have previously been thought to participate only in small-scale agriculture, but this is a misnomer that is continually disproved by emerging peasant livelihood studies that show highly diversified livelihoods (Rahman et al., 2007).

Migration: refers to the situation when, for different periods, one or more family members leave the resident household and are able to make new and different contributions to their welfare, although such contributions are not guaranteed by the mere fact of migration. Migration may be temporary or permanent; it may be a critical strategy for safeguarding off-farm employment or stimulating economic and social links between areas of origin and destination. Structures of kinship, social and cultural norms may have a strong influence on who migrates (Ellis, 2000).

Ellis (2000) provides another collection of livelihood typologies based on the source of livelihood income. Sustainability strategies have been classified into three groups: farm activities, off-farm activities, and non-farm activities. Farm revenue refers to revenue generated from own account farming, which includes both livestock and crop income and includes own farm output consumption as well as cash income from output sold. Wage or exchange labor on other farms refers to off-farm income. This includes labor payments, income from local environmental resources such as firewood, charcoal, building materials for households, and wild plants (Rajadel, 2003).

The theoretical of the study of livelihood diversification in the eastern Hararghe highlands, identified four typologies of livelihood strategies that involve economic practices, investment strategies, reproductive choice, and choice of place of residence (migration). The study further identified between strategies for land use, such as the expansion of cropland and intensification of land use and strategies for diversification of livelihoods in agriculture (diversification of crops and livestock), from agriculture to off-farm activities (Tesfaye, 2003)

The drawing data from southern Ethiopia, described numerous practices both within the agricultural and non-agricultural sectors. The operations in the non-agricultural sectors could take three forms: off-farm job opportunities, non-farm income-generating activities, and relocation, temporarily shifting away from elsewhere in search of employment. The same source classified livelihood strategies into four broad groups; agriculture, agriculture plus migration, agriculture plus non-farm, and agriculture plus non-farm plus off-farm (Berehanu, 2007).

## **2.2 Empirical Reviews**

Many people believe that poverty is often considered as attached with the income capacity of the population. However, the trends and features of poverty are not the same in all over the world and in all geographical locations. For example, the poverty in Africa is often considered as the outcome of drought or famine, where in Asia it was mainly due to political or bureaucratic corruption and in Europe or America it was due to the economic slowdown or losses of jobs (Wang, 2018).

The study finding of Oladipo and Adekunle (2010) specified that because of traditional ownership, operational profits, true possession, admiration, and social participation, socio-economic status (SES) means the circumstances of a community. It refers to an individual's situation in a society concerning the amount of cultural ownership, successful profits, material ownership, credibility, and social contribution. Karklins (2016) added that the socio-economic status does not only income but also educational achievement, economic protection, subjective awareness of social class and status. Therefore, SES can show the excellence of life characteristic as well as the chances and constitutional rights provided to public within culture.

To understand the poverty-livelihood relationship in rural areas of developing countries, several scholars have studied household livelihood strategies through different approaches, given different terminologies, and assessed their relevance to poverty reduction (Soltani et al., 2012).

Studies centered on the welfare outcome of a household's livelihood strategies have consistently found a positive relationship between livelihood diversification to the non-farm sector and poverty reduction (Oumer and de Neergaard, 2011; Stifel, 2010; Alemu, 2012). There is also increasing evidence of the contribution of business or rural enterprises and commercial farming for minimizing rural poverty reduction (Soltani et al, 2012). A number of authors have explored the influencing factors on the choice of a household's livelihood strategies (Fang et al., 2014).

Many scholars have classified household livelihood strategies based either on households' income quartiles, asset ownership, major livelihood activities, or on income composition (Van den Berg, 2010; Ansoms and McKay, 2010; Xu et al., 2015). Soltani et al. (2012) and Tesfaye et al. (2011) studied conclude that the households' livelihood strategy choices mainly depend on differential access to and

control over five type of livelihood capital/assets. Additionally, it also depends on the significant influence of the location factor including geographical location and distance to key facilities such as road and market.

Over the past three decades, the role of NGOs in food security and development in general, has remained an area of considerable debate. Neoliberal economic policies such as structural adjustment policies supported this approach by guiding the donor funds through civil society (NGOs) instead of the state structure. Therefore, non-governmental organizations have become major players in social, economic, and environmental matters, especially in the field of poverty eradication. Many international development organizations such as the UN, World Bank, and IMF use NGOs as key collaborators to execute of their development projects (UN, 2005).

NGOs are non-profit institutes that provide several goods and services to communities voluntarily. They govern themselves and mostly run by volunteers even though the international organizations such as World Bank and International Monetary Fund granted a donation, many of them may avoid accepting the funding (Nunnenkamp and Öhler, 2012). Non-governmental organizations are numerous kinds of organizations that concerned in delivering a wide range of actions using diverse methods to dissimilar portions of the world (Puron et al., 2016).

The study results conducted by Nyang'au and his colleagues on the roles of NGOs in Tanzania was wake-up call to all stakeholders in government, academia, business, private sector, civil society, and the international community. The study findings confirm that the contribution of NGOs to fostering social progress in a developing country like Tanzania is undeniable (Nyang'au et al., 2016).

The poverty and the unemployment situation have prevailed in rural Bangladesh for decades. However, the involvement of NGOs like the GB & BRAC has made initiatives to improve the general situation at least to some extent. The findings of this study reveal an improvement in the current trend of poverty and unemployment, education facility, health & others situation in rural Bangladesh (Roy et al., 2017).

In addition to alleviate the rural poverty, NGO also plays numerable activities to develop territory wise due to the unavailability of resources for ultimate social development and meeting the basic living standard (Nilsson et al., 2020).

The NORAD report confirms that Norway provides nearly NOK 3 billion each year through non-governmental organizations and approximately one-fourth of this was strictly for humanitarian purposes. Also, this report added that Local Norwegian organizations and their network of partners in developing countries receive more than 80 percent of the total support provided to NGOs (NORAD, 2012).

The findings of the study that explore the experience of World Vision at grass-root level and its development endeavor claims that the WV has significant practical contributions in the areas of education, health, potable water supply, food security, and environmental protection (Ebssa, 2017). Ogbonnaya (2012) claim that Ethiopian Kale Heywot church that is indigenous faith organizations was highly intimate with local community and operate at grass root level to promote social and economic development activities through active participation of the community and ultimately to bring about sustainable development at the community level.

Tesfaye (2015) clarify that because most NGOs get their operational budget from a foreign source, this reason makes them depend on their donors' plan. In Ethiopia, only a few NGOs have started to engage in revenue-generating activities and are still dependent on foreign funds as well. Therefore, CSOs/NGOs do not have a sustainability plan for their projects, and the income generation and local resource mobilization activities are not implemented satisfactorily.

The Gambella region is the small marginalized region of Ethiopia and the region has earned an international reputation as generous and hospitable host people for hosting thousands of South Sudanese refugees. According to the data gained from one of my informants the presence of international agencies put the name of Itang special woreda in the air corridor of international arena. Today, different researchers, visitors, and NGOs from different parts of the world come to Itang special woreda for different purposes (Endalkachew, 2018).

The study findings by Endalkachew confirm that the presences of refugees have both positive and negative impacts on the host communities of Itang. Economically, the finding reveal that presence of refugees have a number of positive outcomes such as creation of new employment opportunities, diversification of production and commercialization of local goods and services, and infrastructural development by the aid agencies involved in hosting refugees. On the other hand, the findings also

presence some negative economic consequences on the host communities like diminishing of land holdings, environmental degradation and escalation of the prices of local products (Endalkachew, 2018).

### **2.3 Conceptual Model**

The system for livelihoods offers a systematic and complex approach to understanding how individuals make a living. It can be used as a loose guide to a variety of issues that are relevant to livelihoods or can be extensively researched in all its aspects (Kanji et al., 2005). Livelihood Approaches (LA) emphasizes the understanding of the context in which individuals live, the resources available to them, the livelihood strategies they follow in the face of existing policies and institutions, and the livelihood results they intend to achieve (DFID, 2000).

The emphasis is on conceptualizing and quantifying the asset portfolio of the household as an input into the explanation of the livelihood strategy of a household. If it allows researchers to take into account all the various types of assets and services that are likely to play a role in household livelihoods, it may provide a valuable starting point for household livelihood study (Jansen et al., 2004).

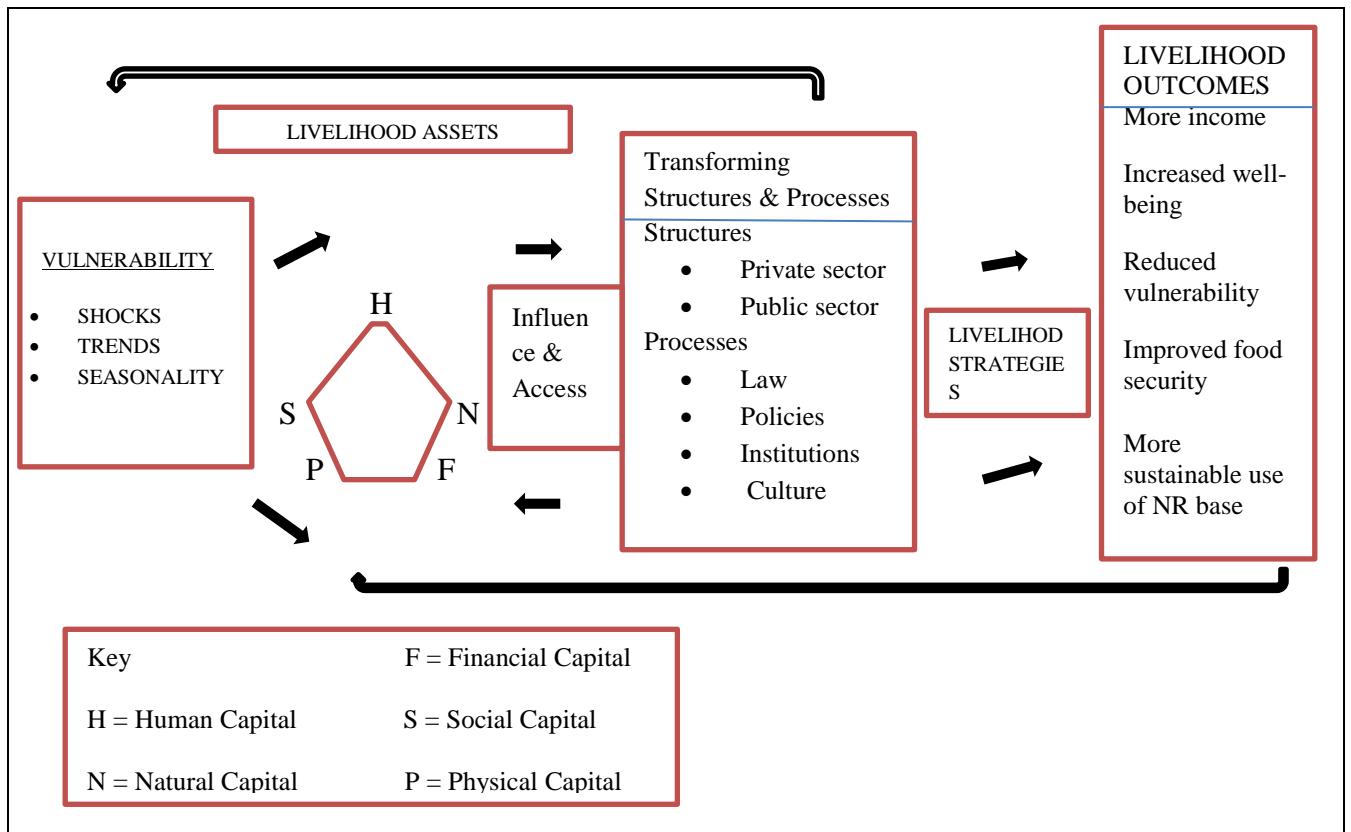
Therefore, an accurate and practical understanding of the strengths of individuals (here called "assets" or "capital") is necessary to evaluate how they seek to turn their assets into meaningful livelihood results (Bezemer and Lerman, 2002; Kollmair and Gamper, 2002).

Institutional mechanisms that mediate the ability to carry out those policies and obtain (or not) such results are of special importance in this context (Kanji et al., 2005). The idea of a livelihood approach has been fundamental to development practice in recent years, among the key elements of the livelihood system (Brown et al., 2006). Policymakers, academics, and other development professionals are paying more attention to the complex portfolio of activities carried out by poor households as a way of implementing and engaging in innovative poverty reduction initiatives that consider the diversity of these activities (Jansen et al., 2004).

Analyzing livelihood methods according to the assets-access-activities process has been going on for several years (Ellis, 2000). From person to household, to the household cluster, to extended kin grouping, to village, region, or even country, the

framework can be applied at several different scales, with sustainable livelihood results evaluated at various levels (Lovendal et al., 2004). It should be known that the framework for livelihoods is not intended to depict reality in any particular environment. Rather, it is intended as an analytical structure to deal with the complexity of livelihoods, to understand the effects on poverty, and to identify where interventions can best be made (Kollmair and Gamper, 2002). Once a brief description of the conceptual framework is given, the key concepts in the analytical framework work for the livelihood strategy will be addressed in the next section.

Figure 2.1 Sustainable Livelihood Frameworks



**Source:** Adapted from Desta Atnafu, 2017.

- The system discusses five categories of capital - the "asset pentagon" - and how policies and organizations turn these assets into solutions for livelihoods.
- The context of risk impacts on livelihood properties.
- Livelihood interventions achieve livelihood results that result in either change or degradation of household-level properties.



# **CHAPTER THREE**

## **RESEARCH DESIGN AND METHODOLOGY**

### **3.1 Description of the Study Area**

The Gambella Peoples' National Regional State is one of the nine states of the Federal Democratic Republic of Ethiopia (FDRE). The region is located between the geographical coordinates of 8° 14' to 8° 60.00' North Latitude and 34°34'59.99' East Longitude with a distance of 766 km in the southwest direction from Addis Ababa (Tesfaye, 2011). The region is bordered by the regional states of Benishangul Gumuz and Oromia from the north, SNNPRS and South Sudan from the south, Oromia and SNNPRS from the east, and the Republic of South Sudan from the west (Abrham, 2002).

The region has a total area of 34,063 km<sup>2</sup> with a total population of 306,916 people consisting of 159,679 males and 147,237 females. It is divided into three ethnic zones, Nuer, Anuak, and Majeng Zones, which consist of 14 administrative Woredas that include one special woreda (CSA, 2007).

The climatic characteristics of the regions are divided into three agro-climatic zones: Woina Dega, Kola, and Bereha. In the Woina Dega areas, Godere and part of Dimma woredas fall, while under the Kola zone lay Gambella town, Abol, Abobo, Itang, and Gog woredas. In the Bereha climate zones, Jor, Makuey, Wanthoa, Lare, Jekow, and Akobo woredas are found (CSA, 2007).

The average regional mean temperature is between 27<sup>0</sup>c and 33<sup>0</sup>c, depending on the agro-ecology of the area. In March, the highest monthly temperature is recorded, reaching up to 45<sup>0</sup>c, while the lowest temperature ranging from 10 and 30<sup>0</sup>c is recorded in August. Rainfall in the region begins at the end of April and lasts in large quantities until October (CSA, 2007).

Ninety percent of the Gambella region's population lives in rural areas and most of them are engaged in subsistence farming, exporting part of their harvest to local markets. Subsistence agriculture, herding, hunting, fishing, forestry, mining, and beekeeping are used to secure the means the necessities of life in the region for local consumption and exchange (Cascão, 2013).

The main sources of livelihood of the people in the region are agro-pastoralism by the Nuer ethnic group and agro-fisheries by Anuak ethnic group. Furthermore, Opo and Majang ethnic communities are agro-hunting of wild animals in the region (Fanta, 1998). The region's main crops grown for consumption and sale are maize, sorghum, rice, and sweet potato, and cattle, goats, and sheep are the main livestock reared in the region. Other economic activities include coffee cultivation, Dimma Woreda gold exploration, and continued work on the remaining state cotton farms in Alwero-Peno Woreda, and Malaysian and Chinese oil exploration (Tesfaye et al., 2011).

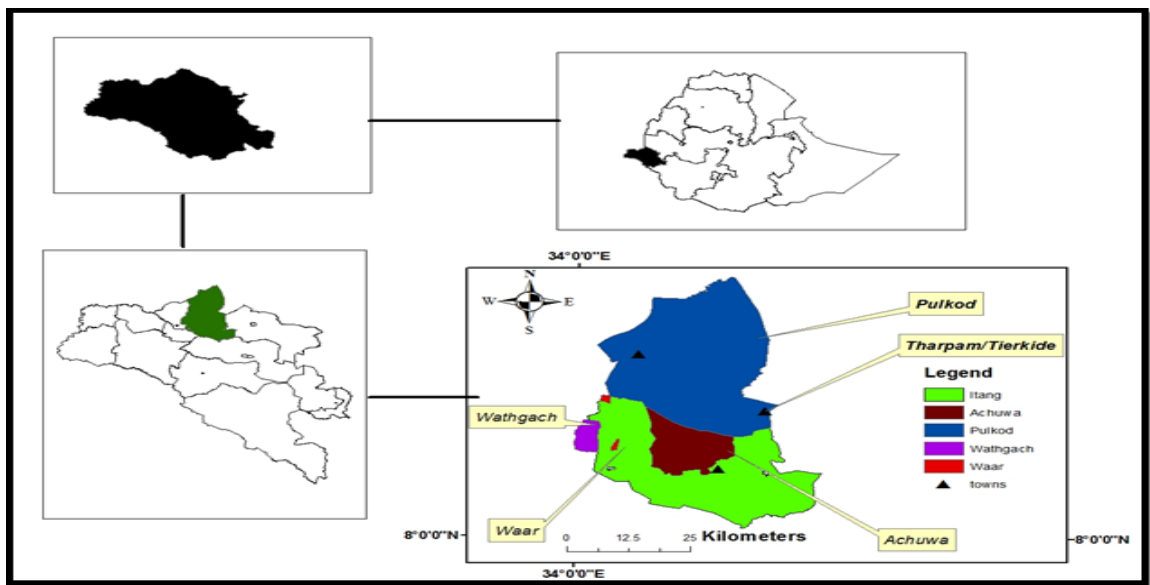
Itang is a woreda in the Gambella region of Ethiopia and because Itang is not part of any Zone in the region, it is considered a Special woreda, an administrative subdivision which is similar to an autonomous area. It is bordered on the south and southeast by the Anuak zone, on the west by the Nuer zone, on the northwest by South Sudan, and on the north by the Oromia region; part of the southern boundary is defined by the Alwero River. The major town in Itang special woreda is Itang which is 42 km away from the main town of Gambella region (Alemseged et al., 2014).

The terrain is mostly flat and the altitude of this woreda ranges from 350 to 480 meters above sea level. The rivers include the Baro and Alwero which is its tributary. According to the Atlas of the Ethiopian Rural Economy published by the Central Statistical Agency (CSA), around 10 percent of the woreda is forest (CSA, 2007).

Based on the CSA (2007), this woreda has a total population of 35,686, an increase of 190.14% over the 1994 census, of whom 17,955 are men and 17,731 women; with an area of 2,188.34 square kilometers, Itang has a population density of 16.31. A total of 6,578 households were counted in this woreda, which results in an average of 5.4 persons to a household, and 6,248 housing units. The main ethnicities of this Zone are the Nuer (63.96%) and Anuak (25.17%), all other ethnic groups 10.87%.

The religion with the largest number of believers is Protestant with 81.63% of the population, while other groups with sizable followings are traditional beliefs (7.54%), Orthodox Christian 6.27%, and Roman Catholic 2.62%. The economy of Itang is predominantly agricultural. There are no agricultural cooperatives, no documented roads, and little other infrastructure. The woreda is one of the highly affected woreda by floods.

Figure 3.1 Map of the Study Area



Source: Sketched by Chambang using GIS software

### 3.2 Research Design and Approach

The challenging problem that follows the task of defining the research problem is the preparation of the design of the research project, popularly known as the “research design”. A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2004). For this study, the descriptive and inferential types of research design were used. The study used the mixed approach of both quantitative and qualitative with cross-sectional types of study.

### 3.3 Sources and Types of Data

The source of data for this study includes both primary and secondary data. Primary data were collected from the households of the local communities, NGOs officials, and government officials in Itang special woreda. The secondary data, on the other hand, are those which have already been collected by NGOs and government which have been passed through the statistical process. Also secondary data can be collected from work of others scholars through internet. The types of data for this study used to validate this research include both quantitative and qualitative types of data.

### 3.4 Sampling Design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample.

There are many sample designs from which a researcher can choose, for example when population embraces a number of distinct categories, the frame can be organized into separate non-overlapping group (strata). Each stratum is then sampled as an independent sub-population, out of which individual elements can be randomly selected using proportionate allocation. Therefore, this study uses the stratified random sampling because the Itang communities were categorized into different kebeles and each kebele act as strata.

Three kebeles Achua, Pulkod and Wathgach were selected because of their access to NGOs development programs compared to other kebeles in the Itang. Also, these kebeles were convenience for the researcher to reach them easily due to road access and their closeness to the main town of Itang as well as Gambella city.

The Gambella Children and Community Development Organization-Project on Empowering Disadvantaged Community for Improving Livelihood and Access to basic services and ZOA-projected on Improving Food Security & Strengthening Community Cohesion were selected. The criteria of NGO selection was based on the number of livelihood programs that NGO run in Itang special woreda.

Therefore, 10 key informants were selected from NGO experts, Government officials, and Local communities' leaders to support the result obtained from household heads through questionnaires.

#### **3.4.1 Target Population of the Study**

A population is a well-defined collection of individuals, programs, elements, incidents, or groups of items that are being examined (Obinga, 2012). The target population of this study was 6,578 households in Itang special woreda in which the finding is to be generalized. The sample population which the sample was actually drawn was 1376 households from three kebeles of Achua, Pulkod, and Wathgach (CSA, 2007).

#### **3.4.2 Sampling Size and Technique**

A sample design or technique is a plan of getting a sample from a specific population (Kothari, 2004).

There are several methods of determining the sample size from finite population participants and the sample size for this study was determined using the (Yamane, 1967) sample formula because the study population is less than 10000.

$$n = \frac{N}{1+N(e)^2} \text{----- (3.1)}$$

Where; n is the required sample size at a confident interval of 95% and e is an acceptable error at the marginal level of 5%, N is the total population. Using the total population of 1376 and error margin of 0.05, the sample size was calculated as follow:

$$n = \frac{1376}{1+1376(0.05)^2} = 309.9099 \approx 310$$

### 3.4.3 Sampling Frame

The attempt to group the sampling frame into three kebeles was based on the study's villagization program. A proportionate sampling technique was used to draw sample sizes from each Kebele.

Table 3.1 Population of Study and Sample Distribution

S/N	Kebele	Sample Frame	Proportion	Sample
01.	Achua	507	37%	114
02.	Pulkod	482	35%	109
03.	Wathgach	387	28%	87
<b>Total</b>		1376	100%	310

**Source: Survey Computation, 2021**

### 3.5 Data Collection Tools

The study data were collected from the households of Itang communities. The main tools were questionnaires, interviews, and internet. A total of 306 questionnaires were distributed to households and interviews were giving to 10 key informants and three enumerators were involved in the questionnaire administration.

### 3.6 Methods of Data Analysis and Presentation

Data analysis has an indispensable role in finalizing the research work. Data analysis begins by categorizing and putting data into different categories for their analysis. Qualitative analysis technique was used to analyze data collected from key informants

through an interview while quantitative analysis techniques such as descriptive statistics and econometric models were used to analyze data from household of local communities through questionnaires.

### 3.6.1 Descriptive Statistics

All the study of frequency distribution is covered in the descriptive section of the analysis. The data was then displayed in this section of the study using tables and graphs/charts. Therefore, the data was simply defined in this section and no relationship was considered between the variables.

### 3.6.2 Econometrics Model

Linear regression is a statistical analysis which depends on modeling a relationship between two kinds of variables, dependent (response) and independent (predictor). The main purpose of regression is to examine if the independent variables are successful in predicting the outcome variable and which independent variables are significant predictors of the outcome (Koloğlu et al., 2018). In this study, a linear regression with multiple independent variables was built, in order to seek relevant factors that affect the market value of a football player in forward position.

Multivariate linear regression model study the concurrent relation that certain dependent variable has more than one independent variables that can be used to forecast and predict it (Lefter, 2004). The goal of multiple-linear regression is to model the relationship between a dependent variable and two or more independent explanatory variables/regressor variables (Geoffrey and Montgomery, 2012).

### 3.7 Model Specifications and Description of Study Variables

The general form between the dependent variable and independent variables for the multiple linear regression equation is defined as:

$$\text{Log}(Y) = f(\text{Sex}, \text{Age}, E, MS, HHS, O, SI, HHLS, C, H, IGA, T, S) \text{ ----- (3.2)}$$

Where;

- |  |                                   |
|--|-----------------------------------|
| ✚ Log (Y)= gross income of a household | ✚ SI = Household source of income |
| ✚ Sex = Sex of the household head      | ✚ HHLSH = HH Livelihood strategy  |
| ✚ Age= Age of the household head       | ✚ Cr = Credit access              |
| ✚ Edu-yrs = HH head Education level    | ✚ H = Health facilities access    |
| ✚ MS= Martial Status of household head | ✚ IGA= Access to IGA program      |
| ✚ HHS= Family Size                     | ✚ T = Training access to hh       |
| ✚ O =Occupation of the household head  | ✚ S = Household Saving            |

$$Y_i = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + \beta_7x_7 + \beta_8x_8 + \beta_9x_9 + \beta_{10}x_{10} + \beta_{11}x_{11} + \beta_{12}x_{12} + \beta_{13}x_{13} + U_i \text{ ----- (3.3)}$$

Where;  $\beta_0$  is a constant term and  $\beta_1$  to  $\beta_{13}$  are the regression coefficients,  $k$  is the number of regressor variables, and  $U_i$  is the error term.

So, an extension of simple linear regression, where there are  $x$  explanatory variables, can be considered as multiple linear regression, or simple linear regression can be considered as a special case of multiple linear regression, where  $x= 1$ . The 'linear' concept is used since we believe that  $y$  is directly related to a linear combination of the explanatory variables in multiple-linear regression. In economic studies seeking to forecast the income of a person given many socio-economic characteristics, the multiple-linear regression model is most widely used (Mark & Mark).

### 3.7.1 Multi Linear Regression Model Assumption

Five separate assumptions must be met to correctly approximate the regression coefficients using ordinary least-squares (OLS). Violation of these assumptions will yield a beta that, if applied to different data sets, would vary significantly. Also the system of ordinary least squares is used to approximate regression coefficients. The aim is to measure the least square approximation vector  $\beta_s$  by minimizing the sum of residual squares  $SS_{Res}$  (Geoffrey and Montgomery, 2012).

### 3.7.2 Potential Glitches

Some potential errors that may arise in the multiple linear regressions model like multicollinearity that occurs when the covariates are highly correlated, i.e. when there are near-linear dependencies between two or more regressor variables. It presents lead significant effects including poor estimates of  $\beta_s$ , large standard errors, and susceptibility to influential observations. Another problem in the OLS is the presents of heteroskedasticity that violate the constant variance of residuals assumption. If heteroskedasticity is present, the standard deviation may be contradictory and the coefficients' significance may be invalid, and OLS estimators can no longer be the best linear unbiased estimators (Herald, 2016).

Autocorrelation which violate assumption 4 is another problem that occurs when the errors at different periods are correlated with themselves. It often happens when regressor variables are missing from the model or the time dependency is not taken into consideration. Variance inflation factor and Durbin Watson test plus others tests

can be used to detect the present of potential problems in multivariate OLS regression (Geoffrey and Montgomery, 2012).

### **3.8 Descriptions of the Study Variables and Expected Signs**

Linear regression as a statistical analysis depends on modeling a relationship between dependent and independent. This study use multivariate linear regression model with main purpose of examining the significance of independent variables in predicting the outcome variable and which independent variables are significant predictors of the outcome.

The following variables are specified for the multivariate regression model for the log income of household:

Log income (Y): is a dependent variable or the variable of interest for the study that was predicted based on the explanatory variables.

Gender: is dummy variable which takes value 1 if the household head is male and 0 otherwise. Households headed by males are expected to have better livelihood than households headed by female.

The age of household head (Age): was hypothesized to influence the household livelihood positively because older household head is believed to have experience and knowledge in farming and enable them to accumulate wealth through time. They wer believed to management the household's resources wisely than younger one.

The education level of the household head (Edu-year): It was assume that household head with better education level are believed to have a chance to diversify households income sources and better manage their farm and agricultural.

Marital status of the household head (MS): is a categorical dummy variable which may be married, single, widowed and divorced. There are no prior expectations for those variables.

The size of family (HHS): In the study area, where there is a persistent shortage of livelihood resource, it was expect that households with larger number of members will face livelihood insecurity because of high dependency burden. Thus, large family size affects Household's livelihood situation negatively.



Occupation: The occupational status of household head is a categorical dummy variable taking 1 if the household head is farmer, 2 if household head is trader, and 3 if work in the formal sector for salary (employee). There is no prior expectation in this case and it is included to test its effect.

Source of household income (SI): is dummy variable used to explain annual income, it take 1 if household depend only on agriculture before project and 0 otherwise. The researcher expected a positive influence if household depend on agricultural and other.

Household livelihood strategies (HHLS): is the strategies used by household for her livelihood satisfaction and it is categorical dummy variable that take 1 if household use agriculture intensification/extensification, 2 if diversified her source livelihood and 3 if the household use only employment opportunities.

Credit: It is another dummy variable that take 1 if the household has access to the credit and 0 otherwise. Credit is often viewed as an entry point for initiating development activities among the poor and it is expected to have positive influence on the household livelihood.

Health status of household (Health): is dummy variable that 1 if the household has access to health facilities and 0 otherwise. The access to health facilities by the household is expected to have positive influence on household annual income.

The in income generating activities (IGA): is dummy variable that takes 1 if the household has access to income generate activities from NGOs programs and 0 otherwise. It is expected to have positive relationship with annual income.

Training: Training is also another dummy variable that take 1 if the household has access to training and 0 otherwise. It is expected to have positive influence on annual income level if the household has access to training.

Saving: Saving habit is considered as one of the way to improve the livelihoods of the households and it is expected to have positive influence on household annual income. Saving is assumed as future transferred consumption because what is saved today has benefit to improve the livelihoods of the households by investing it in income generating activities.

### **3.9 Ethical Considerations of the Study**

In general, at each stage of a research process, ethical questions arise. The necessary approval and permission from Jimma University (JU) were obtained to conduct this research and obtain data from local communities, government officials, community leaders, and senior NGO experts. The questionnaires were accompanied by a covering letter ensuring the utmost secrecy and confidentiality of the participants, indicating that information obtained from them would be used for academic purposes and would not be disclosed to a third party. In the study, names and other identifying information were not used unless it was needed.

# CHAPTER FOUR

## RESULTS AND DISCUSSION

### 4.1 Descriptive Analysis

The Table 4.1 below presented the response rate of the respondents from the sample household of 310 selected from three kebeles. Related to sample size, 310 questionnaires were distributed among the local communities' households, but 306 questionnaires were successfully returned, making the respondents' answer rate to be 98.7 percent while the remaining 4 questionnaires (1.3 percent) were not returned. Also, the results of the 10 primary key informants interviewed from NGOs consultants, government officials, and local community leaders, have been successfully returned.

Table 4.1 Response Rate

Respondents Category	Frequency	Percentage
Responded	306	98.7
Not Respondent	4	1.3
Total	310	100%

Source: Survey Result, 2021

#### 4.1.1 Demographic Characteristics of the Respondents

The general characteristic of the respondents, include gender, level of education, marital status, occupation, and family size were presented in this section.

##### *4.1.1.1 Household Head Sex, Age, Marital status, and Size of the Household*

In Table 4.2 below, 75.2 percent of respondents were male and 24.8 percent were female. These indicate that there was a gender disparity meaning that more male were targeted in the study program compared to female. For simplicity in descriptive analysis part, the Age compositions of the households' heads were grouped in to four categories.

The results in the Table show that 26.1 percent of respondents were between 18-25 years, 31.7 percent of respondents were in the range of 26-35. The remaining 22.6 percent and 19.6 percent of respondents were in range of 36-45 and = >46 age group respectively.

From the sample of households' head 31 percent of the respondents were married while the remaining respondents were categorized into single 20.3 percent, divorced 26.5 percent, and widow/widower 22.2 percent. The household size accounts for the number of individuals in the house. The average family size of the sample households is 5.4 with the minimum and maximum family sizes of 1 and 14 respectively.

Table 4.2 Distribution of Respondents by their Sex, Age, and Marital status

Profile	Response	Frequency	Percent
Sex of Household Head	Male	230	75.2
	Female	76	24.8
Age of Household Head	18-25 years old	80	26.1
	26-35 years old	97	31.7
	36-45 years old	69	22.6
	46 and above years old	60	19.6
Marital Status of Household head	Single	62	20.3
	Married	95	31.0
	Divorce	81	26.5
	Widow/Widower	68	22.2
Total		306	100%

Source: Survey Result, 2021

#### ***4.1.1.2 Educational Attainment and Occupation of Household Head***

From Table 4.3 below, the educational level of the heads of the households was grouped into five categories to simplify it for the descriptive analysis. But in the empirical part only the number of years that an individual spends in school was recorded and zero years were recorded for illiterate heads of households.

The result in the table 4.3 revealed that from the sample household head of the 306 households, 40.8 percent of the households' heads were illiterate, 24.5 percent attended the elementary school, and 21.6 percent attended the secondary school.

The remaining 7.2 percent of respondents were both certificate/diploma and 5.9 percent were degree/master respectively. Concerning the occupation of the households heads, the majority of respondents 49 percent were farmers while the remaining 26.5 percent and 24.5 percent were traders and government/NGOs employees respectively.

Table 4.3 Education and Occupation Status of Respondents

Description	Response	Frequency	Percent
Household Head Educational Level	Illiterate	125	40.8
	Elementary School	75	24.5
	Secondary School	66	21.6
	Certificate or Diploma	22	7.2
	Degree and above	18	5.9
Occupation of Household Head	Farmer	150	49.0
	Trader	81	26.5
	Employee	75	24.5
Total		306	100%

Source: Survey Result, 2021

The study shows that most of the households' heads in the woreda were illiterate even those with formal education levels were in elementary and secondary school level. The study conducted by Meron (2014), show that as the level of education rises the number of household heads getting the next higher education decreases which showing the same result with this study. It was also confirm that the level of education is a vital determinant of the form of labor markets and those with less education most frequently operate in low-wage labor markets with casual, unqualified, and part-time jobs (Lanjouw, 2007).

#### **4.1.2 NGOs Programs on Household Financial Assets**

This study examines the contribution of the GCCDO and ZOA development projects implemented in Itang Special Woreda to the improvement of livelihood of local communities in Itang special woreda. Three metrics have been used to describe the project's effect on household financial assets: household monthly revenue, the amount of savings, and access to credit/grain from the NGOs programs.

##### **4.1.2.1 Access to Cash/grain through Income Generating Activities (IGA)**

As seen in Table 4.4 below, majority 56.9 percent of respondents have access to cash/grain from the projects intervention and 43.1 percent have no access to cash/grain from NGOs' projects operations through income-generating activities.

The result in that table show that from the sample households of 174 who have access to cash/grain through IGA in the woreda, 55.2 percent of the respondents reported that their income increased greatly, 39.6 percent of the respondents also reported an increase in their households income levels while the remaining 5.2 percent of the respondents said that the access to cash/grain did not make a change in their households income levels.

From the result we seen that the majority of households reported access to cash/grain from the projects and also due to the access most households got an improvement in their income levels. These projects interventions also lead many households to move out from the agricultural as source of their livelihood toward non-agricultural and this leads to increment in their income. From this result, we could conclude that NGOs' projects operations brought an improvement in the local communities' livelihood improvement Itang special woreda.

Table 4.4 Household Access to Cash/Grain through IGA

Description	Response	Frequency	Percent
Household access to cash/grain	Yes	174	56.9
	No	132	43.1
Total		306	100
IGA Implication on income	Increased greatly	96	55.2
	Increased	69	39.6
	No change	9	5.2
Total		174	100

Source: Survey Result, 2021

Informative evidence obtained from the interview with key informants indicates that most people borrow money from individual money lenders at a costly pace before the project. During interviews with key informants, the majority of respondents said that the project intervention increased their households' financial assets: income, enhanced saving habits, and access to credit.

#### **4.1.2.2 Household Income**

The household with higher income-level have more options, can meet their basic needs, and enjoy wider opportunities. The assumption is that the project is intended to support the household in terms of enhancing and diversifying the revenue stream.

As shown in Table 4.5 below, 53 percent that is huge number of households have source of income before the projects while 47 percent of the households have no adequate source of income for their livelihood. The result show that the majority 43.5 percent of the respondents highly diversified their livelihood and 33.6 percent of respondents diversified their source of livelihood to medium level. The remaining 22.9 percent of respondents were lesser or not diversified their sources of livelihood. From the result we confirm that majority of households have diversified their sources of livelihood due to NGOs development projects intervention.

Also from result in the same table, 48.7 percent of respondents reported a rise in their income levels, 43.5 percent of respondents reported that there was no change in their income level, and 7.8 percent of respondents said they were unaware about the projects contribute to their income levels.

Table 4.5 Household Source of Income and Livelihood Strategies

Description	Response	Frequency	Percent
Household source of income	Yes	162	53.0
	No	144	47.0
Livelihood Diversification	High	133	43.5
	Medium	103	33.6
	Less/Not	70	22.9
Household Income Level	Increased	149	48.7
	No change	133	43.5
	Don't know	24	7.8
Total		306	100%

Source: Survey Result, 2021

The percentage of high diversifiers found in this study was a lot higher than households of West Bengal which was 21.74 percent found by the study of (Sahal and Baha, 2010). Adugna (2012) had also got 69 percent of less diversifier in pastoral areas of southern Ethiopia compared to this study finding.

The reason for having such as a bigger number of high diversifiers in the study area could be the availability of assets for various livelihood strategies. The area is also suitable for crop, livestock, and fishery production. The better existence of employment opportunities and remittance also contributed to the high diversified result of households.

#### **4.1.2.3 Households' Saving**

As seen in Table 4.6 below, the majority of respondents 41.8 percent reported that their savings did not change, 31.7 respondents reported that their households did not save, and the remaining 26.5 percent respondents reported a change in their household saving. The lack of change in households saving and the household those do not save totally could be attributed to high spending due to large family size.

The table show that from the sample households of 209 who used to save, that 30.4 percent of the respondents save their money in the bank, 18 of respondents save in micro-finance, and 11.4 percent of respondents save in VSLA. The remaining 8.5 percent of respondents save in other forms and while 31.7 percent of respondents did not even save.

Table 4.6 Household Saving and Saving Institutions

Description	Response	Frequency	Percent
Household saving trend	No change	128	41.8
	Increased	81	26.5
	No saving	97	31.7
Household saving institution	Bank	93	30.4
	Microfinance	55	18.0
	VSLA	35	11.4
	Other forms	26	8.5
	Do not Save	97	31.7
Total		306	100%

Source: Survey Result, 2021

The result of this study shown in the table 4.5 above reveal a low increase of 26.5 percent in the saving level compared to 75 percent increase in the level of saving of the study conducted on GOAL Ethiopia project in Darolebu and Hawigudina woredas of West Haraghe Zone (Desta, 2017).

#### **4.1.3 NGOs Programs on the Household Physical Assets**

The effect of project intervention on the physical resources and well-being of the household was measured through types of properties, ownership, quality, and improvement of the household, and diet condition.

##### **4.1.3.1 Types of Asset Owned by Household**

One of the important impacts of projects at the household level is the improvement in the status of household properties. Household asset ownership also measures the



changes in the income of households. The presumption is that the projects intervention could improve the income of the household which could enhance their capacity to buy the household properties.

The data in the Table 4.7 shows that the average table ownership of respondents was 1.6 with a minimum of 1 table and a maximum of 2 tables in households before the project, while this average increased to 3.34 after the project, with a minimum and maximum of 1 and 8 tablets respectively for household. The average household refrigerator ownership previously was 0.46 with a minimum of 0 and a maximum of 1 refrigerator, while this average after project interference raise to 0.84 with a minimum of 0 and a maximum of 3 household refrigerators.

From the results in that Table, before the projects the averages for households properties such as tape, chair, and the bed is 0.6 with a minimum of 0 and a maximum of 1 tape, 3.16 with a minimum of 2 and a maximum of 4 seats, and 0.62 with a minimum and a maximum of 0 and a maximum of 1 household bed. After the project, the average rose to 3.01 with a minimum of 2 and a maximum of 5 tapes, 7.25 with a minimum of 4 and a maximum of 14 seats, and 1.6 with a minimum of 0 and a maximum of 3 household beds. Besides, the projects interventions also show some remarkable rise in the other types of assets such as farm instruments and livestock.

Table 4.7 Projects Impacts on Households Asset Ownership

Asset	Duration	Min	Max	Mean	Std. Deviation
Table	Before project	1	2	1.6	0.49
	After project	1	8	3.34	1.6
Refrigerator	Before project	0	1	0.461	0.499
	After project	0	3	0.84	0.811
Farm tools	Before project	2	3	2.61	0.489
	After project	2	8	3.89	1.2
Tape	Before project	0	1	0.6	0.49
	After project	2	5	3.01	0.861
Chair	Before project	2	4	3.16	0.837
	After project	4	14	7.25	2.356
Bed	Before project	0	1	0.62	0.487
	After project	0	3	1.6	0.85
Livestock	Before project	6	28	12.42	5.451
	After project	5	88	8.87	6.48
Source: Own Survey Result, 2021					

#### **4.1.3.2 Households' House Ownership and Improvements**

House ownership and improvements increase the financial resources and living conditions of the families. It was expected that the projects interventions could enable the households to have better ownership and improvement in their housing and homes.

The results in Table 4.8 show that 94.1 percent of respondents had their own home and only 5.9 percent of respondents did not have their own home. Related to the house quality, 31.7 percent of respondents lived in a medium quality houses, 30.4 percent of respondents lived in a good quality houses, and the remaining 37.9 percent of respondents lived in poor quality houses.

From NGOs projects intervention, 55.9 percent of households improved their houses, whereas 44.1 percent of households did not improve as shown in Table 4.8 below. Most of the improvements 50.3 percent and 36.8 percent were mainly made on sanitation systems and repairs respectively.

Only a few households 12.9 percent extended their houses by expanded the existed houses or building another house.

Table 4.8 House ownership and housing improvements

Description	Response	Frequency	Percent
Household home ownership	Yes	288	94.1
	No	18	5.9
Quality of the house	Poor quality/No house	116	37.9
	Medium quality	97	31.7
	Good quality	93	30.4
Improvement on the house	Yes	171	55.9
	No	135	44.1
Total		306	100
Type of the improvement	Repair	63	36.8
	Expansion	22	12.9
	Sanitation system	86	50.3
Total		171	100%
<b>Source:</b> Survey Result, 2021			

#### **4.1.3.3 Household Diet Condition**

It is obvious that food is the fundamental need of life and the state of diet used in the household is an indication of the well-being of the household. The Table 4.9 reported that 35.3 percent of the respondents had meals twice a day 42.8 percent of respondents had meals three times a day in their household.

The remaining 18.3 percent and 3.6 percent of respondents had meals more than three times and once a day respectively in their households.

Table 4.9 Household Diet Condition

Items	Response	Frequency	Percent
Household Meal	Once	11	3.6
	Twice	108	35.3
	Three-time	131	42.8
	More than three	56	18.3
Meal after the project	Increased	227	74.2
	No change	65	21.2
	Don't know	14	4.6
Total		306	100%
Source: Own Survey Result, 2021			

From the result in that table 74.2 percent of the respondents reported a change in their households' diet condition, 21.2 percent said that the projects did not brought a change in their households diet condition, and the remaining 4.6 percent were unaware about projects contribution in their households diet condition.

Therefore, from these results, it can be inferred that projects initiatives had a positive impacts on diet conditions for households in Itang Special woreda compared to their traditional way of living. Because the local communities in their traditional way of living experienced the culture of eating twice or sometimes once a day even though they have a lot of food to eat.

#### **4.1.4 Non-Financial Services of Household**

Non-financial services include information, education, networking/access to markets, and recognition. They should complement the financial offerings of a bank because they are not a part of marketing effort or corporate social responsibility (CSR), for that reasons they need a business strategy to ensure their sustainability (SIML, 2016).

##### **4.1.4.1 Household Access to Education**

The Table 4.10 below reveals that 69.3 percent of respondents reported that their children have access to the formal education in the school constructed by the projects and 30.7 percent of respondents reported that they did not have access to the formal education.

From the same Table 78.1 percent of respondents claim that there was an improvement in average school attendance, 13.7 percent reported that there was no change in school attendance, and the remaining 8.2 percent of respondents reported that they were unaware about the contribution NGOs projects to the school attendance in the Itang special woreda.

According to the results in the Table 4.10, we can conclude that the involvement of NGOs projects resulted in direct access to education because the projects constructed many schools that increased the overall school attendance in the woreda. The other elements of the intervention, such as different materials of playing for children in school, access to water, and households' livelihood support, etc., played a major role in increasing the school attendance for children in the Itang special woreda.

Table 4.10 Household Educational Access

Items`	Response	Frequency	Percent
Children access to formal education	Yes	212	69.3
	No	94	30.7
Overall school attendance program	Increased	239	78.1
	No change	42	13.7
	Don't know	25	8.2
Total		306	100%
Source: Own Survey Result, 2021			

The educational development is one of the focus fields of action for the poverty reduction plan at the individual and community level. On average, the returns from spending in schooling are smaller, but the return on income growth is much higher for people of higher education levels (Assefa et al., 2005). Assefa and Gezahegne (2004) reported that one of the most important determinants of poverty is the lack of educational opportunity and also differential access to educational opportunity is closely correlated with income inequality. This study data found that the availability of adequate education contributes greatly to the exercise of poverty reduction and the educated farmers are more likely to accept emerging technology and gain a greater return on their ground.

#### **4.1.4.2 Household Access to Health Facilities**

There is a bi-directional relationship between income and poor health in which the poor health contributes to poverty and poverty leads to poor health conditions. The

poor often suffer from poor health facilities due to a lack of financial resources to pay for health care, food, clean water, and good sanitation (Daniel , 2004).

Table 4.11 indicates that about 35.6 percent of respondents had access to medical facilities while 64.4 percent of the respondents did not have access to medical facilities. Regarding the source of access to medical care, 46.1 percent of respondents accessed their health care from government health centers, 30.4 percent of respondents got their health facilities from the local communities’ clinics or pharmacies, and the remaining 23.5 percent of respondents had their health facilities from NGOs projects in the Itang special woreda.

Approximately 25.5 percent of respondents reported the improvement in their health facilities and 11.8 percent of respondents reported a decrease in their access to medical facilities after the projects interventions. The majority 62.7 percent of respondents reported that there were no changes from projects intervention in woreda.

Table 4.11 Household Health Access

Description	Response	Frequency	Percent
Access to health facilities	Yes	109	35.6
	No	197	64.4
Source of health facilities	Gov’t	141	46.1
	Local communities	93	30.4
	NGOs	72	23.5
Overall medical Status after projects	Increased	78	25.5
	Decreased	36	11.8
	No changed	192	62.7
Total		306	100%

Source: Survey Result, 2021

As far as health care, clean water and good sanitation are concerned, the outcome of key informant interviews showed that access to such facilities would contribute to household income improvement. Daniel (2004) claim that bad health can lead to hunger, as well as good health can lead to poverty reduction and household standard of living.

#### ***4.1.4.3 Household Access to Training***

Training is one of the non-financial programs offered to improve the expertise and competitiveness of local populations in the study area. Table 4.12 reveals that 56.8

percent of respondents said that they obtained the training, whereas 43.2 percent of respondents from sample households reported that they did not received the training.

From the 174 households of the survey who had access to training, 26.4 percent of clients received training on IGA operations, 28.2 percent on crop production, and 21.2 percent on saving activity, while the remaining 15 percent and 9.2 percent received training on women's empowerment and general training, respectively.

Concerning the number of training taken, 38.5 percent of respondents attended training once, 30 percent twice, 19.5 percent three, and 12 percent of respondents attended training more than three times from the NGO programs.

Table 4.12 Training for households

Profile	Response	Frequency	Percent
Household access to training	Yes	174	56.8
	No	132	43.2
Total		306	100
Type of training taken	Training on women empowerment	26	15.0
	Training on IGA activities	46	26.4
	Training on crop production	49	28.2
	Training on saving practice	37	21.2
	General training	16	9.2
Number of training taken	Once	67	38.5
	Twice	52	30.0
	Three	34	19.5
	More than three	21	12.0
Total		174	100

Source: Survey Result, 2021

From the interview with key informants, most of the participants state that the training offered by NGOs was important and beneficial to boost the level of the households' income by participating in various IGA programs and by encouraging women to share with their husbands in the household decision.

#### ***4.1.4.4 IGA and Beneficiaries Accessibility to the Market***

The revenue-generating program includes the market place and the market place is the only way that the goods can reach and also where the allocated market/monetary value will be provided to the commodity.

Table 4.13 below indicates that the majority 82.7 percent of respondents had a market place to access their goods and 17.3 percent of respondents claimed they had no place to market their business objects.

From the Table the majority 31.3 percent of respondents said that their market was created by government and 30.4 percent of respondents said that their market was created by the local communities' interaction.

The remaining 21 percent of respondents reported that their market was provided by the NGOs and 17.3 percent of the respondents reported that they did not have market place for their products.

Table 4.13 Market Chain

Profile	Response	Frequency	Percent
Tangible market to sell items	Yes	253	82.7
	No	53	17.3
Who Create Market Place	NGOs	64	21.0
	Gov't	96	31.3
	Local communities	93	30.4
	No Market Place	53	17.3
Total		306	100%

Source: Survey Result, 2021

According to the IGA manual, to decide if the business can profitably compete and fill market holes, business evaluation is important in evaluating whether the products and services compete and may or may not be present to the market. It is important to know about the quality and availability of products and services offered on the market before starting a business (USAID, 2003-2007).

#### **4.1.5 Empowerment of Women in the Household Livelihood Activities**

Johnson and Rogaly (1997) confirm that increasing the influence of women over the income and household resources can boost their awareness and skills in production and trade, and can also increase their participation in decision-making in households.

From the result in Table 4.14, about 36.6 percent of the respondents reported that the husband and wife jointly decided to take the credit, 44.4 percent of respondents said that the decision to take the credit was only made by the husband and 19 percent of respondents said that only the wife could make the decision. Related to decision on

using fund, 33.3 percent of respondents indicated that husband and wife have a judgment about how to use the fund, 49 percent said that only husbands has role in the decision to use the fund and the remaining 17.7 percent reported that only a wife has a role in how to use the household fund.

Table 4.14 below, reveals that 45.4 percent of respondents reported that women play an important role in household IGA for the households, 54.6 percent of respondents reported the opposite in regard to women role.

The result indicates that 41.5 percent of respondents said that women had a lower level of self-confidence in the families' decision-making and 30.7 percent of respondents reported that they had no confidence in the households' decision-making. Also, 27.8 percent of respondents reported a higher level of self-confidence by women in the households' decision-making

Table 4.14 Married Women Empowerment in the Household Decision Making

Profile/Indicator	Response	Frequency	Percent
Women role in the IGA	Yes	139	45.4
	No	167	54.6
Decision maker on the credit taking	Husband & I	112	36.6
	Husband	136	44.4
	Only I	58	19.0
Decision maker on the usage of fund	Husband & I	102	33.3
	Husband	150	49.0
	Only I	54	17.7
Level of confidence in decision making	Very confidence	85	27.8
	Confidence	127	41.5
	No confidence	94	30.7
Total		306	100%
<b>Source:</b> Survey Result, 2021			

The interview results of the key informants showed that the NGOs development projects improved the participation of women in decision-making and also increased their self-confidence in decision-making in households' affair. The result also shows that the IGA activities granted the women at least to equal or more control than their husbands in the household decisions.

In line with this result, the study findings in Costa Rica show that 40 percent of MSMEs are led by women and they are actively find new solutions to serve MSMEs



with innovations in products and services. Almost 40,000 MSMEs in Costa Rica have been trained by BAC through their non-financial services offerings, such as education on business practices, their annual seminar for MSMEs, webinars, and mentoring (SIMLA, 2016).

#### **4.1.6 Local Community Participation in NGOs Programs**

The relationship between NGOs and the community affects the program and this relationship between the two institutions has a lot to do with the program's output and usefulness. Participation helps or hinders the program and if it is participatory the project can bring a life-changing impact in the lives of the beneficiaries.

The data presented in Table 4.15 below show how the intervention of NGOs programs can reach and benefit the local communities. The result show that 79.4 percent of respondents reported that the programs were participatory and only 20.6 percent answered that the programs were flowing downward from the NGOs to beneficiaries since the programs were developed by the NGOs.

Table 4.15 Local Communities Level of Participation in the NGOs Projects

Profile	Response	Frequency	Percent
Nature of NGOs projects	Participatory	243	79.4
	The downward flow	63	20.6
<b>Total</b>		<b>306</b>	<b>100</b>

Source: Survey Result, 2021

The projects involved the local communities and government as described by the program managers during the interview with the researcher. The local communities and government were strongly engaged in the programs starting from the beginning.

#### **4.1.7 The Challenges Facing NGOs in their Development Activities**

This section presented the challenges that hold back the development activities of NGOs to improve the local communities' livelihood in Itang special woreda based on the respondents' reflections. Regardless the important role of NGOs in the livelihood improvement of the local communities in the woreda, conversely, there were several challenges that negatively affected their role in their livelihood improvement programs.

#### ***4.1.7.1 Challenges against NGOs Development Activities***

The result in the Table 4.16 below show that 30 percent of the respondents said that the major restraint facing the NGOs was failed to win the confidence and respect of the community. Subsequently 25.5 percent of respondents said that the challenge was limited access of funds from International NGOs, UN agencies, and donor countries.

The results reveal that 18.3 percent of the survey respondents reported a poor legal or regulatory structure by government related to the NGOs' activities. Whereas, 14.4 percent of respondents stated NGOs did not cooperate with the government in development activities and the remaining 11.8 percent of the respondents said that the challenge was due to competition among NGOs themselves.

Table 4.16 Respondents' Views on the Challenges against NGOs Activities

Description	Frequency	Percent
Lack of cooperation with gov't in development	44	14.4
Poor legal/regulatory framework	56	18.3
Lack of access to sufficient fund	78	25.5
Competition among NGOs themselves	36	11.8
Failure to win the confidence and respect of communities	92	30.0
Total	306	100
<b>Source:</b> Survey Result, 2021		

#### ***4.1.7.2 Independence of NGOs on her Activities***

The Table 4.17 reveals that 33 percent of the respondents agreed with the independency of NGOs in their development activities and 22.9 percent neither agreed nor disagreed on this matter. In contrast, 44.1 percent of the respondents disagreed with the independency of NGOs in their development activities.

Based on the respondents' views in the Table, the majority 49.3 percent accepted the interference of other development partners in NGOs development activities and 30.4 percent of respondents disagreed with the interference of other development actors. The remaining 22.9 percent still have no idea about the matter.

Therefore, from the survey result we can conclude that NGOs are not independent in their development activities. The study findings show the interference of different development actors to the independence of NGOs in their development activities.

Table 4.17 Respondents' Views on the Independence of NGOs in their Activities

Items	Response Category					Total
	SA*	A*	N*	DA*	SD*	
	N (%)	N (%)	N (%)	N (%)	N (%)	
NGOs Independence	46(15)	55 (18)	70 (22.9)	74 (24.1)	61 (20)	306 (100)
Interference of other development actors	72(23.5)	79 (25.8)	62 (20.3)	54 (17.6)	39 (12.8)	306(100)

**Source:** Survey Result, 2021

In line with the survey result in Table above, the interview results with key informants reveal that most of community leaders, government officials, and senior NGOs experts point that NGOs in Itang special woreda were not autonomous for their development activities. Therefore, based on the study results we can finalize that NGOs were dependent on their development partners for the funding and legitimacy.

#### 4.1.7.3 Inter-Organizational Challenges of NGOs

Table 4.18 below, emphasis the challenges that confront the NGOs in their development activities as development partners in Itang special woreda. From the result in the Table, about 45.1 percent of the respondents said that the working hours of NGOs are too short while 38.6 percent of the respondents disagreed with that fact. The remaining 17.3 percent of the respondents have neither agreed nor disagreed.

Related to the management skills and accountability, 47.5 percent agrees with deficit of management skills and accountability within NGOs while 23.8 percent agreed with no side. In contrast, 28.7 percent of the respondents disagreed with the presence of deficit of management skills and accountability within NGOs.

Table 4.18 Respondents' Views on Inter-organizational Challenges of NGOs

Items	Response Category					Total
	SA*	A*	N*	DA*	SD*	
	N (%)	N (%)	N (%)	N (%)	N (%)	
Too-short working-hrs	62 (20.3)	76 (24.8)	50 (16.3)	63 (20.6)	55 (18)	306 (100)
Deficit mg't skills & accountability	67 (21.9)	78 (25.6)	73 (23.8)	51 (16.7)	37 (12)	306 (100)
Deficit experience & understanding voluntary service the principles	67 (21.9)	86 (28.1)	54 (17.7)	56 (18.3)	43 (14)	306 (100)

**Source:** Survey Result, 2021

Regarding the experience and understanding of the principles of the voluntary services, majority 50 percent of respondents agreed with the presence of deficit experience and understanding of the principles of the voluntary services by NGOs in their development activities while 17.7 percent of respondents revealed neutral responses. In contrast, 32.3 percent of the respondents disagreed with the presence of deficit experience and understanding of the principles of voluntary services by NGOs.

## **4.2 Econometrics Results and Discussion**

EKELÖF (2019) confirm that regression analysis is a great tool used by many scholars to aid in confirmation of a cause and effect relationship analysis. There are a large variety of regression models, but to determine the effects of several independent variables on a dependent variable, the most common approaches used by many researchers is the multi-linear regression model (Johnston, 2013).

This study used the multivariate linear regression analysis to evaluate the significance relationship between regressor variables and the response variable. It is confirm that when a researcher uses the multivariate OLS regression models for the study, the seven crucial assumptions of OLS regression must be consider seriously. For now we assume that the assumptions were fulfilled in OLS regressions for log income of household. But in succeeding lessons, the validity tests of those assumptions were conducted in detail.

### **4.2.1 Model Fit**

Wooldridge (2009) state the R-squared as the ratio of explained variation to the total variation. It is the fraction of the sample variation in dependent variable explained by independent variables.

The R-squared of 95.2 percent and Adj R-square of 95 percent of this study were a lot higher compared to 86 percent R-square of the study by (Bakriet et al, 2017). This shows that 95 percent variation in the log income was explained by the explanatory variables other things being held constant and also this show the model goodness fit.

From the result of final model of log income in the Table 4.19, F-statistic yield high value of 316.56 which shows a strong linear relationship between the response and the regressors. From that result, we strongly rejected the null hypothesis that state the regressor variables have no significances differences in explained the response variable.

#### **4.2.2 Data Checking in the Multivariate OLS Linear Regression Model**

Proper regression analysis, like any research design, is contingent upon proper model/variable specification. Failure to properly specify your model may lead to the violation of several of assumptions, causing OLS to produce biased estimates (Studenmund, 2011). The data checking include the checking of omitted variable biases, irrelevant variables, outliers and influential cases were necessary in multivariate regression model.

The link test is importance test of model specification error and it basically checks whether we need more variables in our model.

The link test result in Appendices B with the p-value of 0.142 indicated that the  $\chi^2$  was insignificant at 1, 5 and 10 percent level of significance. Therefore, we highly accepted the null hypothesis and conclude that our multivariate regression model was properly specified with correct explanatory variables, correct functional form, and correct stochastic error term.

Like the omission of relevant variables, the inclusion of irrelevant variables within your model may distort your regression results. Unlike omitted variables, irrelevant variables will not introduce bias to the coefficients of your other independent variables. Therefore, irrelevant variable may not introduce problem in OLS regression model for annual household income.

An outlier is an observation with a large residual that violate the normality assumption of error term. We can detect whether an observation is an outlier via the construction of the studentized residuals. To see how these cases influence our beta coefficients, a technique called jack-knifing was employed; which is based upon analyzing how regression output changes if we exclude peculiar cases. There are four jackknife analyses we will perform for the above model.

1. excluding cases where the absolute value of the residual exceeds 4
2. excluding cases where the absolute value of the residual exceeds 3
3. excluding cases where the absolute value of the residual exceeds 2.5
4. excluding cases where the absolute value of the residual exceeds 2

The Appendices C shows the condensed estimates of the original model plus the four jackknife models with p-values listed below the beta coefficients. From the results, we noticed how our original baseline model changes, as we exclude outlier cases.

In the general statistics, both the R-squared value and the F-statistic of the model increase indicating that the overall model has become more significant to explain a greater percentage of our data variation. Secondly, the inclusion of outliers has a dampening effect for some beta coefficients; moving beta coefficients closer to zero.

Outliers with high leverage may produce beta coefficients that are over/understated or significant when they should not be. To identify these observations and determine whether their inclusion drives our estimates, we rely on difference-in-fits that combine both information's on residual size of whether it is an outlier or leverage.

The general rule of thumb is if an observation's calculated dfit value is greater than critical dfit value of  $2 * \sqrt{k/n}$ , then it is an overly-influential case. To determine how influential cases impact your results, re-run your regression with a jackknife analysis by dropping observations whose dfit value exceeds our critical dfits value.

The condensed estimates result in the Appendices D, presented the original model plus the dfit jackknife model with p value below the beta coefficients. In the result we had seen that with the exclusion of influential cases, the deduction of 20 observations approximately 7 percent from our original data sample outstanding result has emerged.

From this result, we can conclude that a small number of influential cases may overstate the linear relationship for some of independent variables influence on log income of households and their exclusion may reduce some beta coefficient or totally loss significances as shown in Appendices D.

#### **4.2.3 Validity of the Assumptions of OLS Multivariate Regression Model**

Multivariate OLS regression model is subjected to the assumptions those needed to be careful for because their violation lead to wrong results and wrongful conclusions of the study.

##### ***4.2.3.1 Multi-collinearity Problem***

The perfect multicollinearity is rare to happen because the STATA application will automatically drop one. But the presence of imperfect multicollinearity could prompt

researchers to incorrectly conclude that the explanatory variables have no significant influence on dependent or less significance. This is problematic because it increases our chances of committing a type II error (failing to reject a null hypothesis that is actually false).

The pair-wise correlation assessment is important method checking the multicollinearity problem and the absolute value of the correlation coefficient between 0.75 and 0.8 indicate the strong evidence for the presence of severe multicollinearity.

Variance inflation factors is another method of testing the multicollinearity, it measure the extent in which an independent variable is explained by all other independent variables in the model. For this particular study a VIF value greater than 10 or a value  $1/VIF$  less than or equal to 0.10 suggests the presence of severe multicollinearity in our independent variables.

Both the pairwise correlation test in Appendices E and VIF tests in Appendices F for multicollinearity indicate the absence of multicollinearity in the model. From the tests result we conclude that our multiple linear regression model for the log income of household did not suffer from multicollinearity problem that mean no explanatory variables was perfect function of another.

#### ***4.2.3.2 Homoskedasticity vs. Heteroskedasticity***

The error term  $u_i$  is homoskedastic if the variance of the conditional distribution of  $u_i$  given  $X_i$  is constant for  $i=1, 2 \dots n$ . Heteroskedasticity mean that the variance of the conditional distribution of  $u_i$  given  $X_i$  is different across  $X_i$ .

Heteroskedasticity influences the size of our beta coefficients' standard error like imperfect multicollinearity. Rather than increasing our standard errors, if not properly controlled tends to understate standard errors and increasing the likelihood of committing a type I error (rejecting a true null hypothesis).

Hence, from the graph result in Appendices G, the variances of our error terms seem to be constant because it does not follow the pattern of fitted values of our dependent variable.

We can detect the present or absent of heteroskedasticity by non-graphical test using different econometric test statistic. The result in Appendices H, we were presented with an insignificant chi2-statistic with p-value of 0.2556 showing that we can accept the null hypothesis that the model has homoskedasticity error variances even at 10 percent significance level. Another econometric objective test statistic used for checking the present of homoskedasticity in this model is Cameron and Trivedi decomposition of IM-test. From the results in the same Appendices, we highly accepted the null hypothesis at 10 percent significance level.

The results of graphical and non-graphical heteroskedasticity tests suggested the possible presence of constant in our error variances of the model. Therefore, we can conclude that our error term ( $u_i$ ) was normally distributed with constant variances.

#### ***4.2.3.3 Normality of Residuals (Error terms $u_i$ )***

The absence of normality assumption of residuals can affect the validity of all tests (p, t and F). The most common non-graphical tests used to check the normally assumption of residual are the Skewness/Kurtosis and Shapiro-Wilk tests for normality. From the two tests statistics results in Appendices I, we failed to reject the null hypothesis that the distribution of the residuals is normal at 5 and 10 percent significance level respectively and conclude that the residual of our model was normally distributed.

We can check the normality of residual using visual or graphical method. It is most commonly used because a reader can easily identify the violation of normality assumption of residual. Three graphs: k-density, pnorm, and qnorm help us to check for the present of normality in the residuals.

In the result of k-density graph in Appendices J, the residual follow the normal distribution as we seen in that plot. A kernel density plot produces a kind of histogram for the residuals to prove the normality of residual. Hence, residuals appeared to follow a normal distribution as proved by histogram plot in Appendices K.

Standardize normal probability plot (pnorm) checks the non-normality in the middle range of residuals. Therefore, the result of pnorm plots in the Appendices L show that the residual exactly follow the normal distribution. Quintile-normal plots (qnorm) plots quintiles of residuals versus quintiles of a normal distribution. In the Appendices M, the qnorm plot shows that the residual was normally distributed with constant variance.



#### 4.2.4 Results of OLS Regression Model Estimations

For the OLS regression model of the log income household, a total of 17 explanatory variables and one dependent variable were used in the analysis. However, from the 17 explanatory variables 3 were dropped in analysis due to their insignificance and the remaining 14 variables those were significant from 1, 5, and 10 percent significance levels were used in the analysis. The dependent variable was transformed to natural log for the coefficients of explanatory variable to be in the range of 0 and 1.

Table 4.19 Results of OLS Regression Estimations

Source	SS	DF	MS	Number of Observations	=	287
				F(17, 269)	=	316.56
Model	362.799726	17	21.3411604	Prob > F	=	0.0000
Residual	18.1347916	269	0.067415582	R-squared	=	0.9524
				Adj R-squared	=	0.9494
Total	380.934518	286	1.33193887	Root MSE	=	0.25965

Log (y)	Coefficient	Std. Err.	t-value	P>t	[95% Conf. Interval]	
<b>Demographic factors</b>						
Sex	-0.16081	0.043346	-3.71	0.000*	-0.24615	-0.07547
Age	0.003458	0.001598	2.16	0.031**	0.000311	0.006605
Edu-year	0.037088	0.013767	2.69	0.008*	0.009983	0.064193
Family Size	0.012077	0.006255	1.93	0.055***	-0.00024	0.024393
<b>Marital Status (Reference is being Single)</b>						
Married	0.169887	0.064914	2.62	0.009*	0.042083	0.297691
Divorce	0.059397	0.048809	1.22	0.225	-0.0367	0.155494
Widow/wer	0.155437	0.057016	2.73	0.007*	0.043182	0.267691
<b>Occupation of HH head (Ref: Farmer)</b>						
Trader	0.04753	0.045141	1.05	0.293	-0.04134	0.136404
Employees	0.172322	0.045757	3.77	0.000*	0.082235	0.262408
<b>Household Livelihood Strategies (Ref: Agri-intensification/extensification)</b>						
Live-diver	0.466003	0.082687	5.64	0.000*	0.303207	0.628799
Employment	0.437796	0.064813	6.75	0.000*	0.310191	0.565401
<b>Financial and Non-Financial Asset of Household</b>						
SI	-0.17279	0.055854	-3.09	0.002*	-0.28276	-0.06282
Credit	0.816626	0.076881	10.62	0.000*	0.665261	0.967991
Health	0.099817	0.079087	1.26	0.208	-0.05589	0.255526
IGA	0.271666	0.069122	3.93	0.000*	0.135578	0.407755
Training	0.129833	0.077195	1.68	0.094***	-0.02215	0.281816
Saving	0.000227	2.71E-05	8.36	0.000*	0.000173	0.00028
_cons	6.320215	0.093542	67.57	0.000	6.136048	6.504382

Source: Survey Results of OLS, 2021

#### ***4.2.4.1 Demographic Factors***

From the Table 4.19, the sex, age, educational level, being married, being widow/wer and increasing family size were 1 to 10 percent significantly difference in affecting the log income of households. But, the situation of being divorce did not have any significant influence on the change in the log income of household.

Being male than female household tend to reduce the log income by 16 percent, other covariate being constant. This is true because females' household head in Itang special woreda were usually involved in many income-generating activities for their household and they were also responsible for the management of the household income that leads them to low wastage of household resources.

The age of household head was importance variable in determining the log income of household and coefficient indicated that as the age of household head rise by 1 year, the log income of the household increase by 0.35 percent holding other covariate constant. The positive sign implies that when the household head get older and holder he/she tend to engaged in different income generating activities and also manage the household resources more wisely compared to younger household head.

Educational level of household head (Edu-year) was another importance variable explaining household annual income level. The OLS regression result was consistent with a prior expectation as a variable will took a positive sigh and coefficient implies that, keeping other covariate constant, an increase in the level of education of the household head by 1 year can increase the log income of household by 3.7 percent. The study result was similar with the 4.2 percent found in the study conducted on household willingness to pay for improved water supply by (Thijien, 2020). The reason was because more educated household head have more job opportunity payment and also can diversify their livelihood that allow to generate more income than less educated household head.

Family size (HHS) was also another importance variable in determining log income of household by having positive sign and significantly different at 10 level in affecting log income. The coefficient shows that when the family size increases by 1 person, the log income of household increases by 1.2 percent other Covariate being constant. This was contradictory with prior expectation. Besides, the result was in line with the study result that has coefficient of 23.4 percent found by (Thijien, 2020). The

different may be due to the fact that the household in Itang special woreda did not have many job opportunity compared to household living in Gambella town and each member contribute less to family income.

The marital status of the household head is categorical variable coding as married (1), divorce (2) and widow/widower (3) with single being the reference category. Being married than single household head, tend to increase the log income of household by 17 percent, other covariate being constant. Also being widow or widower than single household head tend to increase the log income of household by 15.5 percent other covariate being constant. The possible explanation is related to the economics scale of consumption items purchase and pooling available resources in one way or another and possibly, married households reduce expenditure that would be spent separately (Buom, 2013).

#### ***4.2.4.2 Occupation and Livelihood Strategies of the Household***

From the Table 4.19, the employee, livelihood diversification and employment opportunity were significance difference at 1 percent level in affecting the log income of households. But being trader is insignificant in affecting the log income of household.

Occupation was an important categorical dummy variable to explain the log income of household. Being employee than farmer household head, tend to increase the log income by 17.2 percent other covariate being constant. This was true because being employee indicated that the household head may have certain level of education that lead the household to have more income than household headed by farmer.

The household head that diversified his/her source of livelihood tends to increase the log income by 46.6 percent than agricultural intensification/extensification, other covariate being constant. The having the opportunity to the employment than agricultural intensification/extensification tend to increase the log income by 43.8 percent. In line with this study, the findings of 54.8 percent on livelihood strategies and diversification show that if the households diversifiers their livelihood it tend to have more income (Yilebes, 2017).

#### ***4.2.4.3 Financial and Non-Financial Asset of Household***

From the Table 4.19, the source of income, credit access, participation in IGA, training, and saving were 1 to 10 percent significantly difference in affecting the log income of households. But, the health condition does not have any significant influence on the change in the log income of household.

Source of household income (SI) is dummy variable coded as 1 if household depend on agriculture and 0 otherwise. Being depended on agriculture than non-agriculture tends to reduce the log income by 17.3 percent, other covariate being constant. The fact is that if the household depend only on the agricultural products for her livelihood, the log income of the family tend decrease since agriculture depend on rain. Therefore, in dry season the family loss their source of livelihood and satisfy their livelihood on the base of last season production which result in decrease of household gross income.

Participation in the income generating activities (IGA) is important dummy variable with binary nature coded as 1 if participate in IGA and 0 otherwise. Keeping other covariate constant, being participated in IGA tends to increase the log income by 27.2 percent. Training was another important dummy variable that was used to explain the log income of household. Being participated in training tends to increase the log income by 13 percent other covariate being constant. This was true because participation in the training provides the household head with knowledge and skill those were helpful to improve the household livelihood.

The finding on participation in training and IGA activities were in line with IGA programs of ZOA that cover a wide range of economic activities aimed to improve the living conditions of poor households and individuals. The programs include the production of goods and services, such as small business, cooperative undertakings, job creation and professional skill training schemes, and credit and saving groups (ZOA, 2016).

Credit is dummy variable that take 1 if household has access to credit and 0 otherwise. Therefore, access to credit tends to increase the log income of household by 81.7 percent other covariate being constant.

Saving habit of household was another important variable in explaining the log income of household and it is expected to have a positive influence on income. Holding other covariate constant, the saving habit of household tends to increase the log income by 0.023 percent. This indicates that when the household saving increases by 1 Birr in our case; the log income of household must increase by 0.23% holding the effect other variables constant.

The study results on credit and saving were in line with the findings on sustainable livelihood of rural households through rural-urban linkage that revealed the access of credit and saving practice increases the income of the household and hence improve the livelihood (Meron, 2014).

# CHAPTER FIVE

## CONCLUSION AND RECOMMENDATION

### 5.1 Conclusions

In the Itang Special Woreda, the rise in the number of NGOs working at different developmental sectors such as, education, health, WASH, etc., involved the resource mobilization, fund-raising, employment opportunities, service provision and local communities livelihood improvement. This study has assessed the role of ZOA and GCCDO development projects in livelihood improvement of the local communities' households. The results show that the programs carried out by those NGOs brought a number of positive contributions to household livelihood improvement, such as income diversification and employment opportunities.

The multivariate OLS regression model for log income of household satisfied all economic, statistical, and econometric criteria. The value of the coefficient of determination R-Square of 95 percent indicates the high quality of the model to explain the log income of the household. The final estimated model also satisfies the conditions of the best linear regression model, no multicollinearity, heteroskedasticity, and the residuals are normally distributed. Based on the results from the analysis the log income level of household using the multivariate OLS regression model, we found that most of the explanatory variables were significantly different in affecting the log income of household.

The study results showed that demographic factors such as the sex, age, educational level, being married, being widow and increasing family size were 1 to 10 percent significantly difference in affecting the log income of households. They were important factors in explaining the different in the household livelihood. In relation to occupation and livelihood strategies, the employee, livelihood diversification and employment opportunity were at 1 percent significantly difference in affecting the log income of households. Also, the source of income, credit access, participation in IGA, training, and saving were 1 to 10 percent significantly difference in affecting the log income of households. But, the health condition does not have any significant influence on the change in the log income of household.

From the results, it was revealed that the capacity of the local communities to cover basic expenditure and need has been improved over the program/project period. Similarly, the programs executed by ZOA have enabled local communities to engage in small business, different income generating activities, developing markets through a systems approach and market linkage, promote and increase the saving practice.

The study result indicated 80 percent of respondents reported that the program was all participatory. Also, the results show that the development programs of NGOs improved the participation of women in household decision-making and also increased their self-confidence.

Despite the achievements, NGOs have come across different challenges in their programs implementation period, such as lack land for income generating activities and expansion of service provision. Other obstacles outlined by the study were less confidence and respect from the local communities, limited access of International donors, in terms of information sharing, funding, capacity building and general cooperation of NGOs with other development partners. Although, the principle role of the government was to accelerate the development activities of NGOs, the study has drawn poor regulatory framework for NGOs activities by the government.

## **5.2 Recommendations**

This section strongly recommended that a good and careful consideration for various obstacles hindering the activities and operations of NGOs in Itang Special Woreda and how such obstacles can be overcome in order to enhance and bolster their activities in the future need to be taken. The work done by NGOs matches the strategic aims and objectives towards the improvement of livelihoods and socio-economic conditions of local communities.

- ✚ One of challenge faced by NGOs was lack of trust from local communities, therefore, NGOs must develop a strong ties with the local communities in which they work by increasing their participation at the community level. Moreover, they must consider the voice of local communities in order to raise their organizations' capacity to work with the local communities and make them theirs stakeholders.
- ✚ To ensure the efficiency of their development activities, NGOs should use enough time in their tasks like, setting priorities, strategies and program

implementation. They should also increase the working hours spending in their offices.

- ✚ LNGOs like GCCDO were recognized because they are heavily dependent on international NGOs and donors. To overcome that problem, they must begin to rely more on their own efforts and resources and need to learn from local NGOs in other countries about how to tap local sources.
- ✚ The government should ensure the independence legal issue of NGOs for their development activities from both internal and external interferences. In addition, government should monitor the NGOs activities by certifying the standard of their development programs, especially; the government should engage in the monitoring and evaluation system to NGOs' development activities.

### **5.3 Future Research Direction**

This study primarily focused on exploring impacts of NGOs on the local communities' livelihoods in Itang Special Woreda. The local communities' livelihoods in this study cover only indigenous communities of Itang special woreda, and these are Nuer, Upo, and Anywaa ethnic group. The results of this research were specific to impacts of ZOA and GCCDO and do not include the impacts of other NGOs in Gambella region, and don't also include other ethnic local communities. Thus, the results of this research can't be applied to other woredas in Gambella Region. Therefore, it needs further studies in other woredas and comparisons can be made so that the best practices can be understood.

Finally, the researcher recommend other researchers to use this study as stepping stone to study the contribution of NGOs' in poverty reduction as well as development of the region in general.



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# APPENDICES

JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS DEPARTMENT OF ECONOMICS  
(MASTER OF SCIENCE IN DEVELOPMENT ECONOMICS)

## QUESTIONNAIRES COVER LETTER

Dear Honorable Respondent

My name is Geng Chuol and I am a postgraduate student of Jimma University, College of Business and Economics and Department of Economics. This questionnaire is designed to assess The Role of Non-Governmental Organizations in the Improvement of Livelihood of Local Communities in Itang Special Woreda. Therefore, I kindly request you to spare some time and to honestly respond to all the questions. I assure you that all your responses will be kept confidential and your identity shall not be exposed. Your response will only be used for this academic study. I thank you in advance.

Address of the researcher: [gengnyanhial323@gmail.com](mailto:gengnyanhial323@gmail.com) Cell phone # +251 1935156513

### Instructions:

- You do not need to write your name
- Please use an “x” Mark to select the option that best represent your response for part one and circle the number representing your response for part two.

## Appendices A Questionnaires and Interviews for Study Participants

Appendices A1: Questionnaires to be filled by the Communities/Beneficiaries

### Part I: Demographic Characteristics of Respondents

1. Gender: A. Male B. Female
2. Age of household head(in years) \_\_\_\_\_
3. Educational Background of household head
  - A. Illiterate
  - B. Elementary School
  - C. Secondary School
  - D. Certificate/Diploma
  - C. Bachelor degree above
4. Marital status of household head
  - A. Single
  - A. Married
  - B. Divorce
  - C. Window
  - D. Widower
5. Family Size in number \_\_\_\_\_
6. Occupation of the household head
  - A. Farmer
  - B. Trader
  - C. Employee
  - D. Other

### Part II: The Livelihood Resources of the Household

7. Did you have a source of income for your household before the project?
  - A. Yes 1
  - B. No 2
8. Household level of income after the project intervention
  - A. Increased 1
  - B. No change 2
  - C. Does not Know 3
9. If increased, reason for increment
  - A. Highly diversified
  - B. Medium ,,
  - C. Less ,,
10. What is the average income per month?
  - A. Before the project 1
  - B. After the project 2
11. What is the status of your saving trend after the project?
  - A. Decreased 1
  - B. No change 2
  - C. Increased 3
  - D. No answer 4
12. Where do you save?
  - A. In bank 1
  - B. Local micro finance 2
  - C. VSLA 3
  - D. Other forms 4
13. Have you accessed cash or grain through IGA
  - A. Yes 1
  - B. No 2
14. As a result of the access to the cash through IGA is your income
  - A. Increased greatly 1
  - B. Increased 2
  - C. Stayed the same 3
15. Have your own house
  - A. Yes 1
  - B. No 2
16. Quality of the house at present
  - A. Poor 1
  - B. Medium 2
  - C. Good 3
17. Improvements on houses more than Br.100
  - A. Yes 1
  - B. No 2
18. Kind of improvements on houses
  - A. Repair 1
  - B. Expansion 2
  - C. Sanitation System 3
  - D. Other improvements 4
19. Asset Ownership before and after project

Asset	Before (Number)	After (Number)
Table		
Refrigerator		
farming tools		
Tape		
Chair		
Bed		
Livestock		

20. Number of meals in a day
  - A. Once 1
  - B. Twice 2
  - C. Three times 3
  - D. More than 3 times 4
21. Did your children get formal education access under GOAL program?
  - A. Yes 1
  - B. No 2
22. Over all school Attendance
  - A. Increased 1
  - B. Decreased 2
  - C. No change 3
23. Access to health facilities
  - A. Yes 1
  - B. No 2
24. Source of health facilities
  - A. Government
  - B. Local communities
  - C. NGOs
25. Overall health facilities in woreda
  - A. Increased 1
  - B. Decreased 2
  - C. No change 3
26. Women role in household IGA
  - A. Yes 1
  - B. No 2
27. Decision maker to take the credit
  - A. Husband and I 1
  - B. Husband 2
  - C. Only I 3
28. Decision maker on the usage of fund
  - A. Husband and I 1
  - B. Husband I 2
  - C. Only I 3
29. Level of women self Confidence in decision making
  - A. Highly confident 1
  - B. Confidence 2
  - C. No confidence 3
30. Training Access
  - A. Yes 1
  - B. No 2

- 31. Type of training taken
  - A. Women empowerment 1
  - B. IGA 2
  - C. Crop production 3
  - D. Saving practice
  - E. General training 4
- 32. Number of trainings taken
  - A. Once 1
  - B. Twice 2
  - C. Three times 3
  - D. More than 3 times 4
- 33. What type of relationship exists between the NGO and the community?
  - A. Participatory 1
  - B. Down ward flow of the program 2
- 34. Is there a tangible market place to sell the business item?
  - A. Yes 1
  - B. No 2
- 35. Who created the market access?
  - A. NGOs itself 1
  - B. Local communities 2
  - C. No market 3

Part III: Questions related to the constraints facing NGOs operational Activities

- 36. What are the major challenges restricting NGOs development activities?
  - A. Lack of cooperation with the government as development partner []
  - B. Poor legal/regulatory framework[]
  - C. Lack of access to International donors[]
  - D. Competition among NGOs themselves[]
  - E. failure to win the confidence and respect of communities[]
  - F. others, Please Specify-----

Cross each of the items in the table below to show whether you strongly agree, Agree, Neutral, Disagree or strongly disagree by making 'X' in the boxes

Questions	Responses				
	Strongly	Agree	Neutral	Disagree	Strongly
The organization relies on external funds.					
The working hours of LNGOs are too short.					
Lack of coordination and communication among/between the NGOs					
Deficit management skills and accountability.					
Deficit experience and understanding the principles of voluntary services					
Lack of community base, limited participation by communities/beneficiaries in the programs					
Development partners interference					
Other Challenges (Please Specify and Rate)					

**Thank you so much for sparing your time to respond these questions!**

### **Appendices A2: Interview Questions to the Government Officials**

1. Do you think that Non-government Organizations work with the government as development partners in improving communities' livelihood?
2. As government institution, do you have any development relationship with NGOs?
3. What is the role of NGOs as development partners?
4. To what extent do NGOs participate in the development activities of the woreda?
5. What is the role of government in enhancing the activities of NGOs as development partners?
6. How do you support the development activities of NGOs as partner?
7. What do you think the challenges that face NGOs to operate as development partners with the government?
8. Are NGOs accountable to the government institutions?
9. What do you think the independence of NGOs to their operations from the government intervention?
10. Do the programs/projects implement by NGOs done as intended?

**Thank you so much for sparing your time to respond to these questions!**

### **Appendices A3: Interview Questions to Community Leaders and NGOs Staff**

1. As community leader/NGOs expert, have ever related with NGOs?/Yes/No
2. Do you think that NGOs work with the community in the livelihood improvement programs?
3. What do you think the role of NGOs as development partners with the society?
4. To what extent do NGOs participate in the development activities of the woreda?
5. Does local community support the development activities of NGOs as partner?
6. What do you think the challenges that face NGOs to operate as development partners with the government as well as local community and others NGOs?
7. Are NGOs development programs changed the development of the society?
8. What do you think the independence of NGOs to their operations from the government intervention, others NGOs, and community leaders?
9. Do the programs or projects implemented by NGOs was done as intended
10. Do you believe that NGOs are important for the livelihood improvement of the communities in the woreda?

**Thank you so much for sparing your time to respond to these questions!**

## Appendices B: Link-Test for Model Specification Error

. linktest

Source	SS	df	MS	Number of obs	=	306
Model	380.282072	2	190.141036	F(2, 303)	=	2005.08
Residual	28.7333676	303	.094829596	Prob > F	=	0.0000
				R-squared	=	0.9297
				Adj R-squared	=	0.9293
Total	409.015439	305	1.34103423	Root MSE	=	.30794

log_hhai	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
_hat	1.471411	.3209562	4.58	0.000	.8398258 2.102996
_hatsq	-.0310652	.0211249	-1.47	0.142	-.0726352 .0105048
_cons	-1.749746	1.195931	-1.46	0.144	-4.103129 .6036365

## Appendices C: Original & Four Jack-Knife Models to Test the Outlier Cases

. estimates table Model1 Model2 Model3 Model4 Model5, b(%7.3f) p(%7.3f) stats(r2 F N)

Variable	Model1	Model2	Model3	Model4	Model5
Male	-0.156	-0.156	-0.154	-0.139	-0.161
age	0.003	0.003	0.002	0.004	0.000
education	0.004	0.004	0.004	0.004	0.003
Married	0.047	0.047	0.036	0.023	0.031
Divorce	0.041	0.041	0.039	0.044	0.037
Widow_wer	0.014	0.014	0.014	0.004	0.008
hhs	0.201	0.201	0.162	0.177	0.170
Trader	0.009	0.009	0.030	0.012	0.009
Employees	0.079	0.079	0.094	0.096	0.059
agriculture	0.160	0.160	0.082	0.065	0.225
Live_divers	0.152	0.152	0.140	0.155	0.155
Employment	0.021	0.021	0.029	0.011	0.007
Credit_acc-s	0.013	0.013	0.010	0.009	0.012
health_acc-s	0.069	0.069	0.152	0.207	0.055
Have_wiga	0.090	0.090	0.086	0.063	0.048
Have_train-g	0.085	0.085	0.088	0.192	0.293
saving	0.175	0.175	0.171	0.148	0.172
_cons	0.001	0.001	0.001	0.003	0.000
r2	-0.132	-0.132	-0.137	-0.143	-0.173
F	0.046	0.046	0.033	0.019	0.002
N	0.501	0.501	0.505	0.513	0.466
	0.000	0.000	0.000	0.000	0.000
	0.443	0.443	0.435	0.448	0.438
	0.000	0.000	0.000	0.000	0.000
	0.793	0.793	0.810	0.821	0.817
	0.000	0.000	0.000	0.000	0.000
	0.080	0.080	0.092	0.099	0.100
	0.406	0.406	0.322	0.262	0.208
	0.266	0.266	0.268	0.262	0.272
	0.002	0.002	0.001	0.001	0.000
	0.130	0.130	0.132	0.135	0.130
	0.167	0.167	0.146	0.117	0.094
	0.000	0.000	0.000	0.000	0.000
	0.000	0.000	0.000	0.000	0.000
	6.267	6.267	6.283	6.250	6.320
	0.000	0.000	0.000	0.000	0.000
r2	0.929	0.929	0.934	0.942	0.952
F	222.505	222.505	237.903	267.035	316.561
N	306	306	304	300	287

legend: b/p



## Appendices D: Original Model Plus Dfit Jack-knife Model to Test Influential Cases

. estimates table Model1 Model2, b(%7.3f) p(%7.3f) stats(r2 F N)

Variable	Model1	Model2
Male	-0.156	-0.155
	0.003	0.001
age	0.004	0.002
	0.047	0.138
education	0.041	0.045
	0.014	0.002
Married	0.201	0.133
	0.009	0.048
Divorce	0.079	0.033
	0.160	0.503
Widow_wer	0.152	0.085
	0.021	0.152
hhs	0.013	0.011
	0.069	0.093
Trader	0.090	0.056
	0.085	0.219
Employees	0.175	0.149
	0.001	0.002
agriculture	-0.132	-0.107
	0.046	0.069
Live_divers	0.501	0.359
	0.000	0.000
Employment	0.443	0.338
	0.000	0.000
Credit_acc~s	0.793	0.948
	0.000	0.000
health_acc~s	0.080	0.075
	0.406	0.366
Have_wiga	0.266	0.290
	0.002	0.000
Have_train~g	0.130	0.186
	0.167	0.024
saving	0.000	0.000
	0.000	0.000
_cons	6.267	6.302
	0.000	0.000
r2	0.929	0.952
F	222.505	312.579
N	306	286

legend: b/p

## Appendix E: Pairwise Correlation Test for Multicollinearity

```
. pwcorr Male age education Married Divorce Widow_wer hhs Trader Employees agriculture Live_divers Employment Credit_access health_access Hav
> e_wiga Have_training saving if abs(r)<2, sig
```

	Male	age	educat-n	Married	Divorce	Widow_r	hhs
Male	1.0000						
age	-0.0358	1.0000					
education	0.5463	0.0000	1.0000				
Married	-0.2748	0.0674	0.3461	1.0000			
Divorce	0.0000	0.2550	0.8893	0.0000	1.0000		
Widow_wer	-0.3863	-0.0082	0.3461	0.0000	-0.4113	1.0000	
hhs	0.0050	0.1260	0.0018	0.0000	0.0000	0.0000	1.0000
Trader	0.0715	0.0231	0.0606	-0.3776	-0.3189	0.0000	0.0000
Employees	0.2269	0.6968	0.3062	0.0000	0.0000	-0.0030	1.0000
agriculture	0.0753	0.0253	-0.0764	0.0058	0.1077	-0.0030	0.9592
Live_divers	0.2035	0.6699	0.1968	0.9227	0.0684	0.9592	0.0000
Employment	-0.2239	0.0885	0.1486	0.2542	-0.1552	0.0715	-0.0650
Credit_acc-s	0.0001	0.1349	0.0117	0.0000	0.0085	0.2275	0.2721
health_acc-s	-0.1550	-0.0115	0.3301	0.2127	-0.0471	-0.0443	-0.0642
Have_wiga	0.0085	0.8465	0.0000	0.0003	0.4265	0.4548	0.2786
Have_train-g	0.3844	-0.0005	-0.4927	-0.5964	0.3643	-0.0435	-0.0392
saving	0.0000	0.9939	0.0000	0.0000	0.0000	0.4628	0.5079
	-0.3944	0.0837	0.3879	0.6607	-0.4044	-0.0191	0.0326
	0.0000	0.1574	0.0000	0.0000	0.0000	0.7467	0.5819
	0.1598	-0.0205	0.1168	-0.1968	0.1211	0.2075	0.0119
	0.0067	0.7297	0.0481	0.0008	0.0403	0.0004	0.8404
	-0.3032	0.0288	0.5481	0.4797	-0.3145	0.2386	0.1053
	0.0000	0.6270	0.0000	0.0000	0.0000	0.0000	0.0749
	-0.4578	0.0524	0.4389	0.6777	-0.3956	-0.0289	0.0270
	0.0000	0.3768	0.0000	0.0000	0.0000	0.6255	0.6493
	-0.3373	0.0555	0.4917	0.6013	-0.3800	0.0919	0.0303
	0.0000	0.3488	0.0000	0.0000	0.0000	0.1202	0.6087
	-0.4830	-0.0053	0.4127	0.6517	-0.3843	-0.0327	0.0339
	0.0000	0.9285	0.0000	0.0000	0.0000	0.5814	0.5678
	-0.5087	-0.0775	0.3984	0.5807	-0.2931	-0.1228	-0.1036
	0.0000	0.1907	0.0000	0.0000	0.0000	0.0376	0.0798

	Trader	Employ-s	agricu-e	Live_d-s	Employ-t	Credit-s	health-s
Trader	1.0000						
Employees	-0.3473 0.0000	1.0000					
agriculture	-0.3180 0.0000	-0.2110 0.0003	1.0000				
Live_divers	0.3133 0.0000	0.2252 0.0001	-0.7014 0.0000	1.0000			
Employment	0.0184 0.7557	-0.0011 0.9849	0.0472 0.4254	-0.4138 0.0000	1.0000		
Credit_acc-s	0.3457 0.0000	0.2272 0.0001	-0.7153 0.0000	0.5774 0.0000	0.3386 0.0000	1.0000	
health_acc-s	0.3114 0.0000	0.3089 0.0000	-0.7278 0.0000	0.8289 0.0000	-0.2503 0.0000	0.6106 0.0000	1.0000
Have_wiga	0.3665 0.0000	0.2755 0.0000	-0.7773 0.0000	0.7516 0.0000	0.0175 0.7681	0.7782 0.0000	0.7931 0.0000
Have_train-g	0.3018 0.0000	0.2804 0.0000	-0.7249 0.0000	0.8247 0.0000	-0.2562 0.0000	0.6025 0.0000	0.8815 0.0000
saving	0.2177 0.0002	0.2746 0.0000	-0.5073 0.0000	0.5868 0.0000	-0.1459 0.0133	0.4452 0.0000	0.5990 0.0000

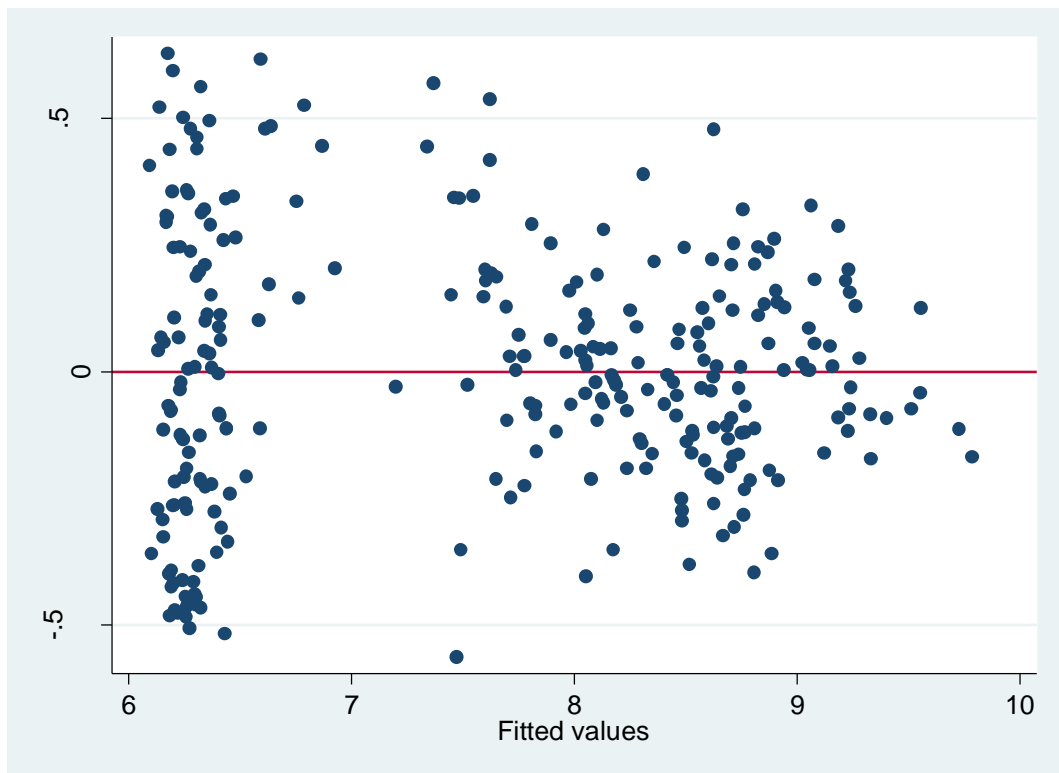
	Have_w-a	Have_t-g	saving
Have_wiga	1.0000		
Have_train-g	0.7604 0.0000	1.0000	
saving	0.5384 0.0000	0.6309 0.0000	1.0000

## Appendices F: VIF Test for Multicollinearity

. estat vif

Variable	VIF	1/VIF
Live_divers	6.67	0.149967
health_acc-s	6.27	0.159434
Credit_acc-s	6.04	0.165492
Have_train-g	5.79	0.172836
Have_wiga	5.08	0.196850
Married	3.95	0.253094
agriculture	3.32	0.301182
Employment	3.23	0.309292
Widow_wer	2.42	0.412458
saving	2.14	0.466469
Divorce	1.94	0.515261
Trader	1.69	0.592124
Employees	1.68	0.596986
education	1.64	0.609286
Male	1.53	0.653327
hhs	1.14	0.880119
age	1.10	0.912953
Mean VIF	3.27	

## Appendices G: rvfplot Test for Heteroskedasticity



## Appendices H: White's Test and Cameron & Trivedi's decomposition of IM-test for Heteroskedasticity

```
. estat imtest, white

White's test for Ho: homoskedasticity
against Ha: unrestricted heteroskedasticity

      chi2(141)    =   151.62
      Prob > chi2    =   0.2556
```

Cameron & Trivedi's decomposition of IM-test

Source	chi2	df	p
Heteroskedasticity	151.62	141	0.2556
Skewness	21.61	17	0.2002
Kurtosis	3.37	1	0.0665
Total	176.60	159	0.1611

## Appendices I: Skewness/Kurtosis and Shapiro-Wilk to Tests Normality of Residuals

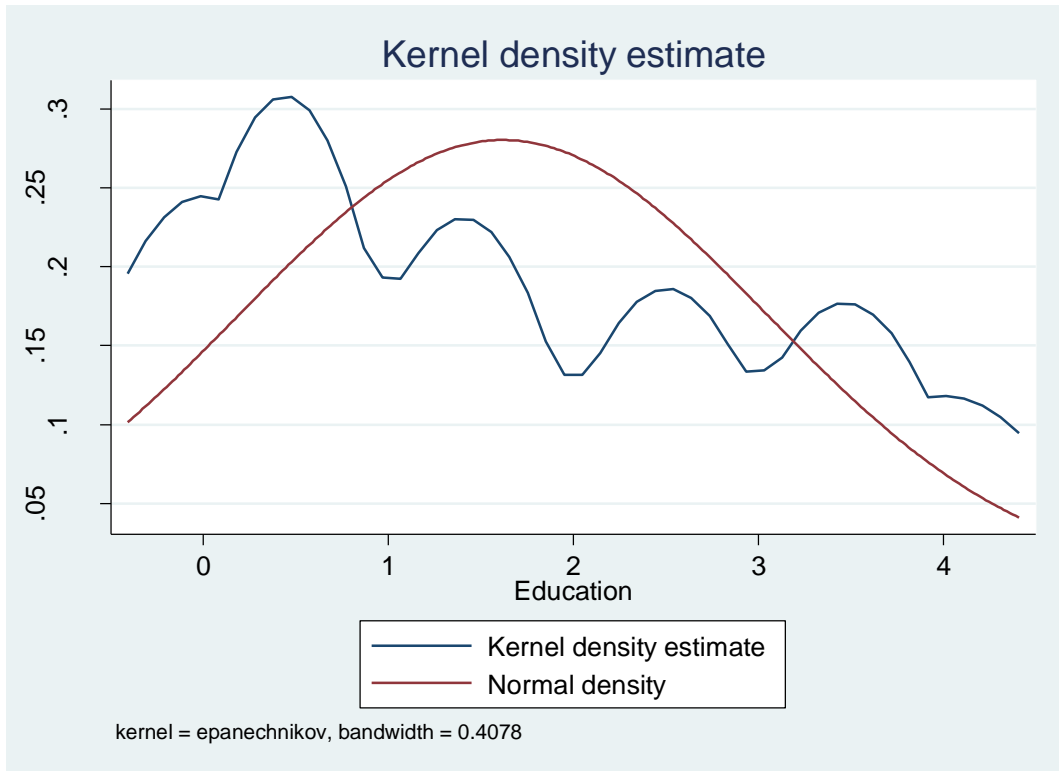
```
. sktest r

Skewness/Kurtosis tests for Normality
----- joint -----
Variable | Obs Pr(Skewness) Pr(Kurtosis) adj chi2(2) Prob>chi2
-----|-----
r | 306 0.1183 0.0355 6.64 0.0361
```

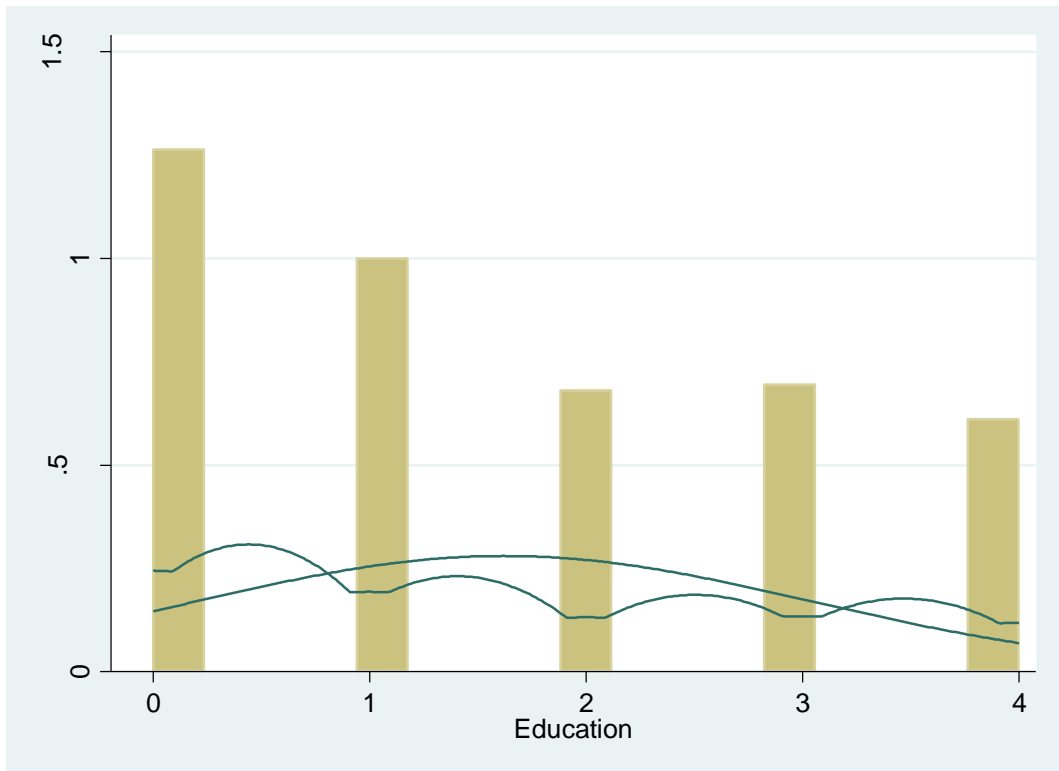
```
. swilk r

Shapiro-Wilk W test for normal data
Variable | Obs W V z Prob>z
-----|-----
r | 306 0.99079 1.997 1.625 0.05206
```

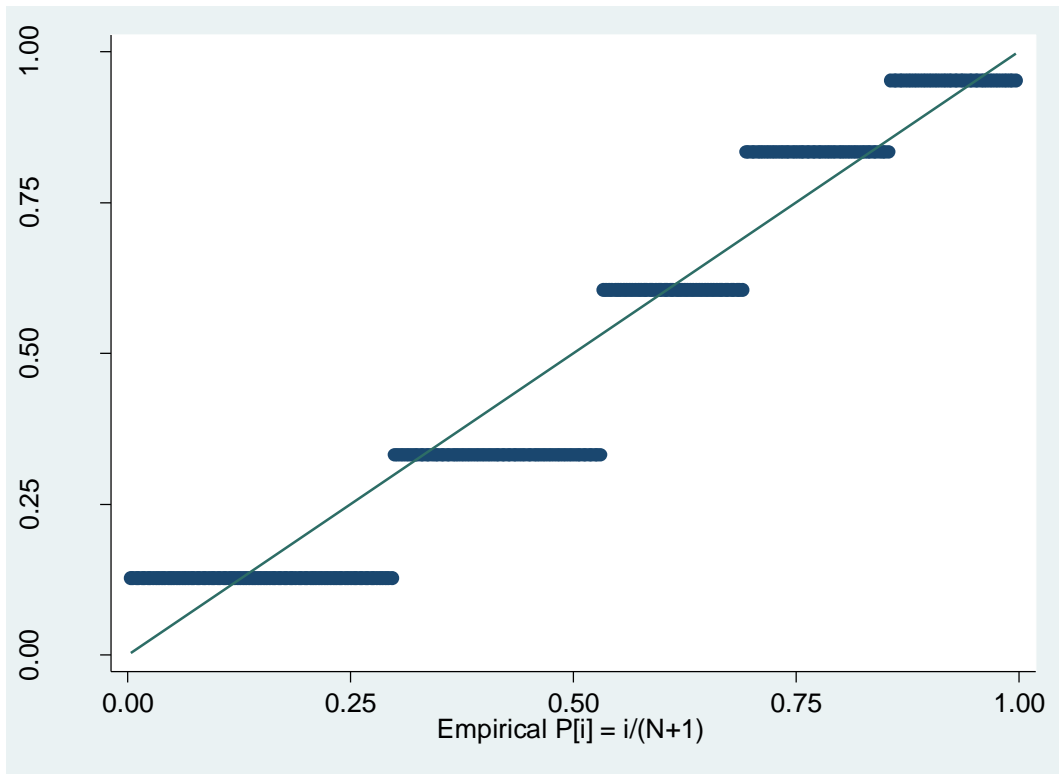
### Appendices J: Kernel Plot for Non-normality of Residuals



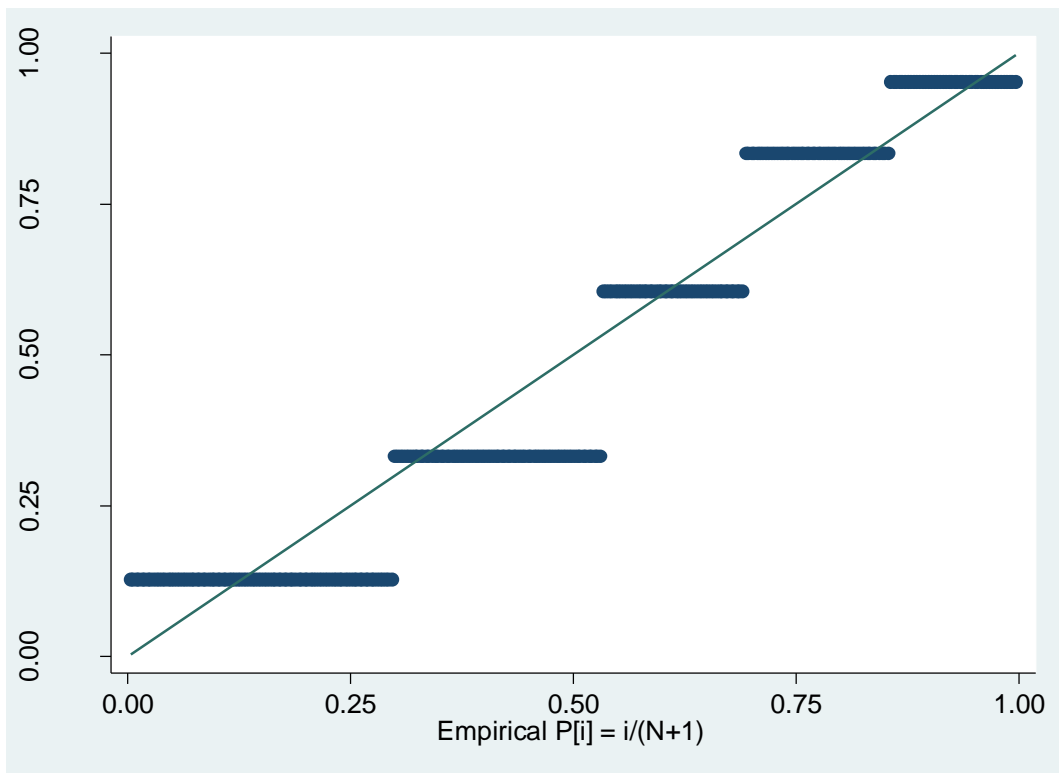
### Appendices K: Histogram of Kernel Plot for Non-normality of Residuals



### Appendices L: Pnorm for Normality of Residuals



### Appendices M: qnorm for Non-normality of Residuals



### Appendices N: Dummy Explanatory variables coding with two categories

Variable	Category	Parameter Coding	
		1	2
Sex	Male	1	0
	Female	0	1
SI	Depend on agriculture source of income	1	0
	Depend on non-agriculture source of income	0	1
Credit	Have access to credit	1	0
	Have no access to credit	0	1
Health	Have Access to health facilities	1	0
	Have no access to health facilities	0	1
WIGA	Have role in income generating activities	1	0
	Have no role in income generating activities	0	1
Train	Have access to training	1	0
	Have no access to training	0	1

### Appendices O: Categorical explanatory variables coding with more than two categories

Variable	Category	Parameter Coding				
		1	2	3	4	5
Occupation	Trader	1	0	0		
	Employee	0	1	0		
	Farmer	0	0	0		
	Live-divers	1	0	0		
	Employment	0	1	0		
HHLS	Agriculture intensification/extensification	0	0	0		
MST	Married	1	0	0	0	
	Divorce	0	1	0	0	
	Widow/wer	0	0	0	1	
MST	Single	0	0	0	0	