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DIVERSIFICATION AS A RURAL LIVELIHOOD STRATEGY: A CASE STUDY IN HULET EJU ENESIE WOREDA, EASTERN GOJJAM,AMHARA NATIONAL REGIONAL STATE.

BY

ZIGALE TAMIR

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Title

Diversification as a Rural Livelihood Strategy: The case of Hulet Eju Enesie Woreda, Eastern Gojjam Zone, Amhara National Regional State.

BY

Zigale Tamir Tenaw

DEVELOPMENT STUDIES

APPROVED BY THE BOARD OF EXAMINERS:	SIGNATURE
Dr. Mulugeta Feseha COLLEGE DEAN	
Getachew Yoseph ADVISOR	
Dr. Woldeamlak Bewket EXTERNAL EXAMINER	
Ato Yigremew Adal INTERNAL EXAMINAR	

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Acronyms

CSA-Central statistical agency

DFID-Department for International Development

FGD –Focus group discussion

OSSREA-Organization for social science research for East Africa

UN-United Nation

WARDO-Woreda Agricultural and Rural Development Office

WMS-Welfare Monitoring Survey

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Abstract

The purpose of this study was to assess livelihood diversification activities in the study area and to identify and describe the major types of assets that enable the diversification of the rural livelihood activities. This study also aimed at identifying the major constraints that affect the participation of individuals or households in diverse activities.

A total sample of 138 households were selected from three rural Kebele administrations by using proportionate stratified sampling technique, and the necessary data was generated through household questionnaires, focus group discussion, key informant interview and direct observation. Both qualitative and quantitative methods were used to analyze the data.

Households are widely engaged in growing of various types of crops and rearing of livestock. Teff, maize, barley and wheat were the major types of crops in the study area. Scarcity of farm land, lack of agricultural inputs, unreliable rainfall, and declining of soil fertility were the major constraints for crop production. Sheep and chickens claimed the largest proportion of livestock in the area. Animal rearing was constrained by shortage of grazing land, lack of additional fodder and animal disease.

A significant proportion of households participated in non-and off-farm activities, which account for 58.7 percent and 29 percent, respectively. Handicrafts, trade and grain mills were the major sub-sector of non-farm activities. However, the sub-sector of non-farm activities are constrained by lack of transport, lack of finance, intensive engagement in farm work, lack of market and lack of education and training. Thus, the development endeavors should aim to reduce the above constraints.

CHAPTER ONE

1. Introduction

1.1 General Background

In many developing countries, the proportion of rural people who are dependent on subsistence agriculture accounts for more than half of their total population. This proportion is even much greater in African countries including Ethiopia (Todaro and Smith, 2003). Agriculture is the backbone of Ethiopia's economy, where nearly 85 percent of people engage in subsistence agriculture for their livelihoods. It contributes about 50 percent of GDP. It is also a source of food supply and raw materials, a supplier of foreign earnings and labor for non-agricultural employment, market for non-agricultural output, and source of surplus for investment (Workneh, 2004). Although still of central importance in many parts of the world, agriculture on its own is increasingly unable to provide a sufficient means of survival in rural areas (Ellis, 1999).

One important pathway towards livelihood sustainability involves avoidance of long-term dependency on only agriculture. The agricultural focus is necessary, but not sufficient for sustainable rural development. Rural development strategy recognizes the significance of off-farm and non-farm economic activities, and the essential role of the private sector in rural development, including rural infrastructure and financial sources (World Bank, 2003).

Rural people in Africa and Asia do not normally specialize in livestock, crop or fish production to the total exclusion of other income generating activities rather; a majority of rural farmers have historically diversified their productive activities to encompass a range of other productive areas (Hussein and Nelson, 1998).

Rural non-and off-farm activities may absorb surplus labor in rural areas, offer more remunerative activities to supplement or replace on-farm income, offer income potential during the agricultural off-season, help farm-based household spread risks and provide a

means to cope with diversities when farming fails. This indicates that involvement in diverse activities allows poor people to smooth out or off-set fluctuation in agricultural income that might occur on a seasonal basis or as a result of unexpected events (Gordon and Graig, 2000).

The living condition of the rural poor in the Ethiopian highlands has been worsening because of deterioration of quality and quantity of natural resources, erratic rainfall, recurrent drought, and very small and fragmented land holdings. Therefore, it is necessary for rural households to look for off-and non-farm activities to supplement and improve the rural livelihood.

The diversification pathways open to households or individuals depend on the contextual setting, the capital required and available, and the paths in which institutional arrangements restrict or encourage certain behaviors. Diversification may be an indication of increased vulnerability, where it is a response to the failure of previous livelihood strategies, or it may be the path to accumulation and investment in the future, leading to a cumulative improvement in livelihood outcomes over time (Devereux and Maxwell, 2005).

So, in order to add to existing empirical knowledge, the researcher was motivated to study the diverse portfolio of activities and the major constraints affecting livelihood diversification in the area.

1.2 Statement of the Problem

Ethiopia is one of the most populous countries of Africa, which comprises about an estimated population of 77 million (CSA, 2006). The rapid population growth has led to limited access to scarce land and other natural resources. Thus, it appears that on-farm activity alone may not bring sustainable development; rather diversified activities are needed to reduce rural poverty.

Due to population pressure, land holdings in Ethiopia are too small to allow most farming households to improve food production; population increases reduce land holdings further and put intolerable stress on an already fragile natural resource base; soil fertility is declining due to over cultivation and limited application of yield enhancing inputs. Recurrent droughts add food production shocks to abnormally low yields; limited off-farm employment opportunities restrict diversification and leaving people trapped in increasingly unviable agriculture and persistent problem of food insecurity problem (Devereux, 2000).

Non-farm activities, which usually grow faster than farm production, will play an increasingly important role in expanding rural employment and income. Rural employment strategies should therefore also be developed in order to spur off-farm employment opportunities (UN, 2003). Information technology provides possibilities for rural communities to have access to a whole range of services without being hampered by their distance to providers. It also provides increased opportunities to work from any physical location, which has favored rural areas with excess labor supply, lower wages and a low cost of living (Ibid).

Even though governmental and non-governmental organizations recognized the significance of diversification to improve rural livelihood, there are constraints to engage in different activities. Thus, this research is undertaken to assess the type of livelihood diversification and to identify the major constraints to participate in a range of activities in Hulet Eju Enesie Woreda.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study is to assess diversification as a livelihood strategy of the rural households in Hulet Eju Enesie Woreda.

1.3.2 Specific Objectives

More specifically, the study attempts to probe the following issues:

- To identify the actual and potential assets that help in diversifying rural livelihoods in the study areas,
- To assess forms of rural household livelihood diversification in the area, and
- To identify the major constraints and factors affecting rural livelihood diversification in the study area.

1.4 Research Questions

This research tried to generate answers to the following research questions.

- What are the major types of rural livelihood diversification activities in the area?
- What is the current level and trend of rural livelihood diversification in the study area?
- What are the major factors affecting rural livelihood diversification activities in the area?
- What must be done to alleviate livelihood diversification problems of the rural community in the area?

1.5 Significance of the Study

The assessment of rural household diversification and its major constraints have paramount importance to development agents concerned with long term objective of enhancing sustainable livelihood in the study area and other similar localities. Without clear information on the contribution of diversification to rural livelihood, it could be difficult to reach conclusion of whether to encourage or discourage diverse activities to ensure sustainable livelihood.

The study will have some benefit for rural development planners in the formulation of new policies as well as policy reforms in the area. Therefore, this study will have significant contribution by giving some insight into the rural household diversification strategy and the major constraints in the area. The study will also give insight to

researchers and students about the problem and stimulates further investigation of the issues.

1.6. The Scope and Limitation of the Study

The researcher tried to assess the livelihood diversification in Hulet Ejue Enesie Woreda in Eastern Gojjam Zone. The study concentrates to the type of assets and the major constraints that affect livelihood diversification in the study area.

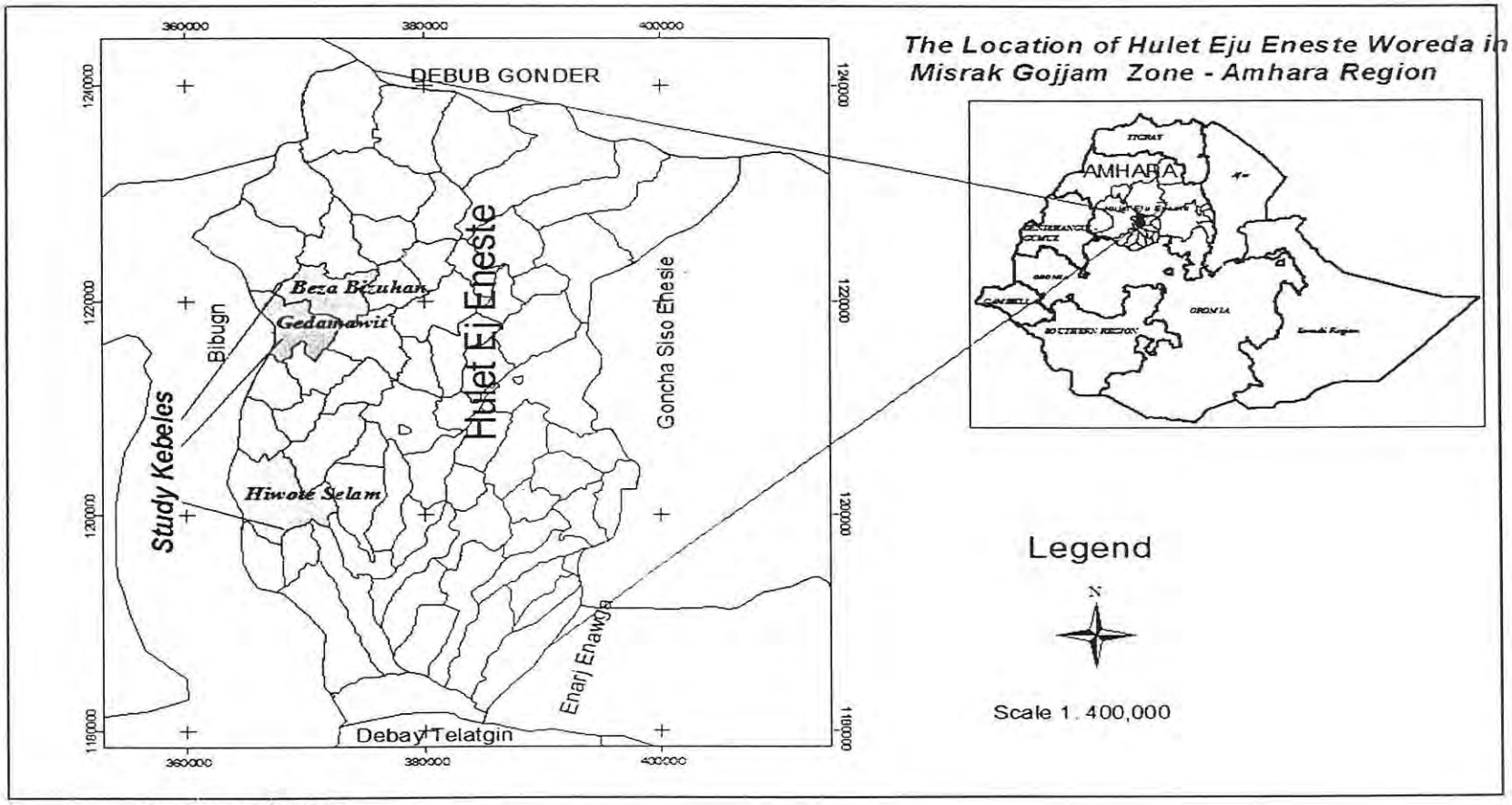
In Hulet Eju Enesie Woreda, there are 41 rural Kebeles. However, due to limited resources (finance and time), the study was restricted to only 3 rural Kebeles. Hence, the researcher was limited to sample household heads from the three Kebele for the household survey. Getting the necessary information from sample households about their diverse activities and other important socio-economic variables under study was difficult in the study area.

1.7. Background of the Study Area

1.7.1 Location

The study was undertaken in Hulet Eju Enesie Woreda located in Eastern Gojjam Zone, Amhara National Regional state of Ethiopia. It is one of the 106 Woredas of the Amhara National Regional State and one of the 17 districts of the Eastern Gojjam Zone. Mota is the capital of the Woreda and is found at 370 km from Addis Ababa and 120 km from the regional Capital, Bahir Dar, and its neighboring towns are Gendewoine and Adet which have a distance of 42km and 78km from it, respectively. Hulet Eju Enese Woreda has a common boundary with Bibugn in the West, Goncha siso Enesie in the east, Southern Gonder in the north, Debay Telat Gin in the south and Enarj Enawga in the south east. It has 41 rural kebele administrative. The total land area of the worda is 137,585 hectare (Woreda agricultural and rural development office, 2006/07).

Figure 2. Location of Hulet Eju Enesie Woreda in Eastern Gojjam Zone- Amhara National Regional State, Ethiopia.



Map 2 Map of Hule Eju Enesie Woreda by kebele

Map 1- Amhara Region in Ethiopia

1.7.2 Topography

The land features can be broadly classified in to plain area, mountainous areas and the ups and downs of the land feature which account 65 percent, 15 percent and 20 percent, respectively. The elevation ranges from 1288 to 3899 meter above sea level (WARDO, 2006/07).

The soil that covers much of the total area of the Woreda can be grouped into three broad types based on their color. These are black soil, brown soil and red soil. The study area is known for its monomodal rainfall pattern. Rainfall is varies between 1100 and 1889mm annually. Summer (keremt) is rainy season (June, July and August)

1.7.3 Agro-ecological zones

Based on traditional agro-ecology, HEEW has three climatic zones based on altitude and temperature. These are Kola, Woina Dega and Dega which account for 30 percent, 52 percent and 18 percent, respectively.

Table 1- Agro-ecological Zones of the Woreda

Agro-ecology	Area in hectare	percentage
Kola	41275.5	30
Woina Dega	71544.2	52
Dega	24765.3	18
Total	**137585**	**100**

Source: WARDO (2006/07).

1.7.4 Land use pattern

According to WARDO, the land use patterns of the Woreda are cultivated land, grazing land, forest and bush land, settlement land and uncultivated land and others. The land use pattern in the Worda is dominated by cultivated land, followed by forest and bush land.

Table 2- Land use pattern

Land use type	Area in hectare	percentage
Cultivated land	51603	37.51
Forest and bush land	34362	24.97
Grazing land	33549	24.38
Settlement land	17403	12.65
Uncultivated land	667.65	0.49
Total	**137585**	**100**

Source: WARDO (2006/07).

1.7.5 Socio-economic Conditions of the Study Area

1.7.5.1 Demographic Aspects

The population of Hulet Eju Enesie woreda was estimated to be 328,658. About 288,184 were estimated to live in rural areas, while 40,474 were expected to dwell in town. The number of male and female population was 163,482 and 165,176, respectively. The proportion of female population is slightly higher than male population in the study area.

Table 3- population size by sex and place of residence

Residence	Male	Female	Total	percent
Rural	145214	142970	288184	87.7
Urban	18268	22206	40474	12.3
Total	**163482**	**165176**	**328658**	**100**

Source: WARDO (2006/07).

1.7.5.2 Economic Activities

Crop production

HuletEju Enesie Woreda is endowed with beautiful diverse resources, with capacity to grow diverse annual and even perennial crops. The dominant crops grown in the district are cereals (teff, maize, barely and wheat), pulses (peas, beans and chickpeas) and oil seeds

Livestock Production

As other parts of Ethiopian high land agricultural system, rearing of livestock is an integral part of the sedentary life of people in the Woreda. Farmers rear different types of domestic animals for many purposes. For instance, cows for milking and bearing calves, oxen for drag ting, goats and sheep for selling and meat and donkeys, mules and horses for transport.

Infrastructural facilities

The presence of high quality and quantity of infrastructures are by far the most important factor for development of different sectors in a given area. Especially, road is one of the physical infrastructure that play important role for the development of marketing and distribution of both agricultural and industrial inputs and products. However, road transport in the Woreda is found at early stage. The low road transport development has give rise to use of pack animals and human portage for the transport of agricultural and other inputs.

1.8 Organization of the thesis

The thesis has five chapters. The first chapter deals with the introduction part. The second chapter presents literature review. The third chapter concern with research methodology includes research method, sampling technique, data collection, source of data and data analysis. Chapter four deals with demographic characteristics of the respondents and livelihood assets, types of diversification and the major constraints of rural livelihood diversification. Chapter five presents conclusion and recommendation of the study.

CHAPTER TWO

2. Literature Review

2.1. Conceptual Issues

2.1.1. Concept of Livelihood

The term development did not bring the desired outcomes rather human beings are faced with range of problems. In realizing that, Chambers developed the concept of "sustainable livelihoods" with the aim of bringing the intended development outcome. Based on his ideas, the British Department for International Development (DFID) adopted the concept of Sustainable Livelihood Approach (SLA) in its program to eliminate poverty in poorer countries since 1997 (see figure-1). Based on the work of Chambers and Conway, Carney (1998) has defined it as follows: A livelihood comprises the capabilities, assets and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Carney, 1998).

According to Ellis (2000), livelihood consists of assets (natural, physical, human, financial and social capital), activities, and the access to these (mediated by institution and social relations) that together determine the living gained by the individual or household.

Within sustainable livelihood framework, livelihood strategies in rural areas can be classified into three categories. These are: agricultural intensification/extensification, livelihood diversification and migration (Scoones, 1998).Of course, many researchers agree that there is no clear boundary separating agricultural intensification, livelihood diversification and migration. However, this study focuses on livelihood diversification.

2.2. Rural Livelihood Diversification

Livelihood diversification is one of the rural livelihood strategies. Different academics and development agents define the term livelihood diversification differently. According to Hussein and Nelson (1998), livelihood diversification refers to attempts by individuals and households to find new ways to raise incomes and environmental risk, which differs sharply by the degree of freedom of choice (to diversify or not), and the reversibility of the outcomes.

Ellis also defines livelihood diversification as the process by which rural families construct a diverse portfolio of activities and social support capabilities in their struggle for survival and in order to improve their standard of living (Ellis, 1998). Rural livelihood diversification refers to the process by which rural households establish an increasingly diverse portfolio of activities and assets in order to survive and to improve their standards of living (Ellis, 2000). Barrett et al (2001,) also state that diversification patterns reflect individuals' voluntary exchange of assets and their allocation of assets across various activities so as to achieve an optimal balance between expected returns and risks exposure conditional on the constraints they face.

2.2.1. The Nexus between Household Diversification and Asset Base

The degree of diversification may differ along economic status, the availability of resources and family size. Scoones (1998) argues that the extent of diversification may relate to the resource endowments available and the level of risk association with alternative options. DFID (2000) states that a livelihood diversification differs by wealth status and social group, and even by each number of household which is the diverse nature of livelihoods.

Numerous studies found that livelihood diversification has common and distinct characteristics. One livelihood portfolio may differ to each socio-economic group such as asset, ownership, income level, gender, religion affiliation, cast, socio or political status, and so on (Hussein and Nelson, 1998; Scoones, 1998; DFID, 2000).

Better-off households have better opportunities to diversify their livelihoods. Swift (1998) noted that the poorest have fewest livelihood options and these are least likely to provide sustainable or secure outcomes. This is due to inadequate endowments of all forms of capital, including the forms of human capital which would enable them to take up opportunities, or the social networks which create opportunities. The poor often face greater institutional restrictions, through the lack of self-organization or institutionalized constraints to access livelihood resources.

The arrangement of institutions might have either positive or negative effect. Ellis (1999) suggested that institutional arrangements which crosscut wealth status may be significant, both in a positive sense where rich members of the social or kin group help poor members of the same group, and negative, when women, elderly or disabled people of any wealth status may have more restricted choices than others. Human and social capitals are particularly important to diversification, as is infrastructure. The wealthy households usually tend to diversify in the form of trade, shop keeping, and transport (non-farm business activities) while the poor tend to diversify in the form of daily wage laborer. The better-off households are diversifying in order to accumulate capital while the poor households are struggling to survive (Carswell, 2000).

Rural men have better opportunities to diversify their livelihood than women. This may be due to the fact that men and women have different asset profile (both tangible and intangible assets), access to resources and opportunities (Devereux and Maxwell, 2005). Deininger and Olinto (2002) also point out that unequal distribution of assets affect equal distribution of opportunities for building both human and physical assets in the future.

2.2.2. Contrasting Views on Diversification

Many researchers on livelihood diversification argue along two lines of thought: the proponents of the positive effect of diversification and those who regard diversification as a negative effect for the people making their livelihood in rural settings (Degefa, 2005).

The proponents of the importance of diversification argue that diversification is a central mechanism to alleviate rural poverty and food insecurity. A diverse portfolio of activities contributes to the security of a rural livelihood because it enhances its long-run resilience in the face of adverse trends or sudden shocks, i.e., as diversity increase, it maintains greater flexibility because it allows wider chance for substitution between opportunities that are decline and those that are expanding (Ellis, 2000). Chambers (1997) also noted that poor societies in particular have to diversify sources of livelihood in order to survive in a risk-prone and uncertain world. Rural people practice in diverse activities in order to minimize their vulnerability. In a diversified household, if one activity does not provide enough or fails completely; there are other sources of livelihood activities that the household can fall back on (De Stage, 2002).

When informal activities are integrated with inputs in the formal economy with a rural setting, they result in diversified rural livelihood strategy which is made up of a range of combined activities on both sides of the formal and informal sectors of the economy. Some of these ranges of diverse activities generate income and some reduce expenses compared to commercial alternatives (Gillespir, Lyson and Harper, 1994). Rural household consider diverse range of income generating activities as one of the main "buffers" to minimize the occurrence of risk in agrarian economy. It is vital to any understanding of household coping and survival strategies and ultimately to the effective design of food security strategies that reflect the relative advantages of various income sources and the characteristics of these income sources and the response of individuals and households (Reardon et al, 1998).

Income diversification portfolio is one important method to bring sustainable livelihood. Bryceson (1999) has stated that one potential pathway out of poverty especially for smallholders are to avoid the involvement of long-term dependency on only one or two income sources. Income diversification has positive relation with wealth accumulation and built ability to withstand exogenous shocks at least in terms of partial consumption smoothing.

Diversification is an important livelihood strategy to reduce vulnerability and improve the wellbeing of society. Barrett et al (2001) argue that the commitment to 'diversification' as an explicit objective within livelihood development strategies assumes not only that diversification will lead to reduced vulnerability and/or improved levels of consumption for most households involved, but that poorest households in risk environments can, and indeed want to, avail themselves of opportunities presented; that is, that current portfolios reflect constraints rather than choice. However, while much attention has been paid to the role of non-farm activities in protecting households against natural and policy shocks, little is known about the reverse context-how shocks affect diversification over time as households reconsider past choices and adapt to new conditions.

Diversification can help in reducing the risk of livelihood failure. Davies (1996) argues that some people regarded diversification as a means to combat (mitigate) risk or coping with vulnerability where risk remains high and in setting poor people on a cumulative path towards greater livelihood success. Diversification also can help to reduce seasonality in labor demands and consumption. It also offsets the impacts of natural risk factors on staple food availability, and activities with higher returns to the household livelihood portfolio, provide cash resources that enable household assets to be built up. Diversification helps households to combat instability in income and thereby increases the probability of their maintaining livelihood strategies.

On the other hand, there are some writers (researchers) who regard livelihood diversification as disadvantageous for the community. Croll and Ping (1997); and Ellis (2000) argue rural agricultural productivity, income distribution and even gender relations could be adversely affected by diversification activities in such a way that the well-off have better options to diversify and secure labor markets and income but the poor households have less chance to diversify and to secure further income. Furthermore, a type of diversification has negative effect on the role and status of women. It creates the situation to shift labor from agricultural activities to non-agricultural activities.

An empirical research conducted in Inland Niger Delta region of Mali reveals that livestock and crop producers have increased diversification of their livelihood systems to reduce risk, but diversification is becoming less effective in supplying producers with their needs (Davie, 1996,). Producers who had diversified more, have become vulnerable to food shortage due to population pressure on natural resources, increasing competition for natural resource to exploit more, and increased dependence on the market. Livelihood diversification has therefore become a form of negative adaptation. In addition, diversification may lead to unsustainable rural livelihoods due to depletion of the environment or human resource or continued external support predicaments in the household and individual livelihoods (Hussein and Nelson, 1998).

2.2.3 Linkages between Diversification and other Livelihood Strategies

According to many researchers, putting clear boundaries between livelihood diversification, migration and agricultural intensification/ extensification are difficult. Rather, these three livelihood strategies represent interlinked tendencies, which, although often studied separately, are implicated together in the formation of sustainable livelihood (Hussein and Nelson, 1998). Livelihood diversification is an important strategy that is generally operated in conjunction with other strategies (agricultural intensification/ extensification and migration) in order to bring sustainable livelihood (Ibid).

Some writers consider migration as a central component of livelihood diversification. For instance, in Ethiopia, Bangladesh and Mali, migration is widely common and in all three cases, it is linked to income generation strategies (Mc Dowell and de Haan, 1997; cited in Hussein and Nelson, 1998). Migration is an important type of diversification that links up with labor market factors in household and individual decision making for survival. Migration means that one or more family members leave the resident household for varying periods of time, and in so doing are able to make new and different contributions to its welfare, although such contributions are not guaranteed by the mere fact of migration (Ellis, 2000). Reardon (1997) point out that migration is becoming important source of employment and income for the rural population especially to those who are living in poor agro-climatic condition. However, migration is affected by several factors such as market proximity.

Migration –voluntary or involuntary movement of one or more family members from their residence to other areas is practiced for the purpose of reinvestment in agriculture, enterprise or consumption at the home or migration site (Scoones, 1998,). Agricultural intensification means increased labor inputs or capital on a smallholding for the purpose of increasing the output per hectare (Ibid).

Researchers point out many of the important linkages between agricultural intensification, economic diversification, and market infrastructure. Areas with better market proximity can help farmers to generate farm and non-farm income from a wide range of sources (Reardon, 1997).

Crop production and animal rearing integration may form a part of complex livelihood strategies and helps to maintain sustainable livelihoods-especially the process of agricultural intensification. It is therefore essential to be aware as to how different livelihood strategies (agricultural intensification, livelihood diversification and migration) complement each other as rural producers make their way in what are often risky, resource-poor environment. Therefore, migration and investment in agricultural

intensification are often combined with a range of income diversification activities to form the basis of rural people's total livelihood strategies (Hussein and Nelson, 1998).

2.3 The Role of Rural Livelihood Diversification

Rural economy is not entirely dependent on agriculture but rather on diverse array of activities and enterprises. Although farming activity remains the backbone of the economy, rural people are looking for diverse opportunities to increase and stabilize their incomes (Chapman Trip, 2004). In addition to on-farm activities, off-farm and non-farm activities have significant effect to the rural economy but their role in development process is not that much well understand by policy makers (LanJouw, 1997).

People who are engaged in diverse activities have better opportunities to improve the five assets. Ellis (1999) argues that the five assets such as human, natural, physical, social and financial assets can be improved by investing the cash obtained from diversification, or by upgrading the quality of assets. Diversification improves the well-being of the people and social tie. Chambers (1997) stated that diversification maintains social relations through new form of living in and visiting of relatives and friends, and people can help each other in time of odd condition depending on the culture. In addition, livelihood diversification increases the experience of good quality of the people. Ellis (1999) suggests that livelihood diversification provides various alternatives to enhance livelihood security, and to improve the well-being of households or individuals. Livelihood diversification improves the capacity of women to generate income. Thus, it leads to the improvements of the mainstay and nutritional status of children since a high proportion of income in the hands of women tends to be spent on family welfare.

The significance of rural non-farm activities in developing countries includes: the reduction of poverty such as alleviation of food security; slow down of migration from rural to urban, and partly the alleviation of social and economic problems existing in towns, narrowing of income gap, the enhancement and maintenance of sustainable

livelihood, the generation of employment and income sources (Reardon, 1998; Lanjouw. J and Lanjouw .p, 2001).

Rural livelihood diversification plays an important role to reduce the existence of poverty especially for land poor households. Barrett et al (2001) find a positive relationship between non-farm income and household welfare indicators across much of rural Africa. Generally, there is evidence that rural livelihood diversification in developing countries has played an important role in reducing rural poverty, especially among land less and small farmers who have been able to integrate on-farm, off-farm and non-farm activities to enhance their income.

2.4 Motives for Undertaking Livelihood Diversification

There are several motivations to engage in a range of activities as for livelihood strategies. The reasons that individuals and households diversifying their livelihood strategy could be classified as 'demand-pull' or 'distress-push'. Demand-pull factors involve where rural people are able to respond to new opportunities, i.e., the rural people engage in diverse activities when there is higher return on labor in the rural non-farm economy compared to on-farm activities, generation of cash in order to meet household objectives, better economic opportunities and technological change (Davis and Pearce, 2000). The higher return activities are usually confined to the richer individuals and households because such type of activities require higher investment. The same authors point out that distress-push factors are the result of population pressure, scarcity of arable land and decreasing of the fertility of soil, declining farm productivity, declining return to farming, lack of access to farm productivity, declining the natural resource base, occurrence of temporary events and shocks, and lack of rural financial markets.

When income is inadequate and means for consumption smoothing such as credit and insurance are missing or when markets are absent or fail and individuals and households need cash to pay for the agricultural inputs, individuals and households may be forced into non-farm activities (NRI, 2000). Rural households who are less well endowed or

with lower incomes are attracted by distress-push motives. These individuals and households will engage in non-farm activities that are less rewarding. Moreover, with the existence of inadequate income, poorer individuals and households are more involved in distress-push diversification (Davis, 2003).

In rural areas, poor households are pushed into the non-farm sector due to lack of opportunities in on-farm activities, for instance, because of the occurrence of drought, fragmentation of farm land or small landholdings. However, some better-off households will make a positive choice to take advantage of the existing opportunities in the non-farm rural activities by taking into consideration of the wage differential between different sectors and the riskyness of each type of employment (Bright et al, 2000; Barrett et al, 2001).

Diversification, as a risk management strategy, smoothes the flow of income to the household by reducing both predictable and unpredictable fluctuations. Predictable seasonal fluctuations in income can be smoothed joining enterprises and activities that make returns during different times of the year. A diverse portfolio of economic activities with variances that are not perfectly correlated can reduce an unpredictable fluctuation, that is, those that create unexpected loss in income (Valdivia et al, 1996).

Seasonality risk strategies, labor markets, coping behavior, credit market imperfections and inter-temporal savings and investment are motives for the adoption of diverse livelihood activities (Ellis, 2000; cited in Degefa, 2005). The same author added that 'necessity' and 'choice' are the major factors that motivate households to diversify their means of livelihoods. 'Necessity factors' involve issues such as risk reduction, response to diminishing factor returns, reaction to crisis or liquidity constraints. On the other hand, 'choice factors encourage households to diversify their livelihood activities in order to secure higher return by adapting from the existing options.

In rural environment, diversification of food and income source (in cash and kind, farm and non-farm) is regarded as one of the main "buffers" that households can develop

against risk. It is vital to any understanding of households coping and survival strategies and ultimately to the effective design of food security strategies that the relative importance of various income sources, the characteristics of these income source, etc., and the response of individuals to these characteristics is captured (Reardon et al, 1998). In order to survive in risk-prone and uncertain world, rural poor people have to diversify source of livelihood. This is especially true of West Africa countries that have historically preferred to diversify than to intensify primary production activities. This has led many Sahalian people to build up a wide portfolio of activities. Thus, diversification may be important to maintain livelihoods by providing flexibility among sources of income, when primary activities fail. It may also fulfill the need of cash income to enable purchases of essential goods and services and to pay school fees, medical costs and government tasks (Chambers, 1997).

Some better-off households involve in off-farm and non-farm activities because it is a lucrative activity and the poor households are drawn in to it because they have little choice. Most of the sub-Sahara African rural households considered diverse activities as a survival strategy. Rural population growth, farm fragmentation, and declining returns to farming compared to other activities are some important events that create pressures leading to livelihood diversification (Hussein and Nelson, 1998).

2.5 Factors Affecting the Participation of Rural Households in Diverse Activities

The rural people are heterogeneous and unequal in terms of the multiple ways by which households combine the available means of livelihoods and their well-being. At village or community level, a single livelihood strategy could not apply, since different households will adopt different strategies according to their particular assets and access status. The ability to pursue different livelihood strategies and their success in generating sufficient income from a range of activities is dependent on the basic material and social, tangible and intangible assets that people have in their possession (Scoones, 1998).

The factors that influence the participation of rural households in a range of activities are ranging from the relative productivity of the local area, to level of risk, security of the area and educational status of the people, market proximity and demand. Asset endowment, such as the accessibility of land and other common property resources, access to transport service, market, credit, and other assets. In addition, external factors such as recurrent drought and macro-economic policy that affect price and political situation are similarly influential factors of rural livelihood diversification (Carswell, 2000).The same author added that differences between households that may account for involvement in certain livelihood activities include ethnicity and caste, position in demographic cycle, household size, structure, composition and gender of household head, as well as wealth group, ownership and access to assets and the household's success in generating sufficient on-and off-farm income. Household's networks with other households and its status and position within the village regarding claims and rights to control access to key resources are also influential.

The distribution of assets is the key factor that determines the participation of individuals and households in livelihood diversification. Scoones (1998); and Carney (1998) argue that distribution of assets determine individual and household choice of livelihood diversification. There is variation in access to different livelihood assets due to differences in power, policies, organizational issues, and institutional arrangements.

According to the sustainable livelihood framework, the factors that affect the rural community, especially poor people's access to diverse activities at household or individual level are human capital (such as health skill); social capital (networks and membership); physical capital (shelter and production equipment); financial capital (credit and savings) and natural capital (access to land or common property) (DFID, 2000).

I. Human Capital

Human capital is one of the determinants of household participation in a range of activities. Human capital comprises knowledge, skills, ability to labor and good health

that together enable the individual to pursue different livelihood strategies and achieve livelihood objectives. Composition of household (size, gender, age, and dependency ratio), education and training, and health services are important factors (DFID, 2000). Education is one of the major factors that determine the participation of households in various activities, which requires better skill and knowledge such as construction services, and manufacturing activities (Reardon, T., 1998).

Many researchers have proved that education has positive relationship with household involvement in various activities. For instance, education enhances knowledge and skill level, which are required for rural non-farm activities. Education can also increase confidence and then establish useful networks. Education tends to be closely correlated with other variables that also improve access to higher income and employment. Generally, studies show that educated people have wider opportunity than non-educated family members. Better educated individuals have more chance to engage in employment in other areas, and can provide advice to others as regards how to improve their living conditions (Gordon, and Graig, 2001).

Age, household size, gender, and dependency ratio also determine household participation in rural livelihood diversification. The ability of households to supply labor to diverse sectors is affected by the structure and family size. Large family size supply more labor to the range of activities. Healthy household members can participate in income generating activities and achieve their livelihood objectives (Ibid).

II. Social Capital

Social capital consists of the social resources such as networks, social claims, social relations, affiliations, associations upon which people draw when pursuing different livelihood strategies requiring coordinated actions (Scoones, 1998). Households with better social networks have better opportunities to participate in different activities. Social resources can improve and provide valuable information and even advice about a range of income generating activities. Information exchange provides ideas about

unfamiliar place and based on information, household members can migrate in search of better employment (Gordon, 2000).

III. Physical Capital

Physical capital comprises basic infrastructure and producer goods needed to support livelihoods, adequate water supply and sanitation, secure shelter and buildings, adequate transport, clean, affordable energy and access to information. Rural infrastructures have significant effect to the growth of rural incomes. Greater access to infrastructure facilitates movement of goods and people to cities and productive areas, which attract migrants for new job opportunities. Road, electricity and telecommunications attract investors, and facilitate small and medium enterprise development. The improvement of physical infrastructures such as roads, electricity, telecommunications, etc, may facilitate the growth of different activities. On the other hand, the improvement of infrastructures may create labor shortage in rural areas due to rural-urban migration (Reardon, T., 1998). Improvement of infrastructure reduces transaction costs, by improving the flow of information and by creating new opportunities previously inaccessible to rural population (Barrett et al, 2001).

IV. Financial Capital

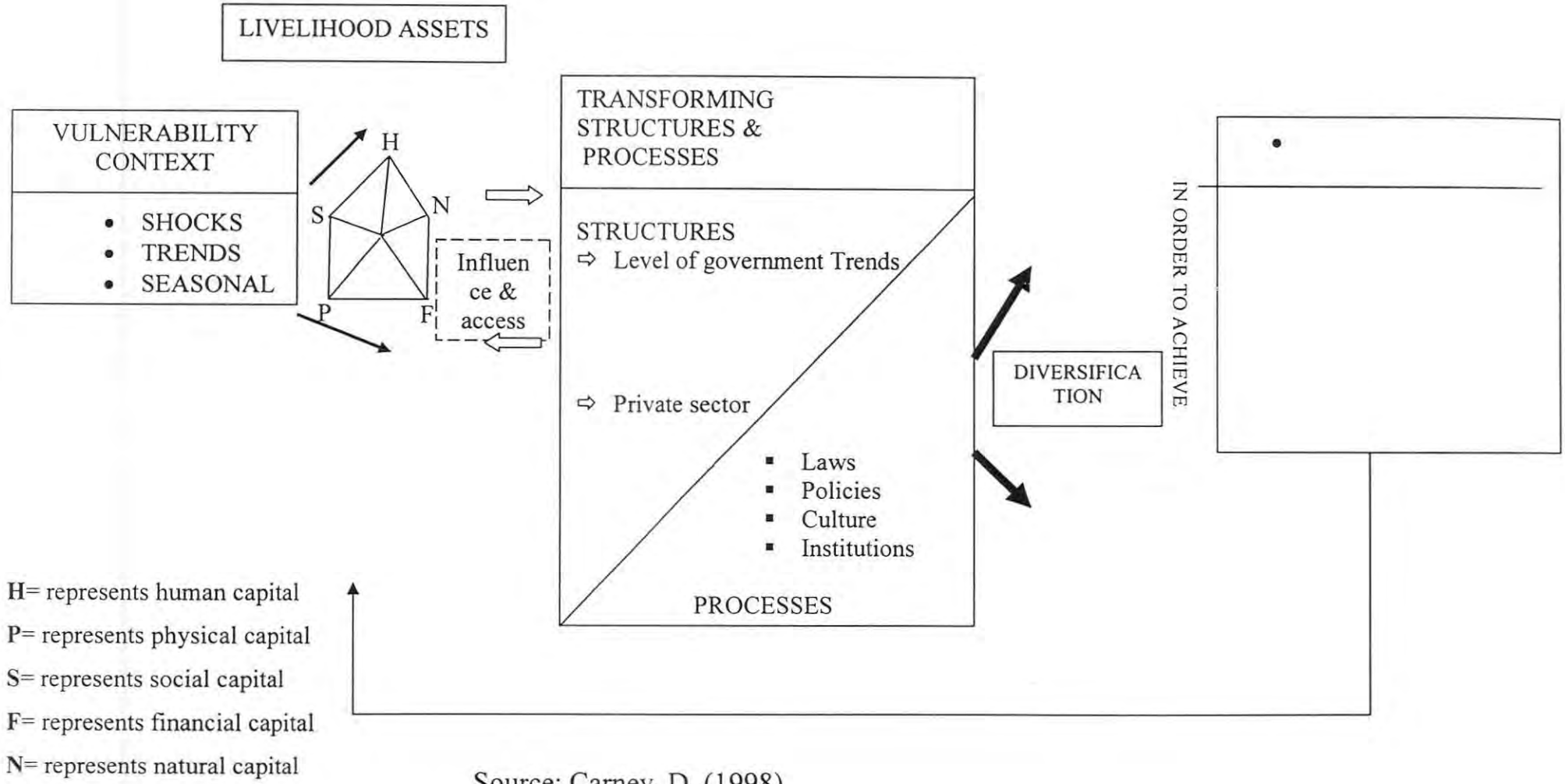
Financial capital denotes the financial resources that people use to achieve their livelihood objectives and it comprises the important availability of cash or equivalent that enables people to adopt different livelihood strategies. The main sources of financial capital include available stocks (cash bank deposits or liquid assets such as livestock and jewelry) and regular inflows of money (labor income, pensions, or other transfers from the state, and remittances (DFID, 2000). Access to capital or credit is one of the principal problems for rural households and individuals to start a business. With only little or no start-up cash available for investment, households or individuals are restricted to a small number of activities, which result poor returns (Gordon and Graig, 2001). Access to credit and credit institutions are also one of the determinants that result in variation in household involvement in livelihood diversification (Reardon, T., 1998).

V. Natural Capital

Natural capital refers to the natural resources, such as land, water, forest, air quality, erosion protection, biodiversity etc, that are crucial to rural livelihoods. Natural capital is of special importance for those who derive all or part of their livelihoods from resource base activities, as it is often the case for the poor community (DFID, 2000). Households with better access to natural resource especially land are likely to be richer and educated. Inequality in access to land also brings inequality in non-farm employment opportunities (Gordon and Graig, 2001).

Natural capital is not static and nor is its utilization for survival purposes confined to gathering activities, such as collecting wild vegetables or hunting wild animals. Natural capital is enhanced or augmented when it is brought under human control that increases its productivity, as has occurred since the beginning of sedentary agriculture with the evolution of farming systems (Ellis, 2000).

Fig 1. DFID's SUSTAINABLE LIVELIHOOD FRAMEWORK



Source: Carney, D. (1998)

CHAPTER THREE

3. Research Methodology

3.1. Selection of the Study Area

Hulet Eju Enesie was selected as a research site using purposive sampling techniques. There are practical reasons for selecting Hulet Eju Enesie as the area of study. The major rationales are:

- Researcher's familiarity with the study site and knowledge of the local language and culture, and
- To the knowledge of the researcher, no study has been conducted in the Woreda especially regarding livelihood diversification.

3.2. Research Method

Both qualitative and quantitative methods were employed in this research. Qualitative and quantitative data were collected through different instruments such as interview questionnaire, focus group discussion, key informant interviews and direct observation.

Household Survey

According to Robson (1993), household survey is often understood as an exchange of ideas between people who have a conversation about a topic of common interest. The household survey was the fundamental data collection method used to conduct the survey. Hence, to assess forms of rural household livelihood diversification and the type of assets, data that could answer the research questions or objectives were collected using carefully prepared and structured interview schedule questionnaires.

Focus Group Discussion

Focus group discussion allows group interaction such that participants are able to build on each other in ideas and comments to provide in depth views not attainable from individual settings, unexpected comment and new perspectives could be explored easily while discussing the issues (Robson, 1993).Interactive discussion was held on different issues. Six focus group discussions were conducted in all three sample Kebeles. Each FGD consists of six household members with different age and sex who are selected purposively from elders, religious leaders, Kebele officials, etc. FGDs were conducted by the lead of the researcher with the help of an assistant who takes notes of the discussion to cross check with the information that was gained through the household survey.

Key Informant Interview

Key informant interview was held particularly by using semi-structured interview schedule to guide specific questions during the interview. The researcher conducted interviews with professional persons and rich in knowledge such as Woreda Agricultural and rural development officials, DA's, Woreda financial and economic development officials, etc.

Direct Observation

Observation of physical features and various types of activities was employed by the researcher to cross check the data obtained through household survey, focus group discussion and key informant interview.

3.3. Sampling Techniques

Objectives of the research, the degree of precision, method of analysis, cost, time, etc determine the type of sampling techniques and procedures to be utilized to get sample that represent total population under study (OSSREA,2001).

The target population of the study is the rural households in Hulet Eju Enesie Woreda. The sample technique used for this study was proportionate stratified random sampling. First, out of the total kebele (41) of the woreda, three kebeles were purposively selected

3.5. Source of Data

In order to address the objectives of the study, both primary and secondary data sources were utilized. The primary data is the major component of this study, which has been collected through household questionnaire, FGD, key informant interview and direct observation. The researcher also used secondary data source both published and unpublished documents, and reports of government to supplement the primary data.

3.6. Data Analysis

Data analysis is the process of linking data that are collected from the field (Kumar, 1996). Data generated through various instruments concerning livelihood diversification were analyzed both qualitatively and quantitatively. The qualitative data was analyzed discribtively. The various responses obtained from interview questionnaire were categorized and coded, then fed into a computer and analysis was made by using SPSS/statistical package for social science. The statistical tools that were applied to analyze and present findings were percentage and mean.

CHAPTER FOUR

4. Data Presentation and Analysis

4.1. Demographic Characteristics of the Respondents

As indicated in a previous section, a total of 138 sample households were selected from three sample Kebeles. From sample households, different data were generated such as sex, age, religion, marital status, educational status, family size, etc and different livelihood assets. The socio-economic characteristics of sample households are summarized as follows:

4.1.1. Sex Composition

Sex is one of the important variables in socio-economic studies because many social and economic conditions are a function of sex. As indicated in Table 5, the percentage of male headed households consisted were 88.4 percent, whereas female headed households consisted about 11.6 percent of all sample households. From the three sample kebeles, Bezabezuhan has the highest share of female-headed households, which accounts for about 14.3 percent.

The households' family male-female composition was 50.5percent and 49.5 percent, i.e., the percentage of male and female population in the study area is almost equal in proportion. The sex ratio of female is 98 percent. It clearly shows the existence of balanced sex composition in the study area.

Table 5- Sex composition

	Kebeles							
	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
Households:	No	%	No	%	No	%	No	%
Male	36	85.7	34	94.4	52	86.7	122	88.4
Female	6	14.3	2	5.6	8	13.3	16	11.6
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**
Family :								
Male	126	51.2	92	52.9	168	48.8	386	50.5
Female	120	48.8	82	47.1	176	51.2	378	49.5
Total	**246**	**100**	**174**	**100**	**344**	**100**	**764**	**100**

Source: own survey (2007)

4.1.2. Age Distribution

The proportion of households with less than 26 years old were about 12.3 percent and household heads above 65 years old were about 6.5 percent. About 33.4 percent of households were concentrated between age 36 and 45 years. The number of household heads above 65 years of age is small. Generally, more than 70 percent of households (75.4 percent) were concentrated between the age 26 and 55 years old (see table 6).

The percentage of household members between 15-65 years old is greater than the population below 15 and above 65 years old. The percentage of household member above 65 years old is very low, which account for 2.1 percent.

Table 6- percentage of age distribution

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Households:								
Below 26	-	-	9	25	8	13.3	17	12.3
26-35	10	23.8	9	25	16	26.7	35	25.4
36-45	15	35.7	11	30.6	20	33.3	46	33.3
46-55	12	28.6	3	8.3	8	13.3	23	16.7
56-65	3	7.1	1	2.8	4	6.7	8	5.8
Above 65	2	4.8	3	8.3	4	6.7	9	6.5
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**
Family member:								
Below 15 years	94	38.2	71	40.8	166	48.3	331	43.3
Between 15-65	149	60.6	96	55.2	172	50	417	54.6
Above 65 years	3	1.2	7	4.0	6	1.7	16	2.1
Total	**246**	**100**	**174**	**100**	**344**	**100**	**764**	**100**

Source: own survey (2007)

4.1.3 Marital Status of the Household Heads

As can be shown in table 7, 87.7 percent of the household heads were married. About 2.2 percent, 7.9 percent and 2.2 percent were single, divorced and widowed, respectively. The proportion of married household heads in HiwoteSelame Kebele is the highest of all other kebeles, followed by Gedamyt (86.1%).

Table 7- Marital status of household heads

Marital status	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
Single	3	7.1	-	-	-	-	3	2.2
Married	32	76.2	31	86.1	58	96.7	121	87.7
Divorced	5	11.9	4	11.1	2	3.3	11	7.9
Widowed	2	4.8	1	2.8	-	-	3	2.2
Total	**42**	100	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

4.1.4. Households Family Size

Table 8 displayed that 39.1 percent of household heads have a family size between 5 and 6 members, and 5.1 percent of the households have between 1and2 and above 8 family members. Large percentage of households in Bezabezuhan (38.1 percent), Gedamayt (27.8 percent) and Hiwoteselam (46.7 percent) replied that they have family size between 5 and 6. About 31 percent, 25 percent and 23.3 percent of household heads in Bezabezuhan, Gedamayt and Hiwoteselam have family size between 7and 8, respectively. Generally, 69.1 percent, 52.8 percent and 70 percent of household heads in Bezzabezuhan, Gedamayt and Hiwoteselam have family size between 5 and 8, respectively. The average size of a household heads in the sample Kebeles was about 5.4 persons; it is almost the same figure with that of the average rural household size of Ethiopia, 4.9 (WMS, 2004/5). The average family sizes of households for Bezabezuhan, Gedamayt and Hiwoteselam were 5.4, 5.0 and 5.7, respectively. This implies that the population pressure in the study area is high and this leads to competition of natural resources, such as farm land, grazing land, etc.

Table 8- Household family size

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
1-2	1	2.4	4	11.1	2	3.3	7	5.1
3-4	9	21.4	13	36.1	12	20	34	24.6
5-6	16	38.1	10	27.8	28	46.7	54	39.1
7-8	13	31	9	25	14	23.3	36	26.1
Above 8	3	7.1	-	-	4	6.7	7	5.1
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

Based on focus group discussion, key informant interview and observation, the natural resources are highly degraded. The sample households also reported that the major natural resources such as forests, soil, wild animals and other natural resources are highly affected because of several reasons. As shown in Table below 9, 98.6 percent, 88.4 percent and 81.2 percent agreed that rapid population growth, recurrent drought and lack of awareness are the major causes of natural resources degradation in study area, respectively.

Table 9- The causes of natural resource degradation

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	yes	no	yes	no	yes	no	yes	no
Improper resource management	71.4	28.6	58.3	41.7	65.0	35.0	67.4	32.6
Improper farming	78.6	21.4	69.4	30.6	78.3	21.7	73.9	26.1
Drought	83.3	16.7	97.2	2.7	86.7	13.3	88.4	11.6
Erratic rainfall	64.3	35.7	75.0	25.0	76.7	23.3	72.5	27.5
Land tenure insecurity	28.6	71.4	52.8	47.2	51.7	48.3	44.9	55.1
Population pressure	100	-	100	-	96.7	3.3	98.6	2.4
Lack of awareness	76.2	23.8	86.1	13.9	81.7	18.3	81.2	18.8

Source: own survey (2007)

Note: Multiple answers was possible

Since the industrial age began, human beings have significantly altered the chemistry of the atmosphere by burning fossils (coal, oil and gas) as the source of energy to power machines. As these fossil fuels burn, they emit variety of gases which build up in the atmosphere forming a blanket of gases which acts like glass green house, trapping the sun's heat and warming the earth. In general because of deforestation, overgrazing, over cultivation and burning fossils, the climatic pattern of the world in general and sub-Sahara African countries in particular has been changed from time to time (World Book of Encyclopedia, vol. 21,).

It can be seen from Table 10, that the largest percentage of the respondents which account for 88.4 percent replied that there was occurrence of drought in the study area within the last ten years. About 11.6 percent of the household heads claimed that there was no occurrence of recurrent drought in the study area. The responses in connection with occurrence of recurrent drought indicated that about 70.7 percent of the respondents replied that recurrent drought had occurred for three to four times within the past ten years.

Table 10- Occurrence of recurrent drought (with in the last ten year)

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Recurrent drought:								
Yes	35	83.3	35	97.2	52	86.7	122	88.4
No	7	16.7	1	2.7	8	13.3	16	11.6
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007).

4.2. Rural Livelihood Assets

Rural Livelihood assets, which are the major factors that influence the active participation of the rural households in different livelihood activities, are assessed in the following section.

4.2.1 Human Capital

Family size, gender characteristics, dependency ratio, age, education, access to health and education facilities are the major assets that categorized under human capital.

I. Educational Status of Sample Population

Education has a very important role in rural development, which often has broad goals including: creation of employment opportunities both on on-farm and off-farm; equitable distribution of rural income; broadly distributed improvements of health, nutrition and housing; and broaden accesses to formal education and non-formal education (outside school system) education for adults and children that will have direct relevance to the needs of and aspirations of rural dwellers (Workneh, 2005).

The relationship between development and education is a two-way process. On one hand education reflects the socio-economic structures of the societies in which they function. On the other hand, educational reform has the great potential for inducing corresponding social and economic reform in the nation as a whole (Todaro, 1981 in Workneh, 2005).

About 45.5 percent and 11.3 percent of the household members are reached at primary and secondary level of education. 31.8 percents of the household members are totally unable to read and write while about 11.3 percents of the sample population can read and write informally. Almost in all sample Kebels, the population who attend primary level of education is relatively better, which accounts for about 50 percent in Gedamayt (the highest), 46.3 percent in Bezabezuhan and 42.9 percent in Hiwoteselam. In the case of secondary level of education, Bezabezuhan shared the largest percentage (17.1 percent) because the distance to high school is very near. Generally, the literacy rate in all Kebeles

is high and this may induce the participation of population on-farm, off-farm and non-farm activities efficiently (see table 11).

Table 11- Educational status of household members (> 7 years)

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Illiterate	51	23.6	43	32.6	106	37.8	200	31.8
Read and write	28	13.0	17	12.9	26	9.3	71	11.3
Primary level (1-8)	100	46.3	66	50	120	42.9	286	45.5
Secondary (9-12)	37	17.1	6	4.5	28	10.0	71	11.3
Total	**216**	**100**	**132**	**100**	**280**	**100**	**628**	**100**

Source: own survey (2007)

II. Access to Education and Health Facilities

Expenditures on education and training, improvement of health, and research contribute to productivity by raising the efficiency of the population, and these outlays yield a continuing return in the future. But the amount of investment on education and health facilities in developing countries is still inefficient. The negligible amount of investment on education in underdeveloped countries is manifested in low labor efficiency, factor immobility, limited specialization in occupations and in trade, deficient supply of entrepreneurship, etc. The lack of knowledge, skill and health is major determinants to progress (Workneh, 2005). Schultz (1969, in Workneh, 2005) pointed out that health facilities and services; on-the job training activities; formally organized education at elementary, secondary and higher education level; informal adult education; and migration of individuals and families to adjust to change job opportunities are some of the important activities that help to improve human capabilities.

A. Distance to Primary School

In the new educational policy, priority has been given to the primary education by focusing on expansion and of ensuring equity during the implementation phase of the policy because it is the chief instrument for social and economic growth (Ministry of education, 2002).

As it is shown in Table 12, more than 80 percent of the household members have to travel up to one hour to arrive at the nearest primary school. Out of 82 percent of household member, 42 percent traveled less than half hour to reach at the nearest school. On the other hand, around 6.5 percent of sample population reported that they have to travel more than two and half hour to arrive at the nearest primary school. About 50 percent, 41.7 percent and 36.7 percent of the household members in Bezabezuhan, Gedamayt and Hiwoteselam have to walk lass than half hour to arrive at the nearest primary school, respectively. Generally, distance to primary school in all kebeles from their residence is very near. It may be one reason for presence of large percentage of household members who attend primary education in all Kebeles.

Table 12- Distance in walking hour to primary school (2006/07)

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	N0	%
Below 0:30	21	50.0	15	41.7	22	36.7	58	42.0
0:30-1:00	16	38.1	14	38.9	26	43.4	56	40.6
1:01-1:30	3	7.1	1	2.8	4	6.7	8	5.8
1:31-2:00	1	2.4	1	2.8	2	3.3	4	2.9
2:01-2:30	1	2.4	4	11.0	2	3.3	7	5.1
Above 2:30	-	-	9	25.0	-	-	9	6.5
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007).

B. Distance to Secondary School

Secondary schools are usually built in towns and cities where there are several primary schools that act as feeders to each school (MOE, 2002). As a result, rural students are forced to travel long distance to attend secondary education and some students may be unable to continue their education.

As it can be seen in Table 13, about 31.9 percent, 26.8 percent and 32.6 percent of the household members have to travel with in the range of two hour, three hour and four hour to arrive at the nearest high school, respectively. Household members who traveled less than one hour and up to five hour to reach at the nearest high school are 0.7 percent and 8.0 percent. More than 50 percent of the sample population is found with in the range of three to four hour distance to arrive at the nearest high school.

Among all sample Kebeles, 81 percent of the household members in Bezabeuhan are expected to walk the shortest distance (two hour) up to the nearest school. However, 66.7 percent of the household members in Gedamyt are expected to travel up to four hours to arrive at the nearest high school.

Table 13- Proximity to high school walking hour

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Below 1:00	1	2.4	-	-	-	-	1	0.7
1:00-2:00	34	81.0	-	-	10	16.7	44	31.9
2:01-3:00	5	11.9	3	8.3	29	48.3	37	26.8
3:01-4:00	2	4.7	24	66.7	19	31.7	45	32.6
4:01-5:00	-	-	9	25.0	2	3.3	11	8.0
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

C. Distance to Health Services

Health status of the population has a significant effect on participation in income generating activities. Because of health problems, economically active household members may not participate in range of economic activities. As a result, the household member income may decrease. So health is the major determinants to progress, i.e. health facilities and service enhance human capabilities.

Both health center and hospital are found at the capital of Woreda, Mota. Household members with in two hour of traveling to the nearest health center and hospital are about 24.6 percent where as 6.5 percent of the sample population are expected to walk over 6 hours to arrive at the nearest health center and hospital. The majority of household members (62.3 percent) have to walk with in the range of 3 to 6 hour to reach at the nearest health service. About 46.7 percent of the household members in Hiwoteselam Kebele are forced to travel between 5 to 6 hours to arrive at the nearest health service. On the other hand, 81 percent of sample population in Bezbezuhan has to travel only up to two hours. So Bezabezuhan household members have the highest opportunities to have access to health service. However, Hiwoteselam household members have the lowest opportunity to get health service because of the remoteness of this Kebele from health center and hospital (See table 14).

Table 14- Distance to health center and hospital in hour

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
Below 1:00	1	2.4	-	-	-	-	1	0.7
1:00-2:00	34	81.0	-	-	-	-	34	24.6
2:01-3:00	5	11.9	3	8.3	-	-	8	5.8
3:01-4:00	2	4.7	24	66.7	3	5.0	29	21.0
4:01-5:00	-	-	9	25	20	33.3	29	21.0
5:00-6:00	-	-	-	-	28	46.7	28	20.3
Above 6:00	-	-	-	-	9	15.0	9	6.5
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

4.2.2 Physical Capital

Physical capital comprises different capitals such as buildings, irrigation canals, roads, tools, machines and soon which are created by economic production process. Physical capital is also defined as a producer good (Ellis, 2000). Market, road, telephone, grain mills, drinking water and other man made capitals are also physical assets. So the major physical capital like road, market, grain mills and drink water are discussed below.

A. Market Accessibility

Markets play a key role in rural development and has at least four related tasks, such as revolution in the marketing of agricultural products in the cities; a shift of industry in the production of simple agricultural equipment; production of consumers' goods for the mass market; and a revolution in marketing methods for such cheap manufactured goods, especially in rural areas (Rostow, 1964 cited in Workneh, 2005). Market provides four important contribution or functions. Such as storage or time utility, movement or place utility, processing or form utility and marketing management (Workneh, 2005).

As it can be shown in Table 15, the largest proportion of household members which accounts for about 46.4 percent have to cover the distance between one-two hours to reach at the very near market area. For the 13.8 percent of the sample population in the study area, the distance to market area is the shortest of all, which covers below one hour travel. However, 6.5 percent of the sample population has to travel long journey which account for about 4 hour up to the nearest market place. Among Kebeles, 83.4 percent of household members and 80 percent of household members in Bezabezuhn and Hiwoteselam are found with in maximum distance of two hour from the nearest market area. This implies that these two Kebeles household members have better opportunities to engage in different income generating activities like petty trading, shop trading.

Table 15- Distance to market in hour

Distance in hour	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Below 1:00	1	2.4	-	-	18	30.0	19	13.8
1:00-2:00	34	81	-	-	30	50	64	46.4
2:01-3:00	5	11.9	3	8.3	8	13.3	16	11.6
3:01-4:00	2	4.7	24	66.7	4	6.7	30	21.7
Above 4:00	-	-	9	25.0	-	-	9	6.5
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

B. Road Accessibility

One of the important classes of physical assets that enhance livelihood diversification is road. Roads have multiple effects in minimizing the spatial cost of transactions in resources and out puts. They also facilitate movement of people between places offering different income-earning opportunities; they create different activities (Ellis, 2000). The proximity to road determines livelihood diversification.

It can be observed from table 16, about 38.4 percent of household members in the study areas are found with in the range of two hours travel to reach at the nearest road. On the other hand 4.3 percents of sample population are forced to travel more than six hours to reach at the nearest all weather road. In terms of Kebeles, 88.1 percents of household members in Bezabezuhan have to travel very short distance (less than one hour) to reach at the nearest road. But sample population in Hiwotselam (46.7 percent) need to travel long distance which covers between four to five hour to reach at all weather road. So sample population in bezabezuhan has better opportunities to participate in non-farm activities.

Table 16- Distance to road in walking hour

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
Below 1:00	37	88.1	-	-	-	-	37	26.8
1:00-2:00	5	11.9	11	30.6	-	-	16	11.6
2:01-3:00	-	-	24	66.7	-	-	24	17.4
3:01-4:00	-	-	1	2.7	4	6.7	5	3.6
4:01-5:00	-	-	-	-	28	46.7	28	20.3
5:01-6:00	-	-	-	-	22	36.6	22	16.0
Above 6:00	-	-	-	-	6	10	6	4.3
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

C. Grain Mills Accessibility

It can be referred from Table 17 that 50 percent of the sample households have access to grain mills by traveling less than half hour. In contrary to this, small percentage of the sample population (2.9 percent) is forced to travel between 1:30 up to 2:00 hour to arrive at the nearest grain mill from their village. Almost in all sample Kebeles, large percentage of household members have access to grain mill by traveling very short distance. Generally, about 91.3 percent of the household members need to travel only up to one hour to reach at the nearest grain mills.

Table 17- Distance to grain mill in hour (2006/07)

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
Below 0:30	23	54.8	12	33.3	34	56.7	69	50.00
0:30-1:00	17	40.5	20	55.6	20	33.3	57	41.3
1:01-1:30	2	4.7	4	11.1	2	3.3	8	5.8
1:31-2:00	-	-	-	-	4	6.7	4	2.9
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

D. Source of Drinking Water

As it is indicated in the Table 18, 56.5 percent of the respondents replied that the surrounding rivers are their sources of drinking water. 29 percent of the households in the area also answered that pipe line water is their major sources of drinking water. In the case of proximity, around 83.3 percent of the households traveled less than half hour to reach at the source of drinking water. This implies that women and children may not spend much time to fetch drinking water.

Table 18- Source of drinking water (2006/07)

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
River	6	14.3	26	72.2	46	76.7	78	56.5
Ponds	2	4.8	-	-	-	-	2	1.4
Hand dug well	14	33.3	-	-	4	6.7	18	13.0
Pipe line	20	47.6	10	27.8	10	16.7	40	29.0
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

4.2.3 Social Capital

Social capital includes community and wider social claims on which individuals and households can draw by virtue of their belonging to social groups of varying degrees of inclusiveness in society at large (Ellis, 2000,). Net works, relationships of trust, membership of groups, access to wider institution of society or other cultural factors are social factors which individuals and households draw on per suit of livelihood diversification. In the study area, various social capitals, such as membership in a community based organization; community based group work and other social capital are collected and discussed as follows.

A. Membership in Community Based Organization (CBO)

As it is found out from the survey, sample household heads in the study area involved in one or two community based organizations, such as Iqub (financial association) and

Kire/idir (burial association to burry the dead and provides social service and in kind like enjera and maize). As it is shown in Table 19, about 49.3 percent of the household heads replied that they are participating in Idir. In the same table, 33.3 percent of household heads were participating in both Iqub and Idir. The remaining household heads (17.4 percent) responded that they are participating only in local financial association, Iqub. So, the majority of the household heads in the study area were participated in burial association, Idir. Among Kebeles, 57.1 percent of household heads in Bezabezuhan participated in kire where as 43.3 percent of the household heads in Hiwoteselame involved in both Iqub and Idir.

Table 19, Community based organization participant households

	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No	%	No	%	No	%	No	%
Only Iqub	8	19.1	12	33.3	4	6.7	24	17.4
Only Idir or Kire	24	57.1	14	38.9	30	50.0	68	49.3
Both Iqub and Idir	10	23.8	10	27.8	26	43.3	46	33.3
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

B. Community Labor Organization

As it can be referred from Table20, about 97.1 percent, 95.7 presents, 90.6 percent and 10.1 percent of the households in the study area were participated in Group work for soil conservation, wonfel (a group of farmers working together in each members plot), Group work for schools development and group work for disabled persons, respectively. In the study area, the lowest percentage of house holds heads was participated in group work for disabled persons. In Bezabezuhan and Hiwoteselam, all sample household heads (100 percent) replied that they are involving in wonfel and group work for soil conservation. Based on the figure in table below, except group work for disabled persons, the largest percentage of household heads in the study area has been participated in community labor organizations.

Table 20- Percentage distribution of households by community labor organization

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	yes	no	yes	no	yes	no	yes	no
- Wonfel.	100.0	-	83.3	16.7	100	-	95.7	4.3
- Group work for disabled person	7.1	92.9	-	100.0	18.3	81.7	10.1	89.9
- Group work for schools development	90.5	9.5	100.0	-	85	15	90.6	9.4
-Group work for soil conservation	100	-	88.9	11.1	100	-	97.1	2.9

Source: own survey (2007)

Note: multiple answers was possible

Figure 3-households participating in group work (crushing activity)

Household heads (88.4 percent) reported that they contributed their time and money to facilitate their common development goal. 92.8 percent of the respondents replied that

there is mutual support in their surrounding at odd time. This implies that there are significant community based organizations that helps to bring economical change in the area.

4.2.4. Financial Capital

Financial capital comprises stock of money to which the household has access. This is chiefly likely to be savings, and access to credit in the form of loans (Ellis, 2000). Bank deposits, liquid assets, labor income, pensions, and remittance and credits are the main sources of finance which provide people with different livelihood options (DFID, 2000).

In this section, the source and purpose of credit, saving and remittance are discussed as follows. However, livestock have been discussed under on-form activities.

A. Source of Credit

As it is indicated in the Table 21, about 45.7 percent of households received credit from different sources. The main source of credit in the study area is the rural credit and saving institution, locally known as muday, which account for 80.9 percent and followed by the household head's own friends, 14.3 percent. The smallest proportion of household (2.4 percent) received credit from money lenders and their relatives. In the study area, household heads received credit from different sources for different purposes. For instance, 52.3 percent, 23.8 percent, 19.0 percent and 4.8 percent of the household heads received credit for agricultural inputs, to buy Ox, for trading activities and to buy food, respectively. Thus, agricultural inputs share the largest percentage of credit in the study areas.

Table 21-Source of credit by percent (2006/07)

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	yes	no	yes	no	yes	no	yes	no
Source of credit:								
-Rural credit and saving	78.9	21.1	75.0	25.0	86.7	13.3	80.9	19.1
- Friends	10.5	89.5	25.0	75.0	13.3	86.7	14.3	85.7
- Relative	5.3	94.7	-	100	-	100	2.4	41.6
- Money lenders	5.3	94.7	-	100	-	100	2.4	41.6
- Banks	-	100	-	100	-	100	-	100
- Iqub	-	100	-	100	-	100	-	100
purpose of credit:								
- to buy ox	15.8	84.2	37.5	62.5	26.7	73.3	23.8	76.2
- to buy agricultural inputs	68.4	13.6	50	50	33.3	66.7	52.3	47.7
- trade activities	10.5	89.5	12.5	87.5	33.3	66.7	19.0	81.0
- to buy food	5.3	94.7	-	100	6.7	93.3	4.8	95.2

Source: own survey (2007)

B. Saving

Out of the sample households, about 27.5 percent responded that they are saving their income in different forms. Among the sample Kebeles, households in bezabezuhan have more experience to save their money than others (see table 22). About 57.9 percent, 26.3 percent, 13.2 percent and 2.6 percent of the household heads in the study area saved their money by using Iqub, home, Bank and their relatives, respectively. Among saving institutes, Iqub in Hiwotselam and Bezabezuhan, and their home in Gedamayt were the best sites to save their money.

Table 22- Status of saving (2006/07)

	Bezabezuhan		Gedamayt		Hiwoteselam		Total	
	yes	no	yes	no	yes	No	yes	no
- Status of saving	35.7	64.3	22.2	77.8	25.0	75.0	27.5	72.5
Saving institution.								
Iqub	53.3	46.7	37.5	62.5	73.3	26.7	57.9	42.1
Bank	26.7	73.3	12.5	87.5	-	100.0	13.2	86.8
Relatives	-	100	-	100	6.7	93.3	2.6	97.4
Home	20.0	80.0	50.0	50.0	20.0	80.0	26.3	73.7

Source: own survey (2007)

4.2.5. Natural Capital

Land, water, forest and biological resource are the major natural capitals which are utilized by people to improve the livelihood diversification in rural area. These resources are also known as environmental resources. Natural capital can be categorized into renewable resources (resources that easily replenish after we exploit) and non-renewable resources (resources that are fixed in quantity and amount) (Ellis, 2000). Among the major natural resource, access to land is the most important factor that greatly affects the rural livelihood diversification. Thus, land size, land fragmentation and other communal land are going to be discussed as follows.

A. Land size and Fragmentation

Land is the determining factor for the economic status of the rural households. But the size of this asset becoming smaller and smaller in size as a result of frequent redistribution of farmland. The average farm land size owned by household in the woreda is 0.94 hectare (woreda agricultural and rural development office, 2006).

As it can be seen in Table 23, 38.4 percent of households have between 0.5-1.0 hectares of farm land. About 30.4 percent, 24.6 percent and 6.5 percent of households have between 1.0-1.5 hectares, less than 0.5hactare and 1.51-2.0 hectare of farmland, respectively.

The household farm land not only becomes smaller but also highly fragmented. For instance, about 47.1 percent and 39.1 percent of households in the study area responded that their farm land is fragmented between 4-5 and 2-3 places, respectively. About 52.4 percent and 52.8 percent of household heads farm land in Bezabezuhan and Gedamyt are found between 4-5 places. Because of fragmentation and reduction of farmland size, rural household in the study area are forced to engage in diverse activities.

Table 23- Land size in hectare and fragmentation (2006/07)

	Bezabezuhan		Gedamayt		Hiwoteselam		Total	
	No	%	No	%	No	%	No	%
Land size in ha:								
- less than 0.5	8	19.0	12	33.3	14	23.3	34	24.6
- 0.5-1.0	9	21.4	12	33.3	32	53.3	53	38.4
- 1.01-1.5	18	42.9	10	27.8	14	23.3	42	30.4
- 1.51-2.0	7	16.7	2	5.6	-	-	9	6.5
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**
Land fragmentation:								
1 place	1	2.4	-	-	6	10.0	7	5.1
2-3 place	13	31.0	15	41.7	26	43.3	54	39.1
4-5 place	22	52.4	19	52.8	24	40.0	65	47.1
≥ 6 place	6	14.2	2	5.5	4	6.7	12	8.7
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

4.3. Types of Livelihood Diversification

4.3.1. On-farm Activities

On-farm diversity refers to the maintenance of a diverse spread of crop and livestock production activities that interlock with each other in various ways. This may involve cultural practices that are specifically designed to spread risk or to take advantage of complementary between crops in their use of soil nutrients, sunlight and other resources.

Thus, intercropping and mixed cropping are diverse farm systems, as also cultivation practices that special advantage of different micro climates with in the land resource to which the household has access (Ellis,2000).

Using household survey and key informant interview, data in connection with the production of crops and livestock have been generated and summarized. The data have helped to show the situation of On-farm diversification in the study area.

4.3.1.1. Crop Production and Major Constraints

As in most parts of the Ethiopian highland, farmers practice mixed (crop and livestock integration) agriculture in the study area. The major types of food crops that farmers grew in the Woreda are cereals, pulses and oil seeds. As it can be observed in the Table 24, from the total amount of crops, 27.3 percent, 25.4 percent, 15.2 percent and 13.0 percent were teff, maize, barely and wheat respectively. In the case of kebeles, teff was the dominant crop which account for 40.7 percent, followed by wheat (23.9 percent) and maize (21.4 percent) in Bezabezuhan. In Gedamayt, Maize became the dominant crop which account for 44.0 percent. Taff (33.9 percent) and haricot bean (7.2 percent) became the second and third major crops in Gedamayt. Potatoes (26.7 percent), barely (25.4 percent) and maize (18.3 percent) were the major crops in Hiwoteselame kebele.

Table 24- Amount of major crops in quintal and percent (2006/07)

Types of Crops	Bezabezuhan		Gedamayt		Hiwote Selam		Total	
	No. in quint.	%	No. in quint.	%	No. in quint.	%	No in quint.	%
Teff	404	40.7	250.5	33.9	314	15.8	968.5	27.3
Maize	213	21.4	324	44.0	364	18.3	901	25.4
Wheat	238.5	23.9	17	2.3	204.5	10.2	460	13.0
Barely	19	1.9	12.5	1.6	505.5	25.4	537	15.2
Beans	6	0.6	5.5	0.7	40	2.0	51.5	1.4
Peas	18	1.8	10	1.4	32	1.6	60	1.7
Chickpeas	9	0.9	13	1.8	-	-	22	0.6
Grass pea	84.5	8.5	5	0.8	-	-	89.5	2.5
Potato	1.5	0.1	-	-	532	26.7	353.5	10.0
Haricot bean	-	-	53	7.2	-	-	53	1.5
Finger millet	-	-	46	6.2	-	-	46	1.3
Total	**993.5**	**100**	**736.5**	**100**	**1992**	**100**	**3542**	**100**

Source: own Survey (2007)

Figure 4- A farmer growing inter-cropping on the same piece of farm land

In connection with crop productivity, the majority of households (65.2 percent) responded that crop production decreased from time to time. They listed down the main factors that adversely affect crop production in order of importance, such as farm land

shortage, lack of agricultural inputs, unreliable rainfall, poor soil fertility and crop diseases. In order to triangulate the above information, researcher also tried to raise questions about crop productivity for key informant interviewees. They almost supported the ideas which were for warded by households. The key informant interviewee responded that because of the reduction of farmland size from time to time as a result of newly formed house holds, unreliable rainfall and other factors, the current crop production is not equal with that of the last five years.

The above result shows that the crop production in the area is practice by traditional method. Todaro and Smith (2003) argue that crop productivity in developing countries is low not only because of rapid population growth in relation to available land but also crop production in developing countries is characterized by traditional features in terms of methods of production, poor organization, and limited physical and human capital inputs (see table in 25).

Table 25- Crop productivity and factors that affect crop production

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Crop productivity:								
Increasing	12	28.6	14	38.9	12	20.0	38	27.5
Decreasing	28	66.7	22	61.1	40	66.7	90	65.2
No Change	2	4.2	-	-	8	13.3	10	7.3
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**
Factors:	Yes	No	yes	No	Yes	No	Yes	No
Land Shortage	92.9	7.1	86.1	13.9	96.7	3.3	92.8	7.2
Unreliable rainfall	64.9	35.1	86.1	13.9	91.7	8.3	81.9	18.1
Poor soil fertility	67.6	32.4	80.6	19.7	85	15	79.0	21.0
Lack of agricultural in put	62.2	37.8	94.4	5.6	100	-	87.0	13.0
Crop disease	54.1	45.9	75.0	25	63.3	36.7	63.8	36.2

Source: own survey (2006/07)

Not: Multiple answers was possible (only for factors)

4.3.1.2. Livestock Production and Major Constraints

In addition to crop production, rearing of livestock is an important sector in the high land regions of Ethiopia for multi purpose, such as food production, input for crop production and soil fertility management, row materials for industry, power source, cash income, saving, fuel, Social functions and employment (MEDAC, 1998, cited in Workneh, 2004). In this study area, rearing of animals is an integral part of the agricultural system especially; oxen are the major source of power to plough the land. About 89.1 percent of households responded that they have their own ox/oxen. As indicated in Table 26, the study area is characterized by limited proportion of Horses and Mules (1.1 percent). On the contrary, the area is largely endowed with sheep and chickens which account for about 26.2 percent and 23.8 percent, respectively. Sheep in both Bezabezuhan and HiwoteSelam, and poultry in Gedamayt were the dominant animals. Although there is high tendency to involve in rearing of various animals to improve their livelihood, there are major obstacles that adversely affect their activities. The major constraints were identified by the respondents in order of their weight such as shortage of grazing land, lack of additional fodder, the occurrence of animal disease and recurrent drought.

Table 26- Livestock distribution (2006/07)

Animals	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Ox	62	12.4	58	12.4	76	13.0	196	12.6
Cow	46	9.2	30	6.4	50	8.5	126	8.0
Heifers	25	5.0	18	3.9	36	6.1	79	5.1
Bull	33	6.6	18	3.9	14	2.4	65	4.2
Calves	35	7.0	30	6.4	20	3.4	85	5.5
Sheep	150	29.9	74	15.8	184	31.4	408	26.2
Goats	15	3.0	88	18.8	18	3.1	121	7.8
Donkeys	26	5.2	25	5.3	38	6.5	89	5.7
Horse and Mules	7	1.3	2	0.4	8	1.4	17	1.1
Chickens	103	20.5	125	26.7	142	24.2	370	23.8

Source: own Survey (2007)

4.4 Non-farm Activities

Sustainable rural development requires multi-disciplinary approaches to poverty reduction. The agricultural focus is essential, but not sufficient for sustainable rural development. In addition to agricultural activities, the rural households should practice non-farm activities to improve their incomes (The World Bank, 2003).

Rural households in the study area involve in non-farm activities. Based on the household survey, about 58.7 percent of the households participated in various non-farm activities in the area. As it can be seen from Table 27, 69 percent and 47.2 percent of households engaged themselves in non-farm activities in Bezabezuhan and Gedamayt Kebeles, respectively. This great variation may be a result of location variation especially road and market proximity. Bezabezuhan have greater access to road and market but Gedamayt Kebele is found away from road and market network.

Table 27- Non-farm activities (2006/7)

Responses	Bezabezuhan		Gedamyt		Hiwoteselam		Total	
	No	%	No	%	No	%	No	%
Yes	29	69.1	17	47.2	35	58.3	81	58.7
No	13	31.0	19	52.8	25	41.7	57	41.3
Total	**42**	**100**	**36**	**100**	**60**	**100**	**138**	**100**

Source: own survey (2007)

The non-farm activities that were practiced by sample households in the study area are grouped into trade (grain, commodity, livestock and butter trading), handicrafts (carpenter, tailoring, lumbering and weaving), drink ('Tela' and 'Arke'), grain mills and wage employment. The largest percentage of sample households was engaged in handicraft and trading activities which account for about 44.5 percent and 30.8 percent, respectively. About 82.3 percent of household heads in Gedamyt involved in handicraft activities such as lumbering (41.1 percent), carpentry (35.3 percent) and tailoring (5.9 percent), See Table 28.

Table 28- Percentage of participants in sub-sector non-farm activities (2006/07)

Activities	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Trading in :								
- Grain	6	20.7	-	-	2	5.7	8	9.9
- commodity	4	13.8	1	5.9	5	14.3	10	12.3
- Livestock	2	6.9	-	-	2	5.7	4	4.9
- Butter	-	-	-	-	3	8.6	3	3.7
Handicraft :								
- Carpentry	4	13.8	6	35.3	6	17.1	16	19.8
- Tailoring	2	6.9	1	5.9	6	17.1	9	11.2
- Lumbering	-	-	7	41.1	3	8.6	10	12.3
- Weaving	1	3.5	-	-	-	-	1	1.2
Drink :								
- 'Tela & Areke'	3	10.3	-	-	1	2.9	4	4.9
Grain mills	3	10.3	2	11.8	4	11.4	9	11.2
Wage employment	4	13.8	-	-	3	8.6	7	8.6
Total	**29**	**100**	**17**	**100**	**35**	**100**	**81**	**100**

Source: own survey (2007)

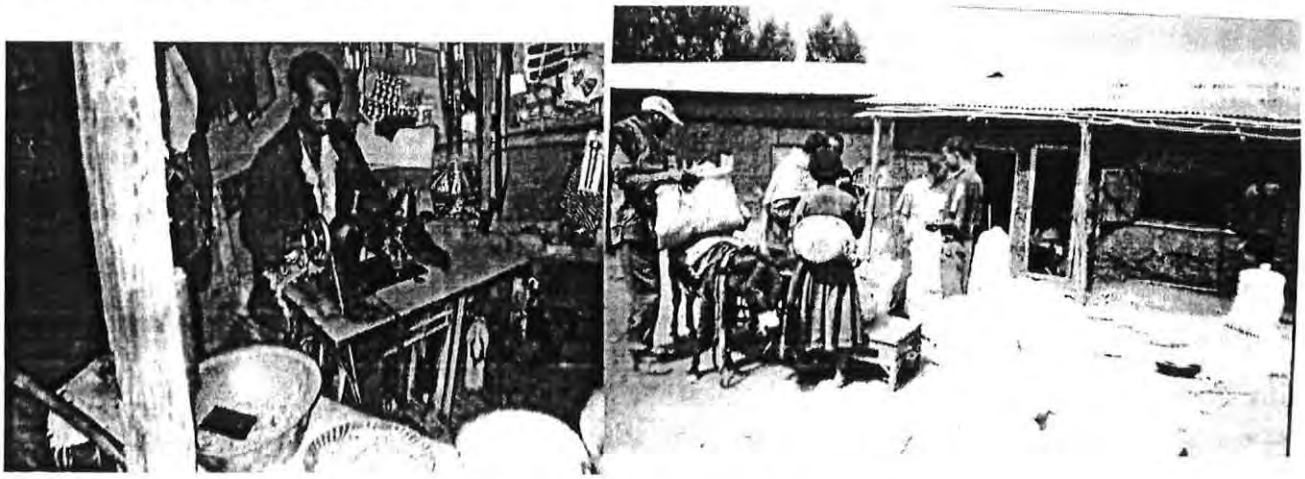


Figure 5- people involving in petty trade activities

that the greatest percentage of households spent more time to on-farm activities than to non-farm activities. This also implies that on-farm activity is the major economic activity in the area.

Table 30-Time spent in non-farm activity (2006/07)

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
More time than in agriculture	6	20.7	4	23.5	7	20.0	17	21.0
Equal time with agriculture	4	13.8	2	11.8	3	8.6	9	11.1
Less time than in agriculture	19	65.5	11	64.7	25	71.4	55	67.9
Total	**29**	**100**	**17**	**100**	**35**	**100**	**81**	**100**

Source: own survey (2007).

4.4.2 Constraints of Non-farm Activities

Major factors that restrain household's participation in non-farm activities were identified in order of importance during focus group discussion (FGD) and household survey. According to the respondents, the main factors that restrain to non-farm activities are lack of road (transport), lack of fiancé, engagement with farm work, market problem, lack of education and training, lack of up-to-date information, lack of labor during peak season and lack of raw materials. The first and most constraint that was reported by both FGD and households is transportation problem. Except, Bezabezhuan, the remaining sample kebles are found far away from all weather road. Thus, people are forced to transport their commodity by using pack animals. The second problem that they faced in undertaking non-farm activities is lack of finance. In FGD, it was also reported that even though there is credit accessibility to farmers, they feared to borrow from existing credit and saving institution (See Table 31 below).

Table 31- Constraints to non-farm activity

Constraints	Ranks
Lack of finance	2
Lack of market	4
Lack of education & training	5
Lack of raw material	9
Lack of transport	1
Lack of equipment	11
Social barriers	10
Lack of labor	8
Lack of information	6
Lack profit	7
Busy with farm work	3

Source: own survey (2007)

4.5 Participation in Non-farm Activities by Location, Sex, Age and Educational Level

Proximity to the capital of the Woreda, Mota, may affect households' participation in various non-farm activities. As it can be seen in table 27, Bezabezuhan shared the largest percentage of households, which account for 69.1 percent, followed by Hiweteselam (58.7percent). This variation may have resulted from their proximity to Mota town.

The Table 32 shows that 95 percent to household heads who participated in rural non-farm activities are male headed whereas the remaining 5 percent were female headed households. This indicates that there is greater sex difference in participation of non-farm activities.

Table 32-Non-farm participation by sex

Sex	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
Male	26	89.7	17	100	34	97.1	77	95.1
Female	3	10.3	-	-	1	2.9	4	4.9
Total	**29**	**100**	**17**	**100**	**35**	**100**	**81**	**100**

Source: own survey (2007).

As can be seen in Table 33, the age of households also affects the involvement in non-farm activities. Households between ages 26-35 years old were involved in various non-farm activities which account for 34.6 percent. The highest percentage of participants (66.7 percent) in non-farm activities was between 26-45 years old.

Table 33- Percentage of non-farm participation by age

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
< 26	-	-	3	17.6	7	20.0	10	12.3
26-35	10	34.6	6	35.3	12	34.3	28	34.6
36-45	13	44.8	4	23.5	9	25.7	26	32.1
46-55	4	13.8	2	11.8	7	20.0	13	16.0
56-65	1	3.4	1	5.9	-	-	2	2.5
> 65	1	3.4	1	5.9	-	-	2	2.5
Total	**29**	**100**	**17**	**100**	**35**	**100**	**81**	**100**

Source: own survey (2007)

Educational level of households may also affect participation in non-farm activities. About 24.7 percent, 30.9 percent, 27.2 percent and 1.2 percent of households can read and write and have attained, primary, junior and secondary education, respectively. Most of participants were literate which account for 84 percent whereas a small percentage (16.0 percent) was illiterate. This indicates that education and participation in non-farm activities may have positive relationships (see Table 34).

Table 36-Main off-farm activities

	Bezabezuhan		Gedamayt		HiwoteSelam		Total	
	No	%	No	%	No	%	No	%
- Wage laborer	1	25.0	5	33.3	2	9.5	8	20
- Harvesting crop	-	-	10	66.7	19	90.5	29	72.5
- Transporting crop	3	75.0	-	-	-	-	3	7.5
Total	**4**	**100**	**15**	**100**	**21**	**100**	**40**	**100**

Source: own survey (2007)

As indicated in table above, crop harvesting, wage labor and transporting crops were the major off-farm activities in the study area, which account for 72.5 percent, 20 percent and 7.5 percent, respectively. About 90.5 percent of off-farm activity participants in Hiwoteselam are engaged in harvesting of crops especially during the slack season, followed by Gedamayt which account for 66.7 percent.

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Conclusion

The purpose of this study was to assess rural livelihood diversification activities in the study areas; and to identify the major types of assets that enable in diversifying the rural livelihood activities. This study also aimed at identifying the major constraints that affects the participation of households in diverse livelihood activities. From the study Woreda, 138 sample households were selected from the three Kebele administrations and the necessary data was generated through household survey, FGD, key informant interview and direct observation. Among the instruments household questionnaire has been intensively utilized to collect the necessary data. Both qualitative and quantitative methods were employed to analyze the data.

The study depicted that the study area was characterized by high dependency ratio, large family size, small land holding, land fragmentation, declining of soil fertility, grazing land and agricultural productivity. The findings showed that the various types of livelihood assets are the most important determinant factors for household participation in non-and off-farm employment. Human capitals are characterized by large family size, high dependency ratio, poor access to health and education, especially secondary education. With regard to physical capital, the study area was also characterized by poor access to roads and market. Access to grain mills and drinking water in the area was relatively better than other physical assets i.e., above 50 percent of sample households traveled less than half hour to arrive at the nearest grain mill house and drinking water. About 45.5 percent of households replied that they have access to credit from different sources. According to respondents, Amhara credit and saving institution was the major source of credit in the study area, which account for 80.9 percent, followed by their own friends, 14.3 percent. Only 15.2 percent of sample households received remittance from different sources. Experience of saving in the study area was found at its early stage,

which account for 27.5 percent. About 38.4 percent of sample households have one and less than one hectare of farm land.

Households are also engaged in diverse crops and livestock production activities that are specially designed to spread risk. Although sample households grew various types of crops, teff, maize, barely and wheat were respectively the dominant crops in the study area. There was crop distribution variation among kebeles, for instance, teff, wheat and maize in Bezabezuhan, maize, teff and haricot bean in Gedamayt, and potatoes, barely and maize in Hiwoteselam were the major crops, respectively. Shortage of land, lack of agricultural inputs, unreliable rainfall and reduction of soil fertility were the major constraints for crop production in the study area.

In the study area, rearing of different animals is an integral part of the agricultural system. Among various animals, sheep and poultry were the dominant animals in the area which accounts for 26.2 percent and 23.8 percent, respectively. The major constraints that hampered rearing of animals were identified and ranked by sample households such as shortage of grazing land, lack of additional fodder and animal disease. As a result of numerous constraints, on-farm activities (crop-livestock integration) could no longer be pursued as a single economic sector. Hence, in addition to on-farm activities, households looked for non-farm and off-farm activities.

A significant proportion of sample households participated in non-farm and off-farm activities, which account for 58.7 percent and 29 percent, respectively. Handicraft (44.5 percent) and trade activities (30.8 percent) were the main non-farm activities that contributed as a source of employment in the study area. Among handicraft activities, carpentry was the most important source of employment which accounts for 19.8 percent, followed by lumbering, 12.3 percent.

Among kebeles, grain trading (20.7 percent) in Bezabezuhan, lumbering (41.1 percent) in Gedamayt and tailoring (17.1 percent) in Hiwoteselam were the most important sub-sector of non-farm activities. Lack of transport, lack of finance, intensive engagement

with farm work, lack of market and education and training were among the main constraints that affect the households to involve in non-farm activities in the study area.

5.2. Recommendations

This study showed that sample households tended to diversify their activities rather than specialization. But their participation in various activities was hampered by several factors. In light of the discussion made in previous chapters, the following recommendations are suggested in order to address the major constraints that affect rural livelihood diversification.

1. Although the sample households are mainly engaged in mixed farming, there were several obstacles that affect farmers' activities. The major constraints that affect animal rearing are shortage of grazing land, lack of additional fodder, and animal disease. Shortage of farmland, lack of agricultural inputs, unreliable rainfall and the decline of soil fertility are the major factors that affect crop production in the area. Therefore, the regional and woreda agricultural and rural development office should give due attention to alleviate the problems.
2. Access to, credit, market and other assets significantly determine the participation of households in non-farm activities. Thus, great emphasis should be placed on these most critical problems and constraints of each non-farm employment.
3. Access to road is the most critical problem to involve in various activities. It is true that road transport in the Woreda is found at its infant stage. The low transport development has given rise to use of pack animals and human portage. Thus, policy priority should be given to these most critical problems even though it needs huge capital.
4. Most of the households who participated in non-farm activities were literate which accounts about 84 percent whereas small percentages of households who participated in non-farm activities were illiterate. Therefore, creating awareness about the importance of non-farm activities for illiterate households should be given due attention by the responsible government officials.

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Annex

Household Survey Questionnaire

The objective of the questionnaire: This instrument is designed for the purpose of gathering information regarding rural livelihood diversification strategy in Hulet Eju Enesie Woreda. Thus, the researcher is kindly requesting you to provide him with the right information. Your response will be confidential and be used only for the purpose of this study.

Thank You!

Section A: Basic information regarding household head

A1. Kebele name _____

A2. Gott name _____

A3. Name of the household head _____

A4. Sex: 1 Male 2. Female

A5. Age _____

A6. Religion of head of household 1. Orthodox 2. Muslim
3. Protestant 4. Other

A7. Marital status of the household 1. Single 2. Married
3. Divorced 4. Widowed 5. Separated

A8. Educational status attained 1. Illiterate 2. Read and write
3. Church school 4. Elementary school (1-4) 5. Junior school (5-8)
6. Secondary school (9-12) 7. Special training

A9. Number of permanent household members at the time of survey
Male _____ Female _____ Total_____

A10. What type of house you have? 1. grass / straw 2. Corrugated roof
3. other _____

A11. What are the major causes for deforestation in your locality? (multiple answer is possible)

1. Bringing forest land into farm land
2. Cutting of trees for firewood and house construction
3. Livestock grazing and fodder 4. All

A12. Would you tell us the three major crops that farmers produce in your kebele? (in rank order)

1st _____ 2nd _____ 3rd _____

A13. According to your own self assessment, is your household

1. food secure 2. food insecure 3. varies from one year to another 4. do not know

A14. Duration of household consumption coverage (self sufficient) per year?

1. 12 months and above 2. 9-11 moths 3. 6-8mothns

4. 5-3 months 5. less than 3 moths

A15. Is there any serious natural resource degradation in your village?

1. Yes 2. No

A16. If yes, which part of natural resource is/are degrading? (Multiple answer is possible)

1. Soil 2. Forest 3. Grass

4. Rivers and streams 5. Wild animals 6. Others _____

A17. What were /are the reasons for natural resource degradation in the area?

1. Improper management of natural resources
2. Improper farming practice 3. Land insecurity
4. Drought 5. Erratic rainfall 6. Human population pressure
7. Lack of awareness of the community 8. all

A18. Is there recurrent drought in the area? 1. Yes 2. No

A19 If yes, how many times drought occurs with in last ten years?

1. Once 2. Two times 3. Three times 4. four times
5. five times 6. six times 7. seven and more than times

A20. The number of population in the area

1. Growing 2. No change 3. Declining

Section B: Human capital

B1. Would you tell us names of your household members, their relationship with you, educational level, etc. from the Table below?

N.O	Name	Relations with head	Sex	Age	Educational status
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
		1. Spouse 2. Son/ daughter 3. Relative 4. Non-relative			1. Illiterate 2. read and write 3. primary junior education 4. junior education 5. Secondary Education 6. Special training

B2. How far is the nearest service in your from your residence (village)

1. Primary school 3. Clinic
2. Secondary school 4. Health center

B3. Would you tell us the number of your family (including you) who are economically active and inactive?

Economically Active (15-65 year old) Economically inactive (<15, >65 year old)

Male __ Female ___ Total _____ Male ___ Female ____ Total _____

Section C: Physical Capital

C1. How far is the nearest infrastructure from your village?

No	Types of facility service	Distance in km	How long does a trip walk take you? (hour).
1	Distance to the nearest market		
2	Distance to the nearest all weather road		
3	Drinking water		
4	Milling house		

C2. The source of drinking water is 1. River 2. Stream 3. Ponds 4. Handdug well 5. Pipeline 6. Others, specify _____

Section D: Social Capital

D1. Ion which of the following community based organizations do you participate?

1. Ikub 2. Idir (Kire) 3. Both 4. Others

D2. In which of the following community labor organization do you participate?

1. Wenfel or debo 2. Group work for disabled persons

3. Group work for school 4. Group work to conserve soil 5. others specify

D3. Do people in your village contribute time and money toward common development goals? 1. Yes 2. No

D4. Do you support each other at odd times? 1. Yes 2. No

Section E: Final capital

E1. Do you save money? 1. Yes 2. No

E2. If yes, in which institution?

1. Bank 2. Iqub 3. Relatives 4. At home

E3. Do you take loan? 1. Yes 2. No

E4. If yes, from which institution (s)? 1. rural credit and saving association 2. Friends

3. Relatives 4. Idir/Ikub 5. Bank 6. Money lenders

E5. For what purpose you take credit? 1. for building house

2. for purchasing ox 3. for renting farm land 4. for purchasing agricultural 5. for petty trade 6. for buying food 7. others specify

E6. If you have never taken loan, why?

1. high interest rate 2. I don't need it 3. The time for repayment is short 4. others, specify _____

E7. Has your household been receiving remittances? 1. Yes 2. No

E8. If yes, would you tell us about the source, the relationship you have with the person or organization and the purpose for which you use the remittance?

Source	Who Remitted	Use of the remittance
1. In the same woreda from other kebele 2. from another woreda in the same zone 3. From other zone 4. from other Region 5. from aborad	1. father 2. Mother 3. Child 4. Relatives 5. non relative 6. organization (specify)... 7. others, specify...	1. for building a house 2. for purchasing ox 3. for buying clothes 4. for buying food 5. for purchasing agricultural puts 6. for petty trading 7. others, specify

E9. If yes, for what purpose? 1. for buying food crops 2. for buying clothes 3. for building a house 4. for purchasing agricultural inputs 5. for paying tax 6. others, specify

Section F: Natural Capital

F1. Do you have access to land for agriculture use? 1. Yes 2. No

F2. If yes, how did you get the holding which you use now?

1. through land redistribution 2. inherited from parents

3. shared with relatives 4. Leased 5. shared cropped

F3. Land size by type of land use

No	Land use type	Unit in Timad	Hectare
1	Cultivated land		
2	Grazing land		
3	Tree land		
4	Fallow land		
5	Others, specify		
6	Total		

F4. In how many places is your farm land fragmented?

1. in one place 2. In two places 3. In three places 4. In four places

F5. Do you have access to communal land?

F6. If yes, for which communal property do you have access?

1. Communal grazing land 2. Communal forest 3. Communal water point

Section G: Agricultural Activities /on-farm Activities/

G1. Would you tell us the type of crops you grew last year from the table below?

No	Crop type	1. Yes 2. No	Amount of harvest in quintal /Kg/
1	Teff		
2	Maize		
3	Wheat		
4	Barley		
5	Beans		
6	Peas		
7	Sorghun		
8	Chickpeas		
9	Grass pea		
10	Podatoes		
11	Haricot bean		
12	Finqure millet		
13	Others specify		

G2. Has your crop production grown or decreased when compared with that of five years back? 1. Increasing 2. Decreasing 3. No change

G3. What are the main factors that adversely affect crop production?

No	Main factors	1. Yes 2. No	Rank
1	Shortage of land		
2	Unreliable rainfall		
3	Poor soil fertility		
4	Lack of better seeds and fertilizers		
5	Crop diseases		
6	Others, specify		

G4. Do you own livestock? 1. Yes 2. No

G5. If yes, how many animals do you have? Place put numbers.

1. ox (en) _____ 2. cow(s) _____ 3. Heifers(s) _____ 4. Bull (s) 5. Sheep ___

6. Goat (s) _ 7. donkey (s) 8. Horse and mule _____ 9. Pultry ___

10. Others, specify _____

G6. What are the major constraints to livestock rearing? (Multiple answer is possible).

No	Constraints	1. Yes 2. No	Rank
1	Shortage of grazing land		
2	Animal diseases		
3	Lack of additional fodder		
4	Drought		
5	Lack of sufficient veterinary services		
6	Others, specify		

G7. Do you practice apiculture? 1. Yes 2. No

Section H: Non- Farm Activities

H1. Do any of your household members work in activity apart from livestock rearing and crop production?

H2. If yes, would you tell us the type of actives they engaged in? (multiple answer is possible).

1. trading grain 2. trading livestock 3. Pettry trading 4. tailoring 5. carpenter 6. weaving 7. selling of 'tella' and "Areke" 8. Grain mills 9. selling fire wood 10. others specify _____

H3. Who is mostly involved in non-farm activities?

1. Head 2. Spouse 3. One child 4. Two children 5. Three children 6. more than three child, specify in number _____7. any other combination _____

H4. Would you tell us the purpose for which you used the money? (multiple answer is possible).

1. buying food 2. buying ox (en) 3. purchase farm tools
4. buying clothes 5. purchase agricultural inputs 6. saving
7. pay loan 8. Schoolfee 9. pay tax 10. others, specify _____

H5. If your family members work in non-far activities, what are the odd reasons to start up the activity? (multiple answer is possible)

No	Reasons	1. Yes 2. No	Rank
1	Declining farm productivity		
2	Temporary events and shocks		
3	Smallness of land size		
4	Growth of family members		
5	Shortage of house hold food		
6	Lack of cash		
7	Others specify		

H6. What are the favorable factors to start up the activities? (Multiple answers is possible).

No	Favorable factors	1. Yes 2. No	Rank
1	Higher return on involvement in rural non-farm activities		
2	Lower risk of rural non-farm activities		
3	Generation of cash in order to meet household needs		
4	To accumulate assets		
5	To escape poverty		
6	Others, specify		

H7. How much time did you spend for your activity compared with agriculture activity?

1. More time than agriculture 2. Equal time with agriculture
3. Less time than agriculture

H. 8. Would you tell us the main problem you faced in undertaking the non-farm activities?

No	Favorable factors	1. Yes 2. No	Rank
1	Lack of finance		
2	Lack of market		
3	Lack of education and training		
4	Lack of raw material		
5	Lack of transport (car, etc)		
6	Lack of equipment		
7	Social barriers		
8	Lack of labor		
9	Lack of information		
10	Low profit		
11	Busy with farm work		
12	Others, specify		

H11. If there are constraints that you faced, would you tell us the solution to alleviate the major problems? _____

Section I: Off-farm activity

I1. Is there any household members engaged in rural agricultural wage labor?

1. Yes 2. No

I2. What are the main activities that the household members participate?

No	Main activities	1. Yes 2. No
1	Wage laborer on other farms	
2	Harvesting crops	
3	Transporting of crops	
4	Weeding /seasonal/	
5	Others, specify	

I. Interview guide for key informants' interview

1. Are farmers encouraged or discouraged to participate in agricultural activities (on-farm diversification)? How?
2. Why do farmers opt to diversify agricultural activities? Or why do they not diversify?
3. Do you think that the size of farm land decrease from time to time? If your answer is yes, what are the factors?
4. Do you think that small holder farmers get enough amounts of food crops?
5. For how many months could the farmer feed themselves with their crop production?
6. What are the strategies that the people use to fulfill their food shortage?
7. D you think that agricultural productivity increase or decrease when compared with that of five years back? Why?
8. Are farmers engaged in rural wage employment? If yes, what are the main activities that the household members participate?
9. What is the major non-farm activities practiced in the area?

Declaration

I, the undersigned, declare that the thesis is my original work, has not been presented for a degree in any other university and that all sources of material used for the thesis have been duly acknowledged.

Declared by:

Zigale Tamir

Candidate

Confirmed by:

Advisor