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The role of Non –farming activities in sustaining rural livelihood, in the case of Enderta woreda,
Tigray, Ethiopia.

By

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A thesis

Submitted to post graduate programe in partial fulfilment of the requirements for the Degree
Master of Art in Management.

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ECLARATION

I, Hadush Adhana, hereby declare that, this MA thesis entitled “The role of Non-farm activities in sustaining rural Livelihood, a case study of Enderta Woreda, Tigray, Ethiopia” is a research work that had been carried out under the supervision of Mr.Efrem Gebru (Ass.Prof.) Collage of Business and Economics, Mekelle University during the 2020/21 until the final write up of the thesis as part of the Master of Art Program in Developmental study in accordance with the rules and regulations of the University. I further declare that this work was not submitted to any other University or institution for the award of any degree or diploma and all the source of materials that I have used or quoted have been indicated and dully acknowledged by means of complete reference.

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CERTIFICATION

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Post Graduate Program

As thesis research advisor I hereby certify that I have read and evaluated this thesis entitled "The role of Non-farm activities in sustaining rural Livelihood, a case study of Enderta Woreda, Tigray, Ethiopia" prepared by Mr. Hadush Adhana under my guidance. I recommend that to be submitted as fulfilling the thesis requirements.

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As members of the examiners board of the final MA thesis open defense examination. We certify that we have read and evaluated the thesis prepared by Mr. Hadush Adhana, and examined the candidate. We recommend that the thesis be accepted as fulfilling the thesis requirements for the degree of Master of Art in Developmental Study (DVS).

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Final approve and acceptance of the thesis is conyigent upon the submission of its final copy to the council of graduate program through the candidate's department graduate committee.

DEDICATION

This thesis is dedicated to all members of my family, friends and colleagues whose consistent encouragement and support has significantly contributed to the successful completion of my study.

Abstract

*A research was conducted at five Tabias of Enderta woreda to examine and study the role of non-farm activities in sustaining the livelihood of respondents in Enderta Woreda. In order to attain the objectives of the study, primary data was collected from 191 stratified selected households using structured and unstructured questionnaires. Furthermore, key informants and focus group discussion had been used to obtain detailed information. Descriptive statistics was used to describe the livelihood resources/assets of the five Tabias of Enderta woreda, non-farm rural diversification. The survey result revealed that rural households in the study Tabias had diversified activities notably non-farm livelihood diversifications, as a result the livelihood of the rural household had been changed. It can also be concluded that **most** of the respondents had better knowhow on non-farm activities. However, the household heads underlined the obstacles of credit services to be revised and the government give due attention. **Thus, government officials** should provide relevant and necessary technical support and training to fill their gaps and create a wide adaptation on new technologies and credit services.*

For better validation, further research is also recommended in many other Tabias of the woreda and other nearby Woredas

Key words: Sustainable rural livelihoods, livelihood asset, livelihood strategy, non-farm livelihood diversification.

BIOGRAPHICAL SKETCH

The author was born on 25 August 1979 in southern zone of Tigray, Endamokeni woreda to his father Adhana Kahsay and his mother Lemlem Adhana. He attended his primary school education at kind haw Welday elementary school from (1990 to 1995) and junior and senior secondary school at Tilahun Yigzaw comprehensive secondary school (1996-1999) in Maichew town, Southern zone of Tigray. In 2000, he joined Mekelle University, College of Law and Governance, Department of Civic and Ethical Education for three years, graduated in 2002 with a Bachelor of Art in Civic and Ethical Education. After graduation, he was employed as a Librarian at Elala elementary school in Mekelle, Semien sub city (2003-2006). Since June (2006 E.C.) he joined Mekelle university and served as Librarian. After serving at this position for five years, he joined the school of Graduate studies at Mekelle University in September 2010 E.C. to pursue a Master of Art degree in Developmental study.

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List of Abbreviations and Acronyms

ADLI	Agricultural Development-led Strategy
CSA	Central Statistics Agency
DFID	Department for International Development
GOs	Governmental Organizations
LA	Livelihood Approaches
MFI	Micro Finance Institution
MoFED	Ministry of Finance and Economic Development
MSE	Micro and Small Enterprise
NGOs	Non-Governmental Organizations
PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
RNFE	Rural Non –Farm Economy
RUL	Rural Urban linkage
SL	Sustainable Livelihood
SLA	Sustainable Livelihood Approaches
SPSS	Statistical Package for Social Science
SSA	Sub Saharan Africa
UNDP	United Nations Development Program

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CHAPTER ONE:

1. INTRODUCTION

1.1 Background Information

The concept “nonfarm activities” is defined in many ways by different authors. Kaija (2007) defined it as; the non-farm sector refers to all other activities outside the farm sector and agricultural wage employment. Non-farm activities are important to the livelihoods of rural households and should occupy a central position in policies addressing the development problems in Africa (Anriquez and Daidone ,2009). The rural non-farm sector not only contributes directly to rural households’ income that creates employment opportunities, but also it provides avenues for input supplies to the farming sector and value adding opportunities for the farm production. A well-off non-farm sector should be able to provide employment to marginal farmers who leave agriculture because they could no longer survive in farming. A growing interest in the rural non-farm sector reflects the increasing realization that rural peoples “livelihoods are derived from diverse sources and are not as overwhelmingly dependent on agriculture as previously assumed. Moreover, policy makers are looking at the wider rural economy to reduce persistent rural poverty and rural-to-urban migration (Davis and Bezemer,2004). The contribution of non-farm income sources to the rural economy cannot be neglected. Because , it has grown substantially during the last two decades and its share to total household income ranges between 30% and 50% in some developing countries (Awoyemi, 2004; Jonasson, 2005; Benjamin and Kimhi, 2006; Kaija, 2007) cited at Adewunmi,*et al.*(2011). In this respect, the behavior of rural households in diversifying their sources of income and employment from solely agriculture tonon-agricultural activities could be considered to be important as part of sustaining livelihood in Ethiopia.

Even though agriculture is the main source of livelihood in rural Ethiopia, farmers are engaged in a range of non-farm activities to diversify their income and enable them survive with the risk of Crop failures. However, there is a wide difference between literatures regarding the share of Non-farm income in total household income in Ethiopia. Barrett and Reardon (2000) reported that the share of non/off-farm income in rural Ethiopia averaged about 36% in 1989/90, on the

other hand, Reardon et al. (2006) found that non-farm share of total income in rural Ethiopia was about 20% in 1999 fiscal year (Demisse and Legesse (2013). Despite, the differences in the percentage of income share derived from non-farm employment, the role of non-farm income in total household income is significant.

Several studies conclude that involvement in supplementary activities is positively related to farm productivity and contributes to poverty alleviation. Farm households, as their income grows, increase their expenditure share on non-food items, thereby accelerating demand for nonfarm goods and services such as housing, clothing, schooling, health, etc. To meet this growing demand, rural households increasingly have to diversify into rural non-farm goods and source, (Demisse and Legesse., 2013).

Increasingly, productive modern agriculture also requires inputs and services, such as seeds, fertilizer, credit, pumps, processing facilities, which in turn create a growing demand for non-farm firms that can provide these services. The case is true even in our region .The growing agricultural economy pushes the rural people to assimilate in varies non-agricultural source and services. The farm households in the study area are engaged in different non-farm activities such as, coble tsone, Sand quarrying, Stone quarrying, Wood work, Metal work, Weaving machine, Baltna, Pottery, Swing machine, petty trade and Food preparation.. Cobble stone production is nowadays believed to be a means to initiate non-farm agricultural activities in the rural area. The cobblestone project is planned and backed by the government to enable the rural youth to engage themselves in non-farm activities it is believed that the rural youth can accumulate initial capital through the cobble stone engagement and thereby proceed to establish petty non-farm occupation Therefore, this paper will focus on contribution of non-farm activities for sustainable rural livelihood considering the respondents in Enderta Woreda.

1.2. Statement of the Problem

Traditional agriculture has been supposed as the only engine to rural growth. The recent literature on rural development has revealed an alternative view in which agriculture performs a more synergetic function in combination with other sources of employment. As a result, the livelihoods of rural households are more often characterized by complex strategies that involve

multiple income-generating activities by one or more household members, as nonfarm income sources assume an increasingly important role over time (Neglo.2021).





The levels of participation by rural households in nonfarm activities are even higher, with the vast majority of rural households in many developing countries involved in some form of non-farm income generating activity. However, while income diversification at the household and local level is the norm, agriculture is still a crucial sector of employment in those rural economies for which evidence is available(Lanjouw.,2001). In rural households in Sub-Saharan Africa (SSA) one of the mechanisms used to smooth income variability is to diversify their activities by starting non-farm activities. In view of these astonishing issues, various empirical studies have identified the socio-economic foundation of rural livelihoods for pursuing livelihood strategies.

Ellis (2004) argues, “Ethiopia follows policies that trap people in agriculture”. Inquiring of the Agricultural Development-led Strategy (ADLI) of the Ethiopian government, however, reveals that Ethiopian policy makers do in fact recognize the reciprocal linkages between agriculture and other sectors. Although small-holder agriculture is at the center of ADLI, the growth strategy pursued under Plan for Accelerated and Sustainable Development to End Poverty (PASDEP) is proposed to be driven by agricultural diversification and Commercialization with a strong export focus. The Rural Development Policy and Strategy Paper of the Ethiopian Government (2001) also explicitly recognize the importance of non-agricultural income diversification in rural areas and have devoted considerable space to elaborating the link between the farm and non-farm sectors. The document in fact states that, “we can consider our rural development activities that have achieved their goal only when agriculture ceases to be the Main source of the Ethiopian economy”. Fikru, (2008), criticizes Ellis as, in light of the above, although there are legitimate grounds for doubting their impact to date, and the seriousness with which they are pursued, it would not be a fair criticism to claim that “Ethiopia follows a rural development policy that traps people in agriculture”. Agriculture is the main economic base of Tigray region. About 80.5 % of the population receives their livelihood from agriculture (Abraha. 2015). Even though the sector remains the main source of livelihood in the region, production is not adequate to sustain the livelihood. Enderta Woreda is among Woredas of Tigray Region in which agricultural production in

the area is highly constrained by factors such as degraded environmental condition, inadequate rainfall, lack of technology, capital as well as credit (Tagel, 2008). Besides, population pressure and shortage of farmland; and lack of productive assets are the factors contributing to the problem. Most research papers carried out in the area, argue that rural non-farm activity is as being only distress-push for the rural poor (Meaza., 2014.). The research strives to assess the opportunities and constraints of nonfarm diversification in the study area and thereby deliver possible suggestions. Besides, the absence of any research of the rural non-farm activities in the study area initiated me to focus on in order to fill the gaps.


1.3. Research questions

The purpose of this study was to answer the following questions: -





-  What are the non-farm livelihood resources/assets of the study area?
-  What does the dominant non-farm diversification sources of the livelihood strategies constitute?
-  To what extent does the non-farm livelihood diversification option has a function in sustaining the livelihood of the study area?
-  What are the constraints are that tackle non-farm diversifications in the study areas?

1.4. Objectives of the Study

1.4.1 General objective:

-  The general objective of the study was to examine the role of non-farm activities in sustaining the livelihood of Enderta Woreda

1.4.2 Specific objective

-  To examine the non-farm livelihood resources/assets of the study area
-  To assess the non-farm livelihood diversification of strategic option of the study area
-  To examine the contribution of non-farm activities existing in the study area of households
-  To analyze the key constraints and opportunities for non-farm rural diversification in the study Woreda.

1.5. Significance of the study

The study focuses on the role of non-farm activities in sustaining rural livelihood. The study contributes to the understanding of the role of non-farm activities and the dynamics of rural non-farm economy in providing employment and income diversification opportunities. Results of this study will be important in providing information for governmental and nongovernmental bodies who are working on non-farm activities for sustainable rural non-farm livelihood diversification. Moreover, it hopes to contribute to understand better the forces that drive change in rural non-farm economy, opportunities and constraints.

1.6. Scope of the study

The concept “non-farm activities” is defined in many ways by different authors. According to Kaija (2007), the non-farm sector refers to all other activities outside the farm sector and agricultural wage employment. The study comprises the livelihood resources/assets including human, natural, social, financial, and physical capital, the livelihood diversification strategy option, the contribution of non-farm activities existing in the study area, the key constraints and opportunities for non-farm rural diversification in sustaining the livelihood of the rural areas of Enderta Woreda. Using appropriate sampling technics five Tabias were selected among 24 Tabias of Enderta Woreda; namely Chelekot, Debremaernet, Membere kidusan, Felegeselam and Didba in2020/21.

1.7. Limitations of the study

The study focuses on the role of non-farm activities in sustaining rural livelihood that covers only 5 of the 24 Tabias which is purposely selected and limited. Namely Chelekot, Debremaernet, Membere kidusan, Felegeselam andDidba. Therefore, the findings from the assessment was limited to the study area and the conclusions delineate may not be possibly represents as whole. The study did not include agricultural wage employment as one of off-farm activities.. Therefore, future research may include other Tabias to generalize the findings and to compare the results across the woreda when it is practical

CHAPTER TWO

2. Literature Review

2.1. Livelihood Resources (Assets)

Livelihood assets are the resources on which people draw in order to carry out their lively hood strategies (Farrington *et al.*, 2002). The members of a household combine their capabilities, skills and knowledge with the different resources at their disposal to create activities that will enable them to achieve the best possible livelihood for themselves. Everything that goes towards creating that livelihood can be thought of as a livelihood asset (Meser and Dani, 2008).

The livelihood approach respects the asset status of households as important to understanding the choices open to them, containing diversification into non-farm activities. The asset location of a household has a significant effect on household participation in non-farm activities. The major livelihood assets are;

Human capital: like age, education, gender, health status, household size, dependency ratio and leadership potential, etc. (Bezemer and Leman, 2003; Farrington *et al.*, 2002; Kollmair and Gamper, 2002);

Physical capital: comprises the basic infrastructure and producer goods needed to support livelihoods, such as reasonable transport, sheltered and housings, sufficient water supply and sanitation, reasonably priced energy and access to information (DFID, 1999);

Social capital: which refers to networks and connectedness, Kollmair and Gamper ,(2002) asserts that in the context of the SLA it is the social resources up on which people draw in search of their livelihood outcome such as networks that add to peoples trust and ability to cooperate or participate in a membership of more formalized groups and their arrangements of rules, norms and sanctions.

Financial capital: like savings, credit, and remittances from family members working outside the home (Bezemer and Lerman, 2003); and

Natural capital: which is the natural resource stock from which resource and service flow, for instance, good air and water quality and foundation for good health and other features of a livelihood (Kollmair & Gamper,2002).

2.2. Policies and institutions

Policies and institutions which influence rural household's access to livelihood assets are also important aspects of livelihood framework (DFID, 2000). Institutions are the social cement which link stakeholders to access to capital of different kinds to the means of exercising power and so define the gateways through which they pass on the route to positive or negative [livelihood] adaptation (Scoones, 1998).

2.3. Livelihood strategies

According to DFID (1999) the term livelihood strategies are defined as the range and combination of activities and choices that people make in order to achieve their livelihood goals, including productive activities, investment strategies, reproductive choices, etc. Livelihood Strategies are composed of activities that generate the means of household survival and are the planned activities that men and women undertake to build their livelihoods (Ellis, 2000)

2.4. Livelihood outcomes

Livelihood outcomes are the achievements of livelihood strategies, such as more income (e.g. Cash), increased well-being (e.g.non material goods, like self-esteem, health status, access to services, sense of inclusion), and reduced vulnerability (e.g. better resilience through increase in asset status), improved food security (e.g. increase in financial capital in order to buy food) and a more sustainable use of natural resources (e.g. appropriate property rights) (Scoones, 1998)

In the circumstance of this study, activities are taken by the household to produce income, such as engagements in non-farm, waged-employment, self-employment and a mix of farm and nonfarm engagements. The decision on the set of activities a household will involve itself in, and the strength of those activities, is trained by the arbitrating processes and the context in which the household operates. Social relations, institutions, and organizations are critical mediating factors for livelihoods. Movements and shocks constitute the context influencing household decisions

through natural and non-natural forces (draught, floods, population growth macro-policy, technological changes, etc.). The asset location of household is facilitated by social relations, institutions and organizations result in the acceptance of livelihood strategies, which are collected of activities that produce the means of household survival. Livelihood results are the achievements or outputs on livelihood policies. For the purpose of the study they are what the study is seeking to achieve is through diversification into non-farm activities. An attempt is made to build this study around the above ideas of livelihood and diversity. In the same vein, Ellis (2000) has defined livelihood and diversification as indicated in the following quotation.

A livelihood comprises the assets (natural, physical, human, financial and social capital), the activities and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household. Diversity refers to the existence, at a point in time, of many different income sources, thus also typically requiring diverse social relations to underpin them. Diversification, on the other hand, interprets the creation of diversity as an ongoing social and economic process, reflecting factors of both pressure and opportunity that cause families to adopt increasingly intricate and diverse livelihood strategies (Ellis 2000:14).

2.5. Definitions of rural non-farming activities and Diversification

Before embarking on a study of non-farm rural activities, it is also necessary to identify what is meant by both „rural“ and “non-farm”. Gordon and Craig (2001:4) observe that: The term „rural“ is subject to a large amount of debate, hanging on three particular aspects: whether rural towns are rural or urban, at what size does rural settlement become urban, and the treatment of migration and commuting between rural areas and towns. There is no firm rule that resolves these issues, and the only practical solution is for the researchers to make sure what they have adopted is clearly stated. With regard to what establishes „non-farm“ too, various researchers and investigators follow different conventions.

Bryceson(1999), for instance, observes that non-farm activity is a term that many associate with non-agricultural activities (e.g. Ellis, 1997); but in the De-agrarianization and rural employment (DARE) survey it includes agricultural paid labor on farms not fitting to the separate producer or his/ her household, in other words, off -farm work Haggblade, *et*

al,(2007) observe that the rural non-farm economy comprises all rural activity outside agriculture. Sectoral projects depend only on the nature of the product and the types of factors used in the production process. Neither place away from home nor employment self-employed or hired for salary or wage matter (Barrett et al, 2000). In this study, however, we follow concept “nonfarm activities” is defined by, Kaija (2007) defined it as; the non-farm sector refers to all other activities outside the farm sector and agricultural wage employment. Activities of the non-farm economy are usually classified into three major sectors i.e., trade, manufacturing and service. A supplementary category is formal employment in the public service (health workers, development agents, teachers etc.)

Typical non-farm activities include

- ✓ Quarrying and production of building materials
- ✓ Furniture making, carpentry, painting
- ✓ Pottery, mats, baskets
- ✓ Repair of shoes, vehicles, tools
- ✓ Leather work, textiles and clothing
- ✓ Transport
- ✓ Wholesale and retail trading
- ✓ Barberry, photography
- ✓ Cooked food sale, coffee and tea shops, bars
- ✓ Grain milling, dairy processing, slaughtering and butchery
- ✓ Formal employment: teachers, health workers etc.

The literature also points two critically important features of the rural non-farm economy, which is its heterogeneity and measurement difficulty. The rural non-farm economy contains a highly heterogeneous collection of trading, agro-processing manufacturing, commercial, and service activities.

The arrangement of non-farm activity differs considerably as a function of widely variable natural resources, labor supply, location, history and institutional factors. Measurement difficulty arises mainly from seasonal, part-time, and small-scale nature of production and the fact that producers do not normally keep written records. Many surveys thus use employment as a proxy for non-farm activity levels (Haggblade. *et al.*, 2007:13).

Numerous definitions of diversification are presented in the literature. Either diversification can refer to an increasing variety of activities regardless of the sector, or it can refer to a shift away from traditional rural sectors such as agriculture to non-traditional actions in either rural or urban space, i.e. sectoral change (Start and Jonson, 2004). Alternative definition refers to expansion in the importance of non-crop or non-farm income and increase in the number of sources of income (Minot *et al*, 2006). As Crole, (2002) defines diversification as the share of non-crop income in total income.

2.6. Determinants and Motives of Diversification

The literature offers diverse diversification typologies: distress „pushes“ versus demand „pull“, income-driven versus activity-driven, occasional versus strategic diversification, to mention a few. Livelihood variation is pursued for a combination of motivations and these vary conferring to context from a need to accumulate in order to invest, to a need to spread risk or maintain incomes, to a requirement to adjust to survive in eroding positions, or some mixture of these (Hussein and Nelson,2004). Two fundamental causes of diversification are also often stated in the literature (Ellis, 1998, 2000); namely seasonality and risk. Diversification is thus expected to play a role in overwhelming the consumption smoothing problem created by the seasonality of agricultural output designs. For rural households, risks are mainly related to natural shocks (drought, floods etc.). All households, whether rural or urban, are disposed to the personal shocks of chronic illness, coincidences and death. Risks are thus reduced by diversifying livelihoods.

Livelihood diversification determinants of fall into two broad categories which are: “push” versus “pull” factors. The coping literature inspects how farmers in low-potential and risky environments those subject to drought, flooding, or environmental deprivation often adapt by organizing household capitals to a range of farm and non-farm doings a growing landlessness also pushes households into non-farm activity by default. Many farm households in average to high -potential environments are also pooled by opportunities for change into attractive non-farm activities. Roads, telecommunications, credit and electricity all give to increased non-farm activity. Renkow in Haggblade, *et al*, (2007:197), observes:

In the specific case of the rural non-farm economy, infrastructure is a double-edged sword. On the one hand, adequate roads, communication facilities, and other public goods are necessary fixed inputs into production; and, hence, would be expected to facilitate the development and expansion of rural industries. On the other hand, connecting rural places to urban places, via infrastructure expansion and improvement, may well lead to inadvertent “crowding out” of more remote rural firms and industries by virtue of lowering the cost of distance and their competitiveness with urban firms.

Similar to infrastructure, new technology is also perceived as a two-edged sword though it drives change in the rural non-farm economy. (Haggblade, 2010) observe that new technology has inspired rapid change in rural non-farm activity through a broad range of developing country settings. In some circumstances, it opens vast new vistas and powers rapid rural nonfarm growth. In other instances, the new technology and excellence standards brandished by expansionist large enterprises may enable them to out compete scrod’s of smaller, outmoded rural non-farm firms.

2.7. Non-Farm Diversification and Poverty Reduction

The income-diversification literature converges on an estimate of roughly 40 % of African rural household income on average being resulting from non-farm sources (Bryceson, 1999).

Because non-farm earnings constitute an even larger portion of cash income (Neglo, *et al.*, 2021). Even if the influence of non-farm pays on relative income equality is unclear or negative, access to non-farm earnings however improves the absolute income levels of the poor. The non-farm subdivision offers potential to absorb a rising rural labor force, slow rural - urban migration, contribute to national income growth, and promote a more equitable distribution of income (Lanjouw and Lanjouw, 1997).

Given low capital supplies and the small-scale nature of numerous rural non-farm enterprises, Poor households control many of them. For these details, policy makers are progressively forced to view the rural non-farm economy as a potentially important donor to foster local economic growth and improve the rural-urban income gap and rural poverty (Davis and Bezemer, 2004).

There is thus a developing consensus that poverty declines as the share of income from nonagricultural bases rises. The harms of agriculture and large-scale activities in African countries reinforce this view. Four welfare important roles of the rural non-farm sector are usually highlighted in the literature:

- The non-farm sector increases the incomes of marginal producers, and by this decreases in equality and poverty,
- During the loose season, farm households find a second employment and income source,
- Many farm households have a hard time even achieving the subsistence level by means of agriculture for rural setting then, non-farm activities serve also the purpose of generating cash income,
- Various linkages between the non-farm sector and the agricultural sector are being generated that might enhance also agricultural production and / or productivity and hence rural development (Tegegne, 2000).

The poor normally remain limited to the low-return section of the rural economy. Policy creators are thus instructed not to believe that an expanding rural non-farm economy will inescapably translate into declining poverty. However, while these deeds do not lift the poor outside poverty, they have great role in protecting the poor from further declines in income.

2.8. Research on Rural Livelihood Diversification in Ethiopia

Rural structural transformation relating diversification out of agriculture is also increasingly becoming both policy and research issue in Ethiopia. As explained by PASDEP, the rural development strategy of the country will be widened beyond the initial focus on agricultural intensification, with acknowledgement of the need to stimulate income diversification and rural urban linkages. Overall, the PASDEP stays to advocate ADLI strategy, but adopts a more stable approach. This is done by highlighting the importance of private advantage of rural households, income commercialization and diversification of agriculture.

There is a growing works relating with rural non-farm livelihood diversification in Ethiopia. Some of these are regional (Demissie and Workneh 2004) cited at Fikru (2008). Others focus on drought periods (Webb 200 and Fredu et al 2006) cited at Fikru (2008). The one by Adugna (2006), though, covers different regions and cropping systems of the country except pastoralist areas. The authors agree that the performance of the agricultural sector in Ethiopia is weak and that preventive policies, drought, population pressure and environmental degradation are among the major bottlenecks in the development of agriculture. On the basis of a study conducted out in three sites in southern Ethiopia, Carswell (2002) generalizes that lack of credit and lack of labor are the two key obstacles to entry for diversification activities. The key policy task identified in the study is how to find effective ways of articulating formal credit delivery and informal systems. Other key institutions identified include institutions markets around labor and natural resource tenures. The institution of caste, the traditional authority that it implies, kinship and social network are also deemed to have a serious role in living strategies of people in the study area.

Tegegne in (2000) study was carried out in Kacha Bira and Damot Gale Woredas of southern Ethiopia, in an attempt to examine the effect of non-farm activity on the production decision of farmers, and to classify the factors influencing non-farm activity. The study found that in the study sites the farm sector is described by shortage of land, low yield of crops shortage of draught animals and lack of grazing land. The implication made is that the farm sector is not enough to support the high density of population in the study sites. Farmers in the study sites, therefore, have exposed higher involvement in non-farm activities and income from non-farm bases play a major role in their livelihood. The main non-farm activities are trade and skill. Those contributing in non-farm activities are found to be relatively younger and more educated. Family size was not found to be an important variable, while villages near urban centers tend to have more number of households making non-farm income and engaging in trade activities. Fredu et al (2006), using data from 385 rural households in Northern Ethiopia, found out that diversification strengthens income inequality. A rise in income from non-farm income and livestock, according to their study increases income inequality. They also originate that social capital is a significant factor determining non-farm income but not so for crop income. One can give conclusion from the above works on

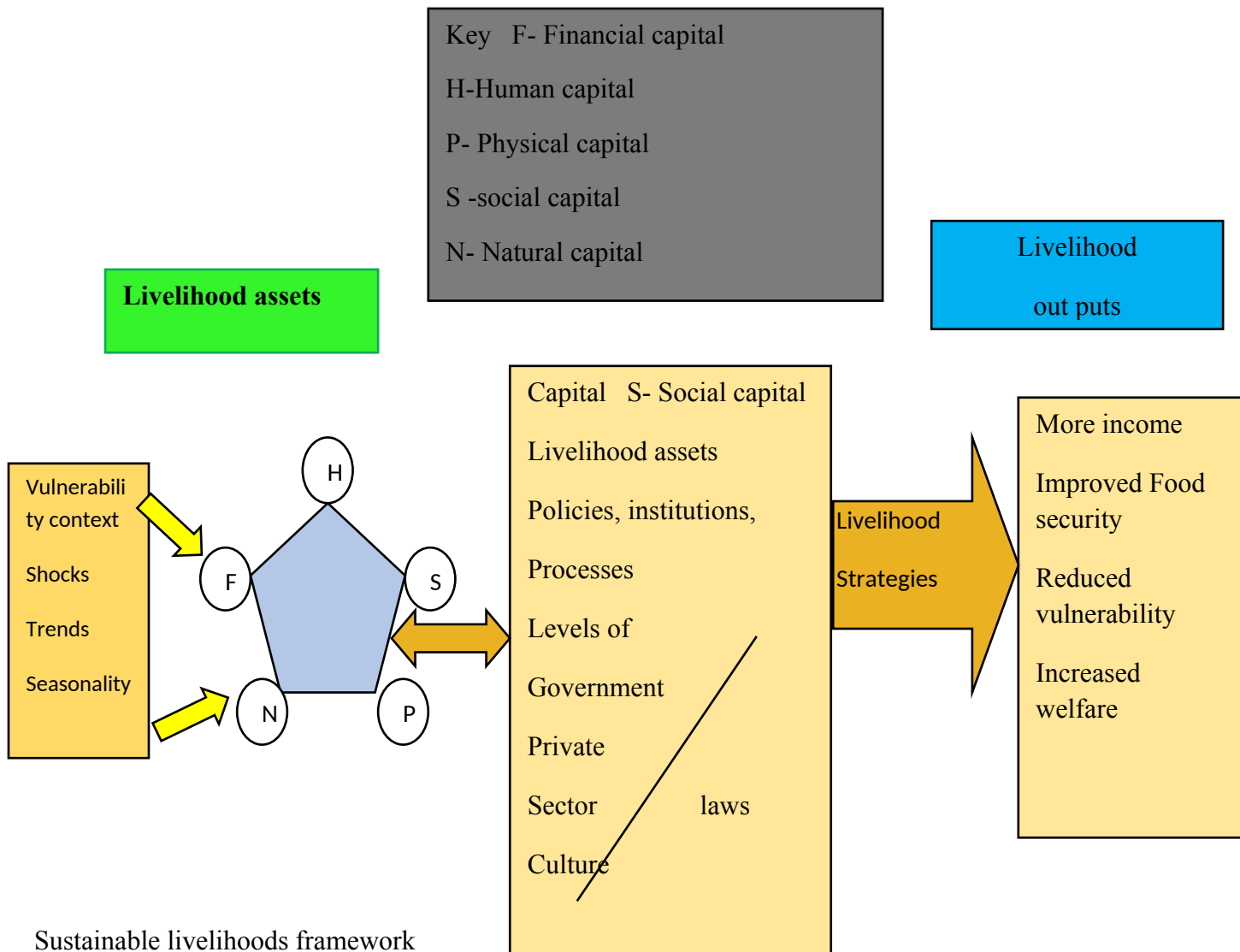
Ethiopia that diversification decision is driven by various factors and variables and its effects also vary.

According to Beyene (2008), most of the sample farmers 79 % of the sample households are participating in off-farm activities mainly to supplement their agricultural income, since production and productivity of agricultural sector is low, farm households income is not sufficient even to feed their families. Excess labor in the family and the seasonality of agriculture are factors responsible for farmers to participate in off-farm activities. Large family size results in declining farm size which in turn result in low level of per capita production and hence less income. The seasonality of agriculture causes a farm family to have excess labor during the slack season, which induces them to take on in other non-farm activities.

2.9. The Conceptual Framework

The conceptual framework for this study is apprehensive from the sustainable livelihood framework (SLF) and Livelihood Approaches (LA) that emphasizes understanding of the context within which people live, the assets available for them, livelihood strategies they follow in the face of existing policies and institutions as well as livelihood outcomes they intend to achieve (DFID, 2000). The framework displays how in different backgrounds, sustainable livelihoods are attained through access to a range of livelihood assets which are shared in the pursuit of different livelihood strategies to achieve certain livelihood outcomes such as increased incomes. Households can access a range of assets or resources (physical, natural, economic, human and Social capital) in which they can use to engage in farm or non-farm activities or both (Scoones, 1998). Conferring to Ellis (2000), the framework defines the context within which rural nonfarm livelihood actions are started in such a way that, different livelihood activities of rural households are allowed by accessing assets, in the setting of institutions and social relations, modified by tendencies and shocks, with effects on livelihood safety and environmental sustainability.

Figure1. Sustainable livelihoods framework



Sustainable livelihoods framework

Source: Adapted from DFID, 2000.

CHAPTER THREE:

3. MATERIALS AND METHODS

3.1. Description of the study area

The study was conducted at Enderta woreda, southeastern zone of Tigray regional state during the 2020/21. Geographically the woreda is found in southeastern zone of Tigray, northern Ethiopia that is bordered by Kelteie Awelaielo woreda to the north, Afar region to the east, Hintalo-wejerat woreda in the south, Seharti in the southwest and Doga temben in the west. The total area of the district is estimated to be 93,048 km² and Altitude in the area ranges from 1400m to 1800m (Almaz, 2008). The Woreda is divided into three Agro-ecological zones, namely Doga (highland) 1%, woina doga (medium land) 96% and kola (Lowland) 3%. Thus, Enderta lies in the midland Agro-ecological zone, characterized by dry climatic conditions and erratic annual rainfall of 450-600 mm. The landscape is mostly plain and hills, with bush vegetation (Weldebrhan. 2013 and USAID.2016).

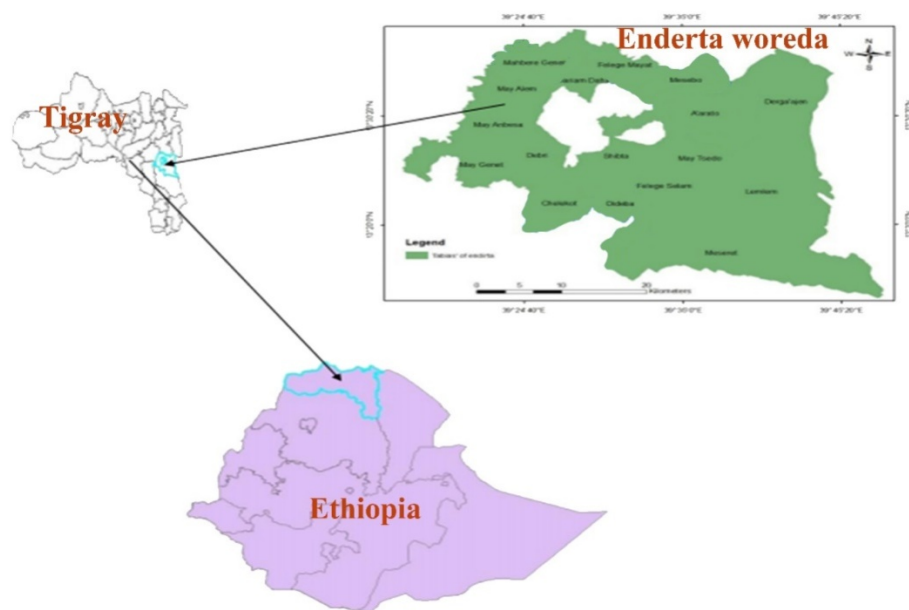
Enderta is a highly populated area in the region with a total population estimated 129,876 from which 49.3% male and the remaining 50.7% female (CSA, 2011 and Abate, 2016). Number of family headed households are 28,432 in which 18,879 male and 9,553 female (CSA, 2011 and Abate, 2016). According to Enderta woreda office of agriculture and rural development recent annual report, the woreda has twenty four (24) Tabias/ kebeles having 31,184 hectare cultivated land.

The capital city of Enderta woreda is Quiha that is situated 774km north of Addis Ababa, the capital city of Ethiopia and about 9km from Mekelle, the capital city of Tigray region in the Southeastern Zone of Tigray regional State. Its western and eastern boundaries are geographically located 13° 42' 37" N Latitude and 39° 37' 4" E Longitude.

Mixed farming, which includes crop and livestock productions, is the most dominant livelihood system undertaken by small-scale farming households in the woreda. Like other parts of the region, livestock ownership and land holding are the important assets of the farming households in this area. (BOARD, 2012). In the study area, crops such as wheat (*Triticum aestivum*), barley (*Hordeum vulgare*), tef (*Eragrostis tef*), and lentil (*Lens culinaris*) are the major crops, which are dominantly cultivated and grown every year. Some tropical fruit and vegetable crops like banana

(*Musa spp.*), mango (*Mangifera indica*), avocado (*Persea americana*), papaya (*Carica papaya*), Guava (*Psidium guajava*), Cabbage (*Brassica oleracea*), Tomato (*Solanum lycopersicum*), Potato (*Solanum tuberosum*) and onion (*Allium cepa*) are also grown in the study area. The agro ecology of the area is hot to warm semi- arid low land plains. It is characterized by hot temperature, unpredictable rainfall, immense area of plain low lands suitable for large scale and subsistence agriculture including crop production and livestock rearing.

Figure 1. Map of Tigray regional state and the study area



3.2. Data type and sources

Throughout the course of this work, the study relies on both primary and secondary sources that include both qualitative and quantitative types of data to generate relevant and valuable information. Primary data was collected by administering open and closed questions, key informants' interview as well as focus group discussion with the respondent. The study had also used secondary data, mainly collected from official records of Woreda level, archival research from books, journals, manuals as well as annual reports of the Woreda magazines and others. It also included published and unpublished materials about

livelihood strategies and livelihood resources/asset. The unit of analysis was the household heads of the selected Tabias.

3.3. Research Strategy and Research Design

John.*et al.*, 200 explained, research design as the blueprint for fulfilling research objectives and answering research Questions. In other words, it is a master plan specifying the methods and procedures for collecting and analyzing the needed information.

This study had adopted both qualitative and quantitative research approaches as the data obtained from the respondents analyzed qualitatively and quantitatively (using stratified statistical approach). Since the quantitative approach has several advantages and a highly structured approach, it can allow for cost efficient and less boring data. It also allows for the computation of statistics from which the interpretation easily drowns. The qualitative methods are also increasingly accepted in social science and business research works. It helps to obtain qualitative data about the people feeling, behavior and opinion. Using the mixed quantitative and qualitative method can be useful to triangulate results from different dimensions and to develop richer pictures of the phenomenon under investigation (Ndanu and Syombua. 2015). The study was stratified type as it used primary data, which was collected in a single period of time mainly through interview, group discussion and observation in order to apprise the role of Non-farm activities in sustaining rural livelihoods. In addition, the study was mostly descriptive type and presented with the help of descriptive statistical tools.

3.4. Sampling Techniques

Concerning the population and sampling techniques, the study was purposely focused on five Tabias/kebeles of the 24 kebeles of Enderta woreda namely, Chelekot, Debre ma'ernet, Menbere kidusan, Felegeselam and Didba. These targeted kebeles were selected due to their nearness to my work area, ease of transport cost, their convenience for my research and nearness to Mekelle, the capital city of Tigray regional state. In order to select the target respondents/households, a stratified sampling method of research was followed.

3.5. Sample Size Determination

The total target population of this study was 7533 households. Using Kothari's formula (2004), the sample size was decided to be 191 as follows.

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2(N-1) + z^2 \cdot p \cdot q}$$

Where

n= size of household heads population

p=Sample proportion of successes;

N= target population

q=1-p;

z=the value of the standard deviate at a 95% confidence level

e=acceptable error (the precision)

Thus, N=7533, p=0.5, z= 1.96 and e=0.07

Therefore, $n = \frac{(1.96)^2 \cdot (0.5) \cdot (0.5)7533}{(0.07)^2 \cdot (7533-1) + (1.96)^2 \cdot (0.5) \cdot (0.5)}$

$$n = \underline{191}$$

Though with this method each tabia was fairly represented, Proportional allocation of the sample was made on the basis of the size. The required sample households were selected randomly within each Tabia; every member of the population had an equal chance of selection in the sample.

Hence, each Tabia was fairly represented through the stratified sampling formula as follows:

1. Sample size for Chelekot $\frac{849 \cdot 191}{7533} = 21$
2. Sample size for Debre ma'ernet $\frac{1361 \cdot 191}{7533} = 35$

3. Sample size for Membere kidusan $\frac{1472 * 191}{7533} = 37$
4. Sample size for Felegeselam $\frac{1410 * 191}{7533} = 36$
5. Sample size for Didba $\frac{2441 * 191}{7533} = 62$

Accordingly, 191 respondents were taken from the whole population of the five Tabias.

Table 3.1 Sample distribution and population of the study area

Tabia/Kebele	Total households of Tabia			Household sample size	Family size			Type of sampling method used.
	Male	Female	Total		Male	Female	Total	
Chelekot	580	269	849	21	2104	2087	4191	Proportionate stratified sampling method.
D/ma'ernet	1181	180	1361	35	3204	3048	6252	
M/kidusan	993	479	1472	37	2994	3182	6176	
F/selam	1030	380	1410	36	3403	3385	6788	
Didba	1634	807	2441	62	5669	5718	11387	
Total	5418	2115	7533	191	17374	17420	34794	

3.6. Data collection procedures

Descriptive analysis was used to examine and describe the role of non-farm activities in sustaining the Rural Livelihood. In this study, both quantitative and qualitative methods were applied. The main reason for relying on both methods was that non-farm activities had a great contribution for Rural Livelihood hence this concept required the use of varied methods to come up with the valid and credible results. Thus, quantitative and qualitative data were obtained from different primary and secondary sources. Five enumerators have been participated in the process of primary data collection (Questioner filling) one enumerator per Tabia. Hence, the enumerators were carefully trained how to fill the questioner and request for respondents for the betterment of the questioner.

3.7. Data collection tools

Data were collected from the sample group through questionnaire; key informant's interview and focusgroup discussion. Questionnaire was the main tool to collect data from the rural households of the Tabia. Face-to-face interview with the administrative bodies of each Tabia and the woreda officials was also carried out.

3.7.1 .Questionnaire

As a main tool for data collection, a questionnaire was developed based on the research questions to gather information from sample respondents in such a way that it addresses the related variables and objectives of the study. A thorough discussion was accompanied with advisors about the drafted questioner. This discussion led us to initial refinement in wording and the inclusion of additional items. Then, in order to have further corrections and necessary modifications, the drafted questionnaire was pre-tested at tabia Chelekot (in ten households). After the enumerators have administered the pre-testing questionnaires, each item was examined and improved on wording, ordering, removing repeated questions and arrangement of research variables. Moreover, the semi-structured interview was conducted with higher Woreda and Tabia officials as key informants. The primary data included in depth close and open ended questions and semi structured interviews. Knowing to the above, questionnaires were prepared to the targeted population of the study area. Moreover, the questionnaires were translated to local language, Tigrigna for the ease of the respondents. Semi structured interviews had also been conducted with higher Woreda and Tabia officials as key informants.

3.7.2. Interviews

Therefore, an interview was conducted with the key informants, like administrative body of each Tabia, the Woreda level office of agriculture and rural development, micro-finance institution and Woreda experts. The interview included how non-farm activities contributed to the rural people in sustaining rural livelihood, what kinds of strategies were followed, what system were followed to obtain credit access, etc.?

3.7.3. Focus Group Discussion (FGD)

In addition to structural questionnaires and key informant interviews, focus group discussion was held through five groups that were selected from each Tabia (which comprised seven persons in

each group) with elders and key informants like farmers, development agents, relevant professionals and administration office to all levels to access detailed information.

As Focus Group Discussion is one of the major data collection instrument, five group discussions were conducted to collect the necessary data. Two professional, experienced and active note-takers were also assigned to record the points raised by participants, their duty was list out the topics that were discussed, monitoring reaction of group participants and making sure the discussion was well recorded. Several issues were raised by the participants, such as complicated structure of credit services, poor market linkage, lake of awareness creation and continuous training about non-farm activities and so on.

3.8. Data quality assurance

In interpretation analyzing of the data, a code was developed to guide the extraction of data from the questionnaire. Then, the responses from the questionnaires were entered into the cells of SPSS. Data processing and analysis was done by computing summary Statistics (frequencies, and percentage), cross tabulation, summarized in tables and graphs. The analysis of the qualitative data obtained through both household interview and focus group discussion was conducted because of narrative type of analysis.

3.9. Methods of Data processing and Analysis

All the data collected from primary and secondary sources of information were edited and checked for consistency. Then the questionnaires were subjected to the statistical package for social science (SPSS) software package. After the data was being analyzed, the significant part of the result was based on descriptive statistics methods such as frequency, averages and percentages used to summarize and present the data. Qualitative information collected through interview had also been incorporated in to the quantitative results.

CHAPTER FOUR:

4. RESULT AND DISCUSSION

4.1. Household characteristics description of statistical result

4.1.1. Age, Gender and marital Status of Rural Household

Table 4.1 Age of Household Head * Sex * Marital Status Cross tabulation

Age of household heads	Sex of household heads			Household heads Marital status					Percent of total
	Male	Female	Total	Single	Married	Divorced	Widow	Total	
18-29	7	9	16	6	5	4	1	16	8.4%
30-49	99	32	131	0	103	19	9	131	68.6%
50-64	29	6	35	0	26	2	7	35	18.3%
>65	7	2	9	0	9	0	0	9	4.7%
Total	142	49	191	6	143	25	17	191	100%
%of total	74.3%	25.7%	100%	3.1%	74.9%	13%	9%	100%	

Source: Compiled from my own survey, 2020/01.

Age, as an important demographic characteristic of the sampled households, had a significant effect on the economic activities of the household. About 68.6% of the respondents were under the age group of 30-49, that contained the highest sample number of household heads (Table 4.1). Thus, the result showed us, at younger age there was an augmentation in non-farm activities. In line with this finding, Beyene, (2008) assured that, at younger age the probability of working on non-farm activities revealed an increased engagement while at older ages the overall labor hour was diminished and the demand for leisure had been increased. This group of age encompassed adults and productive ages that have positive effects on growth and development of the economy.

About 74.3% of the household heads were males while the remaining 25.7% were female-headed households. This showed us the majority of the household heads were male-headed households whereas female-headed household was less in number. The minimum, mean and maximum age for the whole sample was 20 years, 42 years and 70 years respectively. Concerning to marital

status of the household heads, the highest, in which 74.9% of the respondents were married, while 3.1%, 13% and 9% of the respondents were single, divorced and widows respectively (Table 2).

4.1.2. Family Size

The mean family size for the whole sample population was 4.6 people while the minimum and maximum family size of the sampled population was 1 and 8 person per household respectively. This suggested that in the study area, about five people were lived per household on average.

4.2. Primary occupation of rural households

The study revealed that, the primary occupation of the rural household was agriculture, which accounted about 85.7% of the total respondents. Hence, the household had more than one primary activity. The others 14.3% of the respondents were involved in non-farm activities.

Even if the result in (Table 4.2) publicized agriculture as the primary occupation of the household, the productivity of the area was less and uncertain in such a way that most of the production obtained was used for self-sufficient consumption. Therefore, the households follow and develop a wide income-earning portfolio to cover all types of expenses. Non-farm activities had important role in household economy, providing farm households with insurance against the risk of farming and thereby enabling them to adopt new technologies. Similar to this finding, Neglo, et al., (2021) proved that non-farm activities are pro-cyclical with farming operations in Ethiopia

Table 4.2 Primary occupation of rural households

Activities		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Farm	162	84.8	85.7	85.7
	Non-farm	27	14.1	14.3	100.0
Total		189	98.9	100.0	
Missing	System	2	1.1		
Total		191	100.0		

Source: Compiled from my own survey, 2020/21.

4.3. Secondary Activities of the household head

. The study proved that about 30.6% of the respondents were involved in cobblestone production. Thus, this activity was found with the highest number of respondents from the sample taken (Table 4.3). Nowadays, cobblestone production is believed to be a means of initiating non-farm activities in the rural areas. Because the government planned and backed the cobblestone project to enable the rural youth to engage themselves on non-farm activities. It is thought that the rural youth will have initial capital through the cobblestone engagement and thereby proceed to establish petty non-farm occupation. Several rural youth, particularly those who were landless, unemployed or was not attending school were organized by the local administration in developmental groups at a number of 25-30. As the data that was obtained from the respondents, the livelihoods of the participants was

Changed through, the opportunity offered by their Tabias and saved their money too.

Being as members of the developmental group, the livelihood of the participant was significantly changed and improved. Because, they had saved money and take credits from what they have saved to diversify their activities and fully improve their livelihood income.

Table 4.3 Secondary Activities of the household head

Secondary Activities of HH Head		Frequencies	Percent (%)	Total
Agricultural activities	Crop production	31	29.52	100
	Livestock rearing	41	39.05	
	Bee keeping	6	5.71	
	Poultry production	20	19.05	
	Others	7	6.67	
Non-farm Activities	Cobblestone works	78	30.59	100
	Construction	21	8.24	
	Masonry & Painting	47	18.43	
	Stone & sand quarrying	27	10.59	
	Lacing machine	4	1.57	
	Earthenware/pottery	5	1.96	
	Petty trade	21	8.24	
	Food preparation and coffee house	29	11.37	
	Local drink & other activities	23	9.02	

Source: My own survey (2020/21)

4.4. Educational status of rural household

The survey result revealed that, about 64.92% of the sample respondents (Table 4.3) had attained 1-8 grades. This showed us; most of the respondents had better knowledge in engaging themselves in diversified activities. Hence, less or lack of formal education negatively influenced participation in non- farm agricultural labor market at ($P \leq 0.01$) probability level of significance. This condition can facilitate diversification of non-farm activities in the rural households and hence better condition of life. This result is in line with the studies conducted by (Bryceson, 2002, Kassie, 2013 and Kassie et al., 2017).

Most studies have indicated that the higher the education level results with a higher stock of human capital. Fuje, (2017) proved educational attainment as one of the main proxies of livelihood diversification into non-farm activities and self-employment, mainly in highly paid

salary as well as skilled employment. Skills and educational attainment serve as considerable entry barriers to high-paying non-farm employment or self-employment in rural Africa (Haggblade, 2007).

Similarly, Merima and Peerlings, (2012) found that households with educated heads are more probable to participate in non- farm activities.

Table 4.4 Educational status of rural household

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Illiterate	62	32.46	32.46
	Grade 1-4	97	50.78	83.24
	Grade 5-8	27	14.14	97.38
	Grade 9-12	5	2.62	100.0
	Total	191	100.0	100.0

Source: My own survey (2020/21)

4.5. Livelihood Assets (Capital)

The result presented in (Table 4.5) indicated that, from the sample respondents 88.8% have access to credit services. Hence, access for credit services helped the rural households to purchase agricultural (such as fertilizer & improved seed) and nonagricultural inputs (such as stone quarrying machines & mining materials). Moreover, it helped them to engage in non-farm diversified activities, minimizing the effect of natural resource degradation and increasing the capacity to use different agricultural inputs for enhancing productivity. Likewise, it has been described that increasing farm productivity is the turning point for rural non-farm economy (RNFE). Meaning, as agricultural products are raised; the rural economy will also be increased. Reardon *et al.*, (2000), proved that the farm and non-farm economy directly or indirectly might be interconnected through different activities, which are important for the development of non-farm enterprises and then highly increased the household annual income.

Table 4.5 Access to credit service for the rural households

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	169	88.5	92.86	92.86
Valid	No	13	6.81	7.14	100.0
	Total	182	95.31	100.0	
Missing system		9	4.71		
Total		191	100.0		

Source: Own survey (2020/21).

4.6. Source of credit services

The result revealed that the rural saving and Credit Cooperatives (SACCOs) and Dedebit Micro Finance (DMF) as significant players in providing credit for rural non-farm sectors. In particular, the Savings and Credit Cooperatives (SACCOs) as each tabia has its own cooperative and easily get credits in kind or cash, is a source of credit for most of the respondents, which accounts 55.62%.

According to Ibrahim and Ounk (2009), the main factor for non-farm livelihood diversification is access to credit. Bryceson (1999) also explained credit as one of the entry barriers for the poor households to participate in non-farm activities, and, he added, due to this barrier these households are involved in traditional unskilled non-farm activities with lower return. Besides, Ellis, (2000) assured Credit as reasonably a priority area of micro-policy in the rural sector of developing countries like Ethiopia. The resent emphasis has been on small scale lending systems, enabling individual households to expand their income earning option. There is also a need to facilitate the spread of rural financial institution that are self-sustaining on the bases of saving and loan organizations according to conventional banking criteria (Ellis, 2000).

Even if credit access was available in the study Tabias, the loan system was very sophisticated and the amount of loan was inadequate, therefore, insufficient for high return activities. The repayment period is also short. Loan applicants are also required to form a group or cooperative

which is the norm especially in Dedebit microfinance, nevertheless this may not be appropriate for individual entrepreneurs pursuing enterprise-based diversification.

Table 4.6. Source of credit institutions

Credit institutions	Frequency	Percent	Valid percent
Rural Saving and Credit Cooperatives	94	49.22	55.62
Micro finance institutions (Dedebit)	53	28.80	31.36
Community based institutions	13	6.81	3.55
Relatives	4	2.09	2.37
GOS & NGOS institutions	5	2.62	2.96
	169		

Source: Own survey (2020/21).

4.7. Saving of money

Saving can help rural household to be liquid enough as it is serving them as a source of working capital. Hence, 81.20% of the households from the sample respondents had saved their money in nearby rural credit and saving institutions; this showed us majority of the households had a saving habit. The households use the money saved to diversify their activities and increase their income in non-farm activities where credit access is limited in the rural areas. Furthermore, the saved money helped them as startup capital for diversifying their activity.

Accordingly, in order to enhance the productivity of land and hence the overall income of farm operators, the farmers used the non-farm income for purchasing agricultural inputs like improved seeds, fertilizers and irrigation facilities.

Table 4.7 Saving of money

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	155	81.20	81.20	81.20

Valid	No	36	18.80	18.80	100.0
	Total	191	100.0	100.0	

Source: own survey (2020/21).

4.8. The amount of money saved by respondents

The survey result revealed that the highest numbers of respondents 29.84% of the household respondents have saved money within 5000-9999 birr. The result in (Table 4.8) indicated that, the farmers used the saved money to diversify their activities to non-farm activities or to purchase agricultural inputs in order to enhance their land productivity and hence increase the overall income of the households.

The study area, Enderta woreda, had an experience in non-farm opportunities for those unemployed and landless youths in the rural Tabias. They forced them to form groups with 25-30 members and allow them to participate in non-farm activities like cobblestone production, stone and sand quarrying.

According to the survey done, the participants had changed their livelihood as they effectively used the opportunity offered by their Tabias and had saved money. Most of the participants and members of the group assured that saving money is a good opportunity of non-farm activity that changed their livelihoods.

Table 4.8 The amount of money saved by respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
1-999	27	14.14	18.12	18.12
1000-4999	34	17.80	22.82	40.94
5000-9999	57	29.84	38.26	79.20
Valid 10000-19999	12	6.28	8.05	87.25
>20,000	19	9.95	12.75	100
Total	149	78.01	100	
Missing system	42	21.99		
Total	191	100.0		

Source: own survey (2020/21).

4.9. Household Annual Gross Income of sample Respondents

According to the survey result, the highest (45.03%) score of annual household gross income of the respondents was categorized under 50,000-99,999 categorizations. While the mean annual household gross income was 25,437.43. Besides, the survey result revealed that the mean annual household gross income for those who have diversified activity and farm household only are 26,743.64 and 22,905.27 respectively(Own survey 2020/21).This showed us people engaged in diversified activities earned better annual gross income as compared with those who had engaged in a single task. In consistence to this, Comparing people who have engaged in different activities had better income than that of people who did not diversify their tasks. Similarly, there is a growing body of evidence, which suggests that diversification can be employed to help households to survive and increase farm income (Reardon. *et al.*, 2007; Chang and Tuckman.2010).

Table 4.9 Household Annual Gross Income of sample Respondents

	Frequency	Percent	Valid Percent	Cumulative Percent
1,000-9,999	15	7.85	7.85	7.85
10,000-19,999	32	16.75	16.75	24.6
20,000-49,999	41	21.47	21.47	46.07
50,000-99,999	86	45.03	45.03	91.1
100,000-149,999	14	7.33	7.9	100.0
>150,000	3	1.57	1.57	1.55
Valid				
Total	191	100.0	100.0	

Source: Own survey (2020/21).

CHAPTER FIVE:

5. CONCLUSIONS AND RECOMMENDATIONS

5.1. CONCLUSIONS

- ✦ This research highlights the role of non-farm activities in sustaining the rural livelihood of the people by using cross-sectional data obtained from 191 sample respondents of five Tabias of Enderta woreda (i.e. Chelekot, Debre ma'ernet, Membere kidusan, Felegeselam and Didba). The study focusses on the livelihood assets such as human, natural, social, financial, physical, the livelihood diversification strategy option and the contribution of the current non-farm activities of the study area.
- ✦ Even if the productivity of the area is less and uncertain, the result of the study pointed out agriculture as the primary occupation of the households accounts 85.7% of the total respondents and hence led the rural households to run hand –to- mouse economy.
- ✦ In the rural household economy, non-farm activities have a significant role through providing farm households with insurances against the risk of farming and thus bestowing them to adopt new technologies.
- ✦ Though the non-farm occupation of the rural household consist of many activities like cobblestone production, Masonry & Painting, Sand & stone quarrying, Petty trade, preparation of food and local drink ”Siwa” and etc., the highest number of the respondents that accounts 30.59%have engaged in cobblestone production. The target Tabias are rich in stone resources convenient for cobblestone production and easily supply to the nearby city, Mekelle, the capital of the region, which has a large demand for cobblestone to satisfy its needs.
- ✦ According to the result obtained from the study, about 88.5% of the households have access to credit services of which 49.22% of the households have access to Rural Saving and Credit Cooperatives. Access to credit services for the rural households are helping

farmers to purchase farm inputs such as fertilizer, improved seed, hand tools and industrial commodities that help them to engage in farm and non-farm diversified activities. Saving money is among the asset which serves a household's endowment to enjoy own startup capital for investment. Hence, almost 81.20% of the households have saved their money from the sample respondents (own survey 2020/21). This shows that most of the households have a knowhow on saving and credit programs that can help them as their source of working capital for the non-farm engagement.

- ✦ Rural areas are often in problem and the importance of better rural education for development of rural non-farm sector is absolute. Therefore, 64.92% of the household have achieved their 1-8 grades indicating the households have better knowledge in engaging themselves in diversified activities even though they cannot attain skilled salaried labor market.
- ✦ Cobblestone production these days is believed to be a means to initiate non-farm activities in the rural area. As a result, the government planned and bucked the cobblestone project enabling the rural youth to engage themselves in non-farm activities. This project is aimed the rural youth to accumulate initial capital through the cobblestone engagement and thereby proceed to start petty non-farm profession .Hence, numerous rural youth; particularly the landless and unemployed once were organized in developmental groups at a number of 25-30.

5.2. RECOMMENDATIONS

- ✦ Even if it is important to engage in non-farm activities for the sake of diversifying and hence develop their income, the household heads need to get detailed information or awareness about the return and any risk before they are engaged in non-farm activities. Thus, government officials should provide relevant and necessary technical support and training to fill their gaps and create a wide adaptation on new technologies and credit services.
- ✦ Concerning to educational status of the household head, people with formal education have awareness and understanding about non-farm activities. Hence, educational status can affect participation in non-farm activities. This indicates that people with less or no education (illiterate) are forced to engage in less attractive and unaffordable wage activities that cannot make them secure their household food security gaps. Therefore, we can conclude education as the basic thing not only for those who live with salary but also for those who did not employed in any GOs and NGOs to decide in what business to be participated or not.
- ✦ Access to credit services is quiet important to participate and develop the livelihood of the households and hence majority of the respondents have better access for credit

services. However, the government should focus on the rules, regulations, amount of money and the time to be returned/back payed.

- ✦ The government of Tigray regional state should also focus on cobblestone production to be consistent as a small enterprise every year, create market linkage with governmental and nongovernmental officials, and provide continues support to the youth engaging on cobblestone production.
- ✦ For better validation, further research is also recommended in many other Tabias of the woreda and other nearby Woredas.

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Appendix1:

Annex 1

Questionnaire



Mekelle University, Collage of Business and Economics
Department of Management, Development Studies

Household Survey Questionnaires to be filled by sample household heads.

This questionnaire is prepared by a Development Studies Post Graduate student in Mekelle University for partial fulfillment of Master of Arts Degree in development studies. The aim of this questionnaire is to collect data about “The Role of Nonfarm Activities in Sustaining the Rural Livelihood in Enderta Woreda”. The information you provide is pertinent for successfully accomplishing the research. For this sake, I really confirm you that all the data will be used for academic purpose and will be analyzed anonymously and because of your provision, you will never be exposed to any harm.

I really thank and appreciate your kind cooperation in advance!

Enumerator’s name _____ Tabia No _____

Interview date _____ Questionnaire Code _____

General Instruction:

1. Please put a tick mark (✓) that appropriately represents your response in multiple choice questions.
2. To open-ended questions, please write your response on the space provided. You're genuine response is critically invaluable for the better result of the study.

Thank you in advance!

Hadush Adhana

Section A. Demographic characteristics

1. General information on Respondent's

1.1. Name of Tabia

A. Chelekot D. Felegeselam,

B. Debre ma'ernet E. Didba

C. Menbere kidusan,

1.2. Sex of household head: A. Male B. Female

1.3. Age of household head : _____ (years)

1.4. Marital status: A. Single B. Married C. Divorced D. Widow

1.5. Size of household _____

1.6. Primary occupation of the household: A. Farm B. Nonfarm

1.7. If your answer for question number 1.6 is farm, which one of the following is the activity of the household?

A. Crop production C. livestock

B. Poultry

D. Bee keeping

E. Other, specify _____

1.8. If your answer for question number 1.6 is nonfarm, which one of the following is the activity of the household?

A. Construction

F. Pottery

B. Masonry & Painting

G. Swing

C. Cobblestone

H. Machine

D. Sand and Stone quarrying

I. Petty trade

E. weaving machine

J. Food preparation

K. Other specify _____

1.9. Secondary occupation of the household: A. Farm B. Nonfarm

1.10. If your answer for question 1.9 is farm, which one of the following is the activity of the household?

A. Crop production C. livestock

B. Poultry

D. Bee keeping

E. Other, specify _____

1.11. If your answer for question 1.9 is nonfarm, which one of the following is the activity of the household?

A. Construction

F. Pottery

B. Masonry & Painting

G. Swing

C. Coble stone

H. Machine

- D. Sand and Stone quarrying I. Petty trade
- E. weaving machine J. Food preparation
- K. Other specify_____

1.12. Educational status

- A. Illiterate B. Grade 1-4 C. Grade 5-8 D. Grade 9-10 E. above grade 10

Section B: The livelihood resources/assets of the house hold

- 2. Do you have an access to credit services? A. yes B. No
- 3. If your answer is yes for question 2 what are the sources of credit institutions?

- A. Microfinance institutions E. NGOs
- B. Cooperatives F. Bank
- C. Community based institutions G. Traditional lenders
- D. Relatives
- H. Other_____

- 4. What was the amount of money you borrowed in the last two years?

2010 E.C_____ (Birr)

2011 E.C_____ (Birr)

- 5. For what purpose did you take the credit in 2011 E.C?

- A. Petty trade D. School fee service
- B. Cover food gap E. health fee services
- C. Purchase agricultural inputs F. Buy livestock
- G. Other specify-----

6. If your answer for Question 2 is No, what was the reason?
- A. I have not any interest to take it
 - B. Due to high interest rate of repayment
 - C. Couldn't get it
 - D. Credit services is not available
 - E. Other specify_____
7. Do you save money? A. Yes B. No
8. If the answer for no 7 is yes, how much money have you saved so far?
- A. 1-999
 - B. 1000-4499
 - C. 5000-9999
 - D. 10000-19999
 - E. Above 20000
 - F. Not willing to tell
9. How much is your annual household gross income now approximately? _____
10. What is the importance of accessibility of finance for nonfarm diversification?
- _____
- _____
11. Do you have access to road services? A. Yes B. No
12. Do you have access for electricity services? A. Yes B. No
13. What type of electricity service do you have?

A. Privately owned C. Absent

B. Shared

14. Do you have access to water supply? A. Yes B. No

15. What type of water supply do you have?

A. Privately C. Absent

B Shared

16. Do you have access to school for your children? A. Yes B. No

17. Do you send your children to school?

A. Yes B. No C. No children

18. If the answer for question 17 is No, what was the reason?

A. No school near my surrounding area

B. I could not afford school fees for them

C. They are on work in support of the family

D. Other, specify_____

19. Do you have access for health services? A. Yes B. No

20. Do you have an access for telephone service? A. Yes B. No

21. Do you have an access for market in your village? A. Yes B. No

22. Do you think your social ties are strong? A. Yes B. No

23. In which of social capital and social institution do you participate or not?_____

24. What is the role of social capital for nonfarm diversification?

25. What is the role of social capital for sustainable rural livelihood?

Section C: Option and opportunities of nonfarm livelihood diversification strategy.

26. Do you believe you will be food secured and self-sufficient if you do farming alone?

A. Yes B. No

27. Do you think you can survive without farming? A. Yes B. No

28. If yes, what kind of livelihood strategies do you use to improve your livelihood?

A. Agriculture intensification by producing high value products

B. Sending some family members to some other towns

C. Developing a wide income-earning portfolio to cover all types of shocks

D. Other, specify_____

29. If nonfarm activities are one of your livelihood diversification strategies, what are the specific sources? Multiple answers is possible

- A. Construction Work
- B. Masonry & Painting
- C. Coble stone
- D. Sand and Stone quarrying
- E. weaving machine
- F. Pottery
- G. Swing
- H. Machine
- I. Petty trade
- J. Food preparation

K. Other specify_____

30. What was your most important motive for starting nonfarm activity?

- A. Small size of land holding
- B. No access to agricultural land
- C. Obtain income to support agricultural work
- D. Market opportunity
- E. Support from cooperatives
- F. Advice from relatives/friends
- G. For agricultural input
- H. Other, specify_____

31. What was your startup capital to establish nonfarm activities?

- A. Crop sale
- B. Livestock sale
- C. Tapped resources from Microfinance institutions for nonfarm investment purpose
- D. Cooperatives
- E. Other, specify_____

32. What was your reason for applying for microfinance institutions?

- A. Agricultural input
- B. Nonfarm business equipment machinery
- C. Education
- D. Health
- E. Other, specify _____

Section D: the contribution of nonfarm activities existing in the study area

33. The employment status of members of the household is _____

- A. Self-employed nonfarm business
- B. Both farming and Self-employed nonfarm business
- C. Wage and salary employment
- D. Daily laborer
- E. Cooperative engagement in nonfarm activities

34. For what purpose do you use the income you acquired from nonfarm activity?

- A. For consumption and essential household expenses
- B. Invest it to expand nonfarm business activity
- C. To invest on farm
- D. Purchase farm inputs
- E. Other purposes, specify _____

35. Do you think nonfarm activities are essential components for your survival?

- A. Yes B. No

36. What activities do you perform out of farming time?

37. What amount of average earnings do you generate from these activities?

38. What contributes the nonfarm activities for sustainable livelihood of the rural people _____?

Section E: constraints and opportunities for non-farm rural diversification

39. Do you have an opportunity for participation in to nonfarm activities?

A. Yes B. No

40. If yes, in which of these nonfarm activities

A. Self-employment

B. Wage employment

C. Opportunity for cooperatives engaged in nonfarm activities

D. Other Specify, _____

41. If No, what are the constraints preventing household members from opening nonfarm Activities?

A. Insufficient startup capital

B. Poor infrastructure

C. Lack of appropriate skills

D. Limited market demand

E. Other, specify _____

42. What are the opportunities for diversifying the nonfarm activities in your Tabia? _____

43. What are the constraints for nonfarm activities, which is one of your livelihood options, in sustaining your livelihood? _____

