LIVELIHOOD DIVERSIFICATION AS HOUSEHOLD STRATEGIES. A CASE STUDY OF RURAL KEBELES AROUND GELAN TOWN, OROMIA, ETHIOPIA.

By

WORKU IFA DADI

A Thesis Submitted to the Department of Geography and Environmental Studies Presented in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Geography and Environmental Studies (Population, Resources and Development)

Addis Ababa University

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This is to certify that the thesis prepared by Worku Ifa, entitled: *Livelihood Diversification as Household Strategies. A case study of rural kebeles around Gelan town, Oromia, Ethiopia.* and submitted in partial fulfillment of the requirements for the Degree of Master of Arts in Geography and Environmental Studies (Population, Resources and Development) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Internal Examiner _____ Signature _____ Date _____

External Examiner_____ Signature _____ Date _____

Advisor _____ Signature _____ Date _____

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Chair of Department or Graduate Program Coordinator

ACKNOLEDGMENTS

First of all it is my pleasure to extend my acknowledgement to my research advisor Dr.Aseffa Abegaz for his valuable comments and guidance throughout the preparation of this paper.

I am also sincerely thankful to Gelan City Agriculture and Rural Development office, Micro-enterprises office of the *woreda* and Development Agents, *kebele* Administrators and all key informants of Chaffee Tummaa, Mareloo and Tulu Gurachaa *kebeles* for their cooperation and assistances during data collection.

Finally, I would like to express my heart-felt thanks to my parents especially my mother Buzinesh Lema who always wishes for my success. And I would also thank my friends Seyoum Worku and Getent Tessfaye who encouraged and provided me great support in data encoding and analysis.

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GLOSSARY

Edir	Local mutual financial and social aid association
Iqub	Traditional saving union
Katikala	Homemade liquor or Local beverage with high alcoholic content
Kurtituu	Cut worms
Farsoo	Local beer
Wagii	Maturity of crops before harvest
Weynadega	Sub tropical
Ofalla	Collective labor among neighbors and friends to work on each other's farm when needed
Kert	¼ hectare
Iyessaa	*Poor*
GiduGalesaa	*Middle*
Duresaa	*Better-off*

ACRONYMS

1.	AEMFI	Association of Ethiopia Microfinance Institutions
2.	CSA	Central Statistical Agency
3.	FAO	Food and Agricultural Organization
4.	FDRE	Federal Democratic Republic of Ethiopia
5.	FGD	Focus Group Discussion
6.	FSZ	Finfine Special Zone
7.	IFAD	International Fund for Agricultural Development
8.	IFPRI	International Food Policy Research Institute
9.	MOARD	Ministry of Agriculture and Rural Development
10.	MOFED	Ministry of Finance and Economic Development
11.	NGOs	Non-Governmental Organizations
12.	NMS	National Metrological Station
13.	OCSSC	Oromia Credit and Saving Share Company
14.	OWWDSE	Oromia Water Works Design and Supervision Enterprise
15.	PA	Peasant Association
16.	PASDEP	Plan for Accelerated and Sustainable Development to End Poverty
17.	RDPSI	Rural Development Policies, Strategies and Instruments
18.	SPSS	Statistical Package for the Social science
19.	SWC	Soil and Water Conservation
20.	TLU	Tropical Livestock Unit

ABSTRACT

The objective of this study was to assess the rural households' involvement in livelihood diversification .i.e. off-farm and non-farm activities. The study also aimed at investigating the various factors that affect and increase the involvement of households in various diversification activities. To achieve this objective both qualitative and quantitative methods were employed. Households survey which is obtained from the rural kebeles around Gelan Town of Finfine Surrounding Oromia Special Zone in Oromiya Regional State covered 90 households in three Rural kebeles; Chafee Tumaa, Tuluu Gurachaa, and Mareloo. Focus group discussions and key informant interview were also conducted in order to support the data obtained from household survey. The result has shown that households' involvement in various diversification activities are affected by credit service, education, households' size and farm holding size. The study revealed that lack of access to credit is found to be the major institutional constraints of households to involve in various diversification activities. Those with relatively big farm size have the financial opportunity to involve in non-farm activities. However, the majority is small farm holders and need to have access to credit to involve in the activities. Off-farm activities usually include wage labor and since wage is very low in the area a few who do not have or little farm land are involved. Involvement in diversification is also affected by access to education, and it is found that the literates; besides, formal education, lack of awareness of information and trainings on various income generating activities constrained the households' involvement. It is also found that large households' size leads to the involvement of households in non-farm and off-farm activities due to the availability of more labor. Therefore, the findings call for efficient allocation of budget on easy access to credit, on the provision of information, knowledge and the various income generating activities, and promote NGOs and private sector which are useful as sources of job opportunities.

Key words: livelihood strategies, non-farm, off-farm, livelihood diversification.

CHAPTER ONE

INTRODUCTION

1.1 General Background

Rural livelihood diversification is commonly defined as a process of structural change in which the source of employment and income for the rural population are being expanded and strengthened. It is a key element of the development process for most low-income countries, involving not only subsistence agricultural output but also the growth of rural non-farm and off-farm activities that can provide the basis for a self-sustaining and equitable economic growth (Hussein et al., 1999).

Rural livelihoods diversification generally occurs as a result of an increasing importance of off-farm wage labor in household livelihood portfolio or through the development of new forms of on-farm production. In both cases, diversification ranges from a temporary change of household livelihood portfolio, which is occasional diversification, to a deliberate attempt to optimize household capacity to take advantage of ever-changing opportunities and cope with unexpected constraints, which is strategic diversification (Warren, 2002).

Several factors contribute to rural poverty in the developing world. Deterioration of the agro ecological environment, isolation of rural communities from the rest of the economy especially markets, population increase, lack of productive assets: health, skill, land, and capital have serious repercussion on the livelihood of rural people since the majority involve in agriculture. They have to look for other ways of complimenting their farm

income such as selling their labors to other better off- farms and non-farm activities such as petty trade, handicrafts and day labor (Warren, 2002).

Women also play an important role if they involve in off-farm and non-farm activities in increasing household incomes and also improve family welfare and nutrition. They greatly value the respect and status they earn by making a greater contribution to the welfare of their families (IFAD, 2004).

Diversification of income sources, assets, and occupations is the norm for individuals or households in different economies but for different reasons. The poor households will exhibit greater demand for diversification for the purpose of ex-ante mitigation while the rich ones diversify due to the financial opportunities to invest into different income generating activities (Reardon et al., 1998).

Despite the increasing significance of these activities for households and its increased importance as income source, most previous studies addressed the problem and significance only from a static point of view that is the characteristics of or relating to a society that has reached a state of equilibrium so that no changes are taking place. The dynamics and intensity and participation in non-farm activities in Africa in general, and in Ethiopia in particular, have not been given due attention, especially when the determinants of livelihood change from time to time. These changes may be due to government policy, economic growth, infrastructure and market situation. In the case of Ethiopia, recent years have witnessed some changes in policy that promote the role of the market, even in the rural setting where increased market participation just began to have impacts (Adugna, 2006).

Due to the importance of livelihood diversification, the major purpose of this research is to assess rural livelihood diversification of rural *kebeles* around Gelan Town in Finfine Surrounding Oromia Special Zone (FSOSZ). Therefore the paper contributes policy implication to encourage the environment of the rural society in non-farm and off-farm activities in using the available human, economic and financial resources to increase productivity and income sources.

1.2 Statement of the Problem

The Ethiopian economy heavily depends on the agricultural sector. Despite such an immense importance the performance of agriculture is very low by any standard. A growing number of young and potentially productive people in rural areas are becoming landless because of declining cultivable land. Climatic change also affects agricultural productivity since the majority of farmers depend on rain fed agriculture.

According to Cornia as quoted by Flynn (2005) 85% of the labor force in rural Ethiopia is engaged in agriculture, and three-quarters of the population relay on it as their only source of income with the bulk of them being engaged in subsistence farming. The average cultivated holdings are usually a hectare of land, which is barely large enough to feed the average family size of five to six.

Risk-related hardships faced by rural households in Ethiopia for the last 20 years include climatic risk affecting 78% of the households, policy shocks consisting of 42% of the households, oxen problem (35%), others livestock and land problems accounts 17% of households (Dercon quoted in Demisse and Workneh, 2004).

As a result, given the ever-increasing rural and agricultural difficulties of traditional production system to support the livelihood needs, diversification is becoming extremely important.

However different factors influence rural diversification in Ethiopia. Even if the government focuses on agriculture to bring rural development, there is no significant change on the improvement of the rural livelihoods. Many of the efforts to support livelihood diversification so far have tended to be supply-driven and focused on single issue solutions. Services are offered to rural communities to address perceived short-falls without really understanding the underlying causes of the lack of livelihood diversification.

Therefore in rural Ethiopia, where the livelihood of the population is mainly crop production and livestock rearing, families tend to diversify occupation to buffer the risk of bad weather and other problems that affect both crops and livestock. So there should be awareness of the available resources that are natural, physical, financial and human capital that encourage the involvement in non-farm and off-farm activities in order to tackle land constraints, climate fluctuation, seasonal idleness and low income.

The research takes a case study in the rural *kebeles* of Gelan town which is one of the Finfine Surrounding Oromia Special Zone (FSOSZ). It is located to the south of Addis Ababa at a distance of 25 km. Under Gelan town there are four kebeles. These are Gelan, Chafee Tumaa, Tulu Guracha and Mareno. Out of the total 4 kebeles found in Gelan Districts, 3 kebeles are selected based on the economic activity (livelihood) of the people. Out of 4 kebeles, Gelan is more urbanized and industrialized town therefore excluded

from this study. But the remaining three; Chafee Tumaa, Tulu Guracha, and Mareno are rural and the economic activities of the people are more related to agricultural activities. Rural kebeles around Gelan Town are predominantly rural and engaged in subsistence rainfall agriculture. The climate varies from time to time and results in inconsistent rainfall which is unfavorable for crop production. Sometimes unexpected high rainfall occurs and destroys the crop. In addition, crop disease and shortage of farm land are other problems in the study area. As a result the households of rural kebeles around Gelan town are not satisfied with the production of agriculture.

Therefore, addressing the problem of livelihood diversification is important in order to improve the livelihood of households. As a result the researcher is motivated to assess the various factors that affect livelihood diversification in the study area.

1.3 Objective of the Study

1.3.1 General Objective

The overall objective of the study is to assess rural livelihood diversification.

1.3.2 Specific Objectives

The specific objectives of the study include:-

1. To assess different livelihood activities that smallholder farmers are practicing in the rural kebeles of Gelan town.
2. To identify the notable participants in diversified livelihoods in the study area.
3. To identify the main factors of livelihood diversification in the study area.

1.4 Research Questions

The thesis answered the following main research questions.

1. What are the main livelihood activities of small holder farmers in the rural kebeles of Gelan town?
2. Who are the notable participants of livelihood diversification in the study area?
3. What are the main factors of livelihood diversification in the study area?

1.5 Significance of the Study

Livelihood diversification is important for a country like Ethiopia where almost the majority of the rural people depend on subsistence agriculture. It is one of the livelihood strategies to improve productivity and income source.

The researcher has been motivated by the quest of finding explanation that since agricultural sector alone cannot ensure sufficient employment or sufficient income for the rural population and the need for integrating in the non-farm and off-farm sector is important.

This study has the following significance:

- Giving information for the concerned authorities of rural kebeles around Gelan town to make necessary measures to enable smallholder farmers to diversify their livelihoods.
- Informing the concerned governmental and non-governmental organizations that work on food security areas to include diversification as alternative means of dealing with securing household food conditions as one area of their concern.

- ❖ Serving those researchers who intend to work on the same area as further reference material and filling the research gap on livelihood diversification in the country in general.
- ❖ Give insight about rural livelihood diversification.
- ❖ Giving information on the positive contribution of livelihood diversification in sustaining household food supply.

1.6 Scope of the Study/Delimitation

This study was undertaken in the rural kebeles around Gelan town, especially the three selected kebeles of Chaffe Tumaa, Tulu Guracha and Mereno with the intention of intensive investigation and analysis so as to come up with very insightful policy implication. The core concern of the study was to assess rural livelihood diversifications. The sample survey data was cross sectional, where the current assets from different wealth category of households and their income sources and other household data at the local context were generated.

1.7 Limitation of the Study

There are several limitations of the study. Particularly:

- It was difficult to make trend analysis of households' income from various diversification activities due to absence of record in the woreda office.
- Researches made on Ethiopia on this specific issue are very limited in order to get figures and compare data of different regions.

Nonetheless, given the limitations, the paper at its best tried to minimize the impact of limitations.

1.8. Operational Definition of Terms

Different literatures have different definitions for diversification. According to Ellis (2005), diversification refers to the allocation of production assets among different income generating activities, that is off-farm and non-farm activities. Carswell (2000) defined rural livelihood diversification as the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and improve their standard of living. Bryceson (1999) defined farm diversification as a way of branching out from traditional farming activities and taking on a new farm, off-farm or non-farm income generating enterprise.

In this study, the Ellis's (2005) definition of non-farm and off-farm activities of the following has been used.

Off-farm income:-Wages of exchange labor on other farms that is within agriculture, including payment in kind.

Non-farm income:-non agricultural income sources, such as various handicrafts and business income.

1.9 Ethical Consideration

In order to have respondents' genuine responses and to make them feel free, possible emphasis has been given to the ethical issues. These include the following, enough information was provided to the participants of the research regarding the objective and nature of the study. Participants of the research were told about the confidentiality of their responses and their consent's have been mentioned. All cited literatures in the text were scholarly acknowledged.

1.10 Organization of the Study

The thesis is divided into six chapters. The first chapter is introduction of the study. Chapter two deals with reviewing of related literatures. Third chapter deals with the background of the study area and the methodology used in the study. Chapter four and five present results and discussion. The last chapter presents conclusion and recommendation.

CHAPTER TWO

REVIEW OF CONCEPTUAL / THEORETICAL AND RELATED LITERATURE

2.1 The Concept of Rural Livelihood Diversification

Peoples of the world, who inhabit every corner of the world, have their own means of livelihood ranging from primitive to modern life styles. Peoples of either case and inhabit a particular place have also internal variations in their activities. These are various livelihood strategies in a particular society since a single activity cannot fulfill the entire needs of the society. These varied activities have different backgrounds that range from bio-physical to socio-economic constituents.

Various scholars forwarded their views on the concepts of livelihoods and livelihood diversification. According to Degefa (2005), a livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living. The author further explains the sustainability of a livelihood; he stated that a livelihood is sustainable if it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets and provide sustainable livelihood opportunities for the next generation, and which contributes net benefits to other livelihoods at the local and global levels and in a short and long terms.

A number of studies expressed livelihood diversification in a number of ways. For instance, World Bank (2003) states “diversification as range of copying strategies, investments in livestock and non-farm income, and migration that are used to reduce fluctuations in income which also include traditional copying strategies”. Similarly Ellis

(1998) stated livelihood diversification as "a process that involves; wage agricultural labor on others' farms, trade and service related activities that have taken place in rural areas and urban based ones requiring workers' commute", (Mohammad, 2006).

According to FAO (2006), livelihoods diversification is of two types. These are as a result of increased importance of off-farm wage labor in household livelihood portfolio through the development of new forms of non-farm/on site production of non-conventional marketable commodities. In both cases, diversification ranges from a temporary change of households portfolio (occasional diversification) to a deliberate attempt to optimize household capacity to take advantage of ever-changing opportunities and cope with unexpected constraints (strategic diversification)

2.2 Reasons for Livelihood Diversification

People diversify their livelihoods depending on the challenges they face and opportunities of the activities they engage in. Various scholars stated various reasons for diversification. For example, diversification may occur as a deliberate household strategy or as an evolutionary response to crisis or as to diminish and accentuate rural inequality, Ellis (2000). Livelihood diversification may be of economic and social in nature. According to Anderson and Deshingkar (2004), the main reasons for livelihoods diversification are of two in nature. These are *asset-based* and *insurance-based* reasons of diversification. The *asset-based* diversification can be explained by the amount of diversity in a household's income portfolio reflects the amount of diversity in the assets or factor of production it owns or access to. For example, households which possess some land, but not enough fully employed the household's labor supply, drive their income both from own cultivation and wage labor similarity ownership of other income

generating assets is also the most important reasons for livelihoods diversification. The second reason for livelihood diversification is that the *insurance-based factor*. This is when diversification is taken as a way of insuring against income shocks. This also can be explained as the amount of diversification varies across households according to their demand to a particular form of insurance, and its cost. Household diversification can arise because each individual within the household has a diverse income portfolio, or because individual within the household are specialized in different activities. It can act as both a safety valve for the rural poor and as a means of accumulation for the rural rich or can benefit farm investment and production or impoverish agriculture by withdrawing critical resources especially labor (Bryceson, 1999). In addition, it is well known that poor households in rural areas of developing countries often relay on a diverse set of income generating activities to meet their consumption needs. This is to provide security against diverse external shocks, coping with seasonality and generating additional income (Ellis, 1998; Anderson and Deshiingkar, 2004 as cited in Ellis and Freeman, 2005).

In Africa, livelihood diversification is the result of the composite driving forces and reasons. For instance, the main reasons according to (FAO, 2006) are: to generate cash that can be used to improve farm yields by hiring labor and purchase farm inputs, to reduce risk and encourage innovation, to bring environmental benefits. On the other hand, literature shows that livelihoods diversification in sub-Saharan Africa is because of the failure of agriculture to provide a sufficient livelihood for a substantial proportion of rural dwellers (Bryceson and Bank, 2001; Bryceson, 2002).

According to Yared (1999), in Ethiopia, food insecurity and cash needs to purchase other goods and services are the main reasons for many households to diversify their

livelihoods and he stated that income earning intensifies as the granary begins to employ during a drought or a pre-harvest season. He added, wage-labor, which is one of the livelihood strategies, is a critical source of cash and food for the poorer peasant households. Furthermore, non-agriculture income occupies a significant disproportionate to its actual amount, because a cash source fragment at the time that many households start to face serious food and cash problems (Yared, 1999). They can be an important source of cash for purchase of necessary items from the market such as salt, pepper, coffee and clothes. This contribution of the non-farm income enhances household food security by allowing households to avoid grain sales rather help them to purchase additional grain.

2.3 Determinants of Livelihood Diversification

2.3.1 Push and Pull Factors of Livelihood Diversification

Asset, activity and income diversification lies at the center of livelihood strategies in rural Africa (Barrett and Reardon; 2001), and very few people collect their income from any one source, hold all their wealth in a form of any single asset, or use their assets in just one activity. Multiple motives prompt households and individuals to diversify income, assets and activities. The first set of motives are what is termed as “Push factors”; risk reduction, reaction to diminishing factor returns in any given use, such as family labor supply in the presence of land constraints driven by population pressure and land holdings fragmentation, reaction to crisis or liquidity constraints, high transaction cost that reduce households to self provision in several goods and services, etc. The second set of motives to livelihoods diversification are “Pull factors”: realization of strategic

complementarities between activities, such as crop-livestock integration or milling and hog production, specialization according to comparative advantage accorded by superior technologies, skills or endowments, etc (Barrett and Reardon; 2001).

The pull factors of diversification can be seen from the context of the benefit that households will get being engaged in diverse livelihoods. As stated by Thodaro and Smith (2003); diversification has various advantages:

1. It can help households to use other activities in the slack season to take advantage of both idle labor and family labor:
2. Where labor is in short supply during peak planting, weeding and harvesting seasons simple labor saving devices can be used and free labor for other farm activities.
3. The use of better seeds, fertilizers and simple irrigation to increase the yields of staple crops such as wheat, rice and corn can free part of the land for cash crop cultivation, that on the other hand can rise families consumption standard and help to invest in farm improvements;
4. Can minimize the impact of staple crop failure and provide a security of income previously unavailable. Similarly the realization of strategic complementarities between diversification and specialization according to the comparative advantages is the pull-factor for livelihoods diversification.

2.3.2 Capital as Determinant Factor of Diversification

There are various kinds of capitals identified by different scholars and organizations. According to Ellis (1998) capitals are divided in to Physical, Social, Natural, Human and Financial categories. While IFAD (2004), added personal capital in the aforementioned

categories. The availability and absence of these stated capitals have its own influence on the extent of livelihood diversification.

With regard to natural capital, as stated by Ellis and Freeman (2005): small landholdings in many countries limit the availability of agriculture as a livelihood strategy, forcing many smallholders to diversify in to other livelihood options. Therefore, while dependence on agriculture is negatively correlated with income in some countries, this effect is limited by the small size of landholding in many other countries. According to the same study, full-time farming is only option for those endowed with enough land or livestock to absorb all the adult labor in the household. Skilled non-farm employments are only available to those with education, particular skill, or the necessary financial capital to start a business.

Assets are the determinate factors for households' livelihood diversity. For example, as illustrated by Ellis and Freeman (2005) households who own lots of natural capital such as land and water diversify more in agriculture. For example, households which own some livestock but not enough to fully employ the household's labor supply drive their income both from livestock activities and wage labor .According to these authors the range of activities which the household has access to, which will in turn depend on the household's asset base, including human capital (education, health, skill, etc), social capital (Networks, relationships etc), financial capital (credits, loans, etc), physical capital (infrastructure, modern agricultural inputs, market ,etc) and personal capital (motivation, willingness to act, etc).

2.3.3 Institutional Determinant Factors

There are institutional factors that also determine the individuals and households' livelihood diversification. These are local and international institutions (e.g. local customs, local and national land tenure systems) and social relations (gender, kinship) as well as economic opportunities (local, national and global), wealth status (rich or poor), modern and traditional financial institutions, technology and information and communication institutions (Ellis and Freeman, 2005; Barret,1997; Barret et al., 2001).

2.3.4 Vulnerability Contexts as Determinant Factors

As many scholars and organizations tried to state, contextual factors that determine livelihoods diversification include: Shocks, trends and seasonality. As Ellis and Freeman (2005) stated, diversification is used by the household as a way of insuring against income shocks. If this is the case, we would expect the amount of diversification to vary across households according to their demand for their particular form of insurance and its cost. The demand for diversification for insurance will depend positively on how risk-averse the household is and on how much income volatility it is subject to, and negatively on the extent to which it has other ways of insuring against or coping with risk, access to be members of local credit associations or receive government benefits, and have more diversified income. There are also seasonal variations in the household's livelihood diversification. As it was stated by Ellis and Freeman (2005), income diversification may reflect the fact that households and individuals are engaged in different activities during different seasons, rather than in different activities within any one particular season.

Furthermore, individual livelihood diversification is also dependent on the seasonal availability of employment and raw materials.

In addition, the finding by Bryceson (1996), on the effect of market imperfection and market liberalization enhanced the risk of sub-Saharan smallholder agriculturalists and forced them to take up an alternative risk aversive and labor allocative activity, known as non-agricultural income diversification. Reductions in asset stocks below key threshold levels may cause households to shift from higher return to lower return livelihood strategies (Ellis and Freeman, 2005). The poor tend to be much more exposed than the rich are to asset risk and thus face a higher probability of being cast below critical thresholds due to adverse shocks (e.g. drought, floods, erosion, war, hurricanes, and diseases).

According to Mohammed (2006), livelihoods diversification is widespread, but there are barriers or opportunities in accessing non-farm activities in rural areas that mostly context dependent i.e. local context and national context; locally, access to credit and affordable transportation and nationally, domestic trade liberalization. He continued and stated that the growth in livelihoods diversification is not the outcome of rising agricultural incomes since it is constrained by limited access to credit and land.

2.4 Debate on Livelihood Diversification

There are two views on the livelihood diversification. The first group is that opposes the idea of livelihoods diversification and the second is that support livelihoods diversification. The first group or those who opposes livelihood diversification argue that diversification on livelihoods can adversely affect an economy by declining "specialization" in the production of a single commodity which can help high yield per

hectare of land; it affects growth in agriculture, facilitates labor migration from agriculture to non-agriculture, and undermines investment in agriculture (Degefa, 2008).These group further justify their position by advocating the linear path in agricultural growth i.e. “evolutionary mixed farming model” from traditional and background to modern agriculture (Degefa, 2005).

The second group is those that support livelihood diversification. They argue for diversified livelihoods, because it is a central mechanism for tackling rural poverty and food insecurity. For instance, Ellis (1998) stated livelihood diversification as “a process by which rural families construct a diverse portfolio of activities and social support capabilities in order to survive and to improve standard of living”.

According to these group and Degefa (2008), livelihood diversification is the result of varieties of factors: seasonality, differential labor markets, risk strategies, coping behavior, credit, market imperfections, inter-temporal savings and investment are the main ones.

2.5 Major Participants of Livelihood Diversification

As livelihood varies from place to place, its actors also vary from place to place and subject to subject, livelihood diversification is a process of branching out of household activities in view of harnessing varied out-puts to reduce household vulnerability. Thus, participants in livelihoods diversification vary from household to household, from society to society, from one age group to the other and from one wealth group to the other. There are many conditions that make variation in household livelihood diversification. For instance, Ellis and Allison (2004) state that there are variations in diversification among

different income groups, in that, the better-off tend to diversify in the form of non-farm business activities (trade, transport, shop keeping, bricking etc), while the poor tend to diversify in the form of casual wage work, especially in the others' farm.

Similarly as it was stated by Mohammad (2006), at intra-household level, younger household members tend to diversify better than older ones. At gender level, women involve in less remunerative activities than their male counter parts. In continental variation, there is increasing level of income diversification activities in rural sub-Saharan Africa than in Asia. Barett et al. (2001); Mohammad (2006). In addition, World Bank (2003) stated that, the rural non-farm sector is an important source of employment of rural women. As this study shows non-farm activities are linked to falling poverty rates for both male and female headed households, but the rate of decline is faster for women than male headed households. Further Bryceson (1999), Ellis and Freeman (2005) stated that the need to pursue agriculture alone shifted to non-agricultural income diversification, the historically disadvantaged household members and women, overturned the male dominance and started to participate, even take the lion share on non-agricultural activities. These authors additionally stated that households earn cash involving in activities such as: selling of prepared snacks, beer, hair plating, especially female headed households, who face major labor constraints due to the relatively small size of their household and lack of male assistance for various tasks.

2.6. Constraints of Livelihood Diversification

There are considerable factors that can be pointed out as the constraints of the livelihoods diversification in the global contexts. For instance, Reardon (1997) stated that unequal access to non-farm opportunities are the main cause for poor farmers in sub-Saharan

African countries not to participate in non-farm activities. Similarly unequal access to land holding and non-farm earnings are the other dominant constraint that cause the land less and the limited land owners to engage in non-farm activities because of their land scarcity. For instance Reardon et al. (1992) 264-296 stated that:

> *Farmers with large landholdings diversify better than farmers with small landholdings and farmers who are near to towns and access to market centers diversify better than those who are far from the market sources and with infrastructural problems. The same is true with wealth differentials, in that richer groups diversify better than the poor households.*

Therefore, limited access to capitals and other social and economic resources are the most important controlling factors in participation in diverse livelihoods. These factors are also working in the case of Ethiopia and this study is aimed at finding out whether these factors are working particularly in rural kebeles of Gelan town.

2.7 Challenges of Livelihood Diversification

As explained in the previous section households engaged in diversification activities due to the various push and pull factors. However households are constrained from diversifying their livelihood due to different reasons. According to the International Food Policy Research Institute IFPRI (2002) various barriers to entry keep some households from diversifying in to different activities. These are:-

A. Lack of liquidity and lack of access to credit. Since non-farm activities needs large amount of investment than off-farm activities the presence of credit constraints may make households not to involve in non-farm activities.

B. Lack information about production methods and markets. Households might not have the information and knowhow of diversification activities other than what they already have even though there are opportunities for it.

C. Lack of education or language skills necessary to acquire needed information. This issue affects ethnic minorities in many countries and may be an issue for female-headed households in some areas.

D. Poor infrastructure which reduces the farm-gate price of crops and raises the farm-gate cost of purchased inputs. This constraint is more binding for households in remote and for crops that are either perishable or have a low value-bulk ratio.

E. Insufficient land or labor to diversify in non-food crops and other activities. Poor farmers are farmers are understandably reluctant to depend on the market for their food, so they often prefer to supplement food production with high-value crop production. This constraint affects areas where the population density is high relative to the agro-ecological potential of the land.

F. Lack of social capital. Social capital refers to the network of friends and business associates with which a person has some level of mutual trust in the agricultural sector.

G. At last Barret et al. (2001) added that land tenure is another issue constraining livelihood diversification in rural areas. He explained that a skilled blacksmith who inherits land spends less time on farming although his comparative advantage lies in smith work. Where land market is operative, he might rent out or sell his land and devote all his time blacksmithing. But in the absence of land markets and in the

presence of labor market he will have less productive farm so his land asset returns nothing to him.

2.8 Research Related Review of Literature

A number of empirical studies across Asia and Africa have established that occupational diversification levels are much higher and more complex than official statistics indicate. However, diversification patterns vary substantially within a country and region so making generalization is very difficult particularly in designing interventions (Deshingkar, 2004).

Evidence from most continents over the last decade suggests that the share of household income from non-farm sources is growing. From a survey non-farm sources account for 40-45% of average rural household income in sub-Saharan Africa and Latin American and 30-40% in south Asia with the majority of this coming from local rural sources rather than through urban migration. Such patterns of diversification promise to transform the structure of rural economies and societies (Start, 2001).

Moreover according to Ellis (2005) a recent survey shows that the reliance on non-farm income sources in sub-Saharan Africa ranges between 30% and 50% but it attain 80% to 90% in southern Africa. In south Asia, on average, roughly 60% of rural household income is derived from non-farm sources.

In rural Ethiopia, where farming is the main source of livelihood, households tend to diversify their income sources due to both "pull" and "push" factors. Rural livelihoods are usually engaged in multiple activities both within agriculture and non-farming sectors. Some households might depend exclusively on crop farming for their livelihoods,

while others on mixed farming. Still others might try to exploit opportunities of rural non-farm activities in densely populated areas (Demissie and Workneh, 2004).

Non-farm activities and off-farm employment can have mixed impacts on agricultural production, reducing labor intensity but increasing farmers' ability to purchase inputs. For example, these activities are associated with less labor-intensive crop production in Tigray but more use of improved seeds. The effect on crop production is insignificant. But household involvement in non-farm activities and off-farm employment increase household incomes (Holden as quoted by Pender et al., 2004). In addition, from the survey made by Woldenhanna and Oskam (2001) in northern Tigray, it was found that households' participation in off-farm activities is driven by the availability of surplus family labor, lower farm size and low farm incomes.

The other evidence in northern shewa zone of the Amhara region is that increased non-farm employment opportunities would substantially increase household incomes but would also reduce investment in soil and water conservation (SWC) measures. These findings show the increase in agricultural production, and reduction of land degradation via income diversification in to non-farm activities (Nkonya as quoted by Pender et al., 2004).

Similarly from the survey made in Wolayta, households that make a living from exclusively agriculture are very few, due to the accessibility of market over half (56%) of the population involves in diversification activities throughout the year. The very common non-farm and off-farm activity in the area are trade and wage labor respectively (Carswell, 2000).

However, Ethiopia follows policies that "trap people in agriculture", since the land belongs to the state and selling is prohibited. There are widespread perceptions in rural Ethiopia that if land is left for more than 3 to 4 months it will be reallocated by the local administration and the same also would occur if individuals were thought to have moved unduly in to non-farm activities (Ellis, 2005).

According to Pender et al. (2004) credit appears to have had positive effect on agricultural commercialization and diversification in Kenya. However in Ethiopia there is less influence of credit in diversification activities. Usually it is associated with greater use of improved seeds and fertilizer which has little effect on crop production and income due to limited profitability of fertilizer. Credit can also affect livestock ownership, a study made in the Amhara region revealed that credit and saving in situations are associated with declining livestock's ownership because of forced livestock sales to repay fertilizer loans.

2.9 Government Policies, Strategies and Programs

Understanding macro level policies, strategies and programs is an important aspect in the livelihood studies. It provides good insight on how they affect the study population and the provision they have to enhance people's livelihood in relation to diversification. This section briefly reviews the "plan for Accelerated and sustained Development to End Poverty (PASDEP);" the Rural Development Policies, strategies and Instruments and the five years development plan of the regional government of oromiya.

According to MOFED (2005), in order to bring sustainable rural livelihood development, emphasis has been given on agricultural development through adequate capacity building, implementation of relevant training programs, introduction of high yielding

technologies supported by agricultural research and extension services, diversification, specialization and commercialization of agricultural production, increasing the quantity and quality of marketable agricultural products with demands in both domestic and international markets expansion of small and medium scale irrigation and water conservation schemes, and ensuring prudent utilization of natural resources.

In addition, PASDEP encourages off-farm and non-farm diversification in the areas of drought-prone regions and degraded areas. As a result, market effectiveness, credit services through micro finance institutions; establishment of marketing cooperatives; provision of trainings for both agricultural and non-agricultural activities are provided.

Similarly, RDPSI emphasize on the promotion of rural-centered development programs. Its main focus is on the development of the agricultural sector by emphasizing on the production of multiple products which is on farm diversification and makes farmers practice it with in limited plots of land. Besides, non-farm-agricultural activity is also one of the nine pillars of the RDPSI, which are important to bring sustainable rural development (FDRE, 2001).

However, the five years development plan of the regional government of Oromiya (2006), in the area of rural development, gives emphasis on the production of crops, livestock, irrigation, and natural resource conservation, development of cooperatives, water resource development and provision of better rural roads, health and educational services. Therefore, the plan has not given due attention with regard to the development of non-farm and off-farm activities as part of rural development activities in the region.

CHAPTER THREE

BACKGROUND OF THE STUDY AREA AND RESEARCH METHODOLOGY

3.1. Background of the Study Area

3.1.1. Establishment, Location, Geographic Setup and Climatic Condition

In this study, the Diriba's (2016) background of the study area has been used. Finfine Special Zone (FSZ) was established in 2008 by Proclamation No. 115/2008, on December 2008. The establishment of FSZ was made possible by re-integrating some of the districts once part of the nearby zones bordering Addis Ababa/Finfine in all geographic directions. Accordingly, three rural districts (Sululta, Mulo and Berak) and two towns (LegeTafo Lege-Dadi and Sendafa-Beke) were acquired from the north Shewa zone. Also, one district (Sebeta-Hawas) and two towns (Sebeta and Burayu) were taken from the west Shewa zone while a district (Welmera) and a town (Holleta) was obtained from the southwest Shewa zone. Another district (Akaki) and two other towns (Gelan and Dukem) were acquired from east Shewa zone. Thus, the Finfine Special Zone is composed of eight towns (i.e. Gelan, Dukem, Lege-Tafo-Lege-Dadi, Sendafa–Beke, Sululta, Holota, Burayu and Sebeta) and six rural woredas/districts/ (i.e. Welmera, Sebeta-Hawas, Akaki, Sululta, Mulo and Berak).

Gelan is located south of Addis Ababa at a distance of 25Km. The total area of Gelan is 7516 hectare. The altitude of Gelan is 2140m above mean sea level (OWWDSE, 2011).

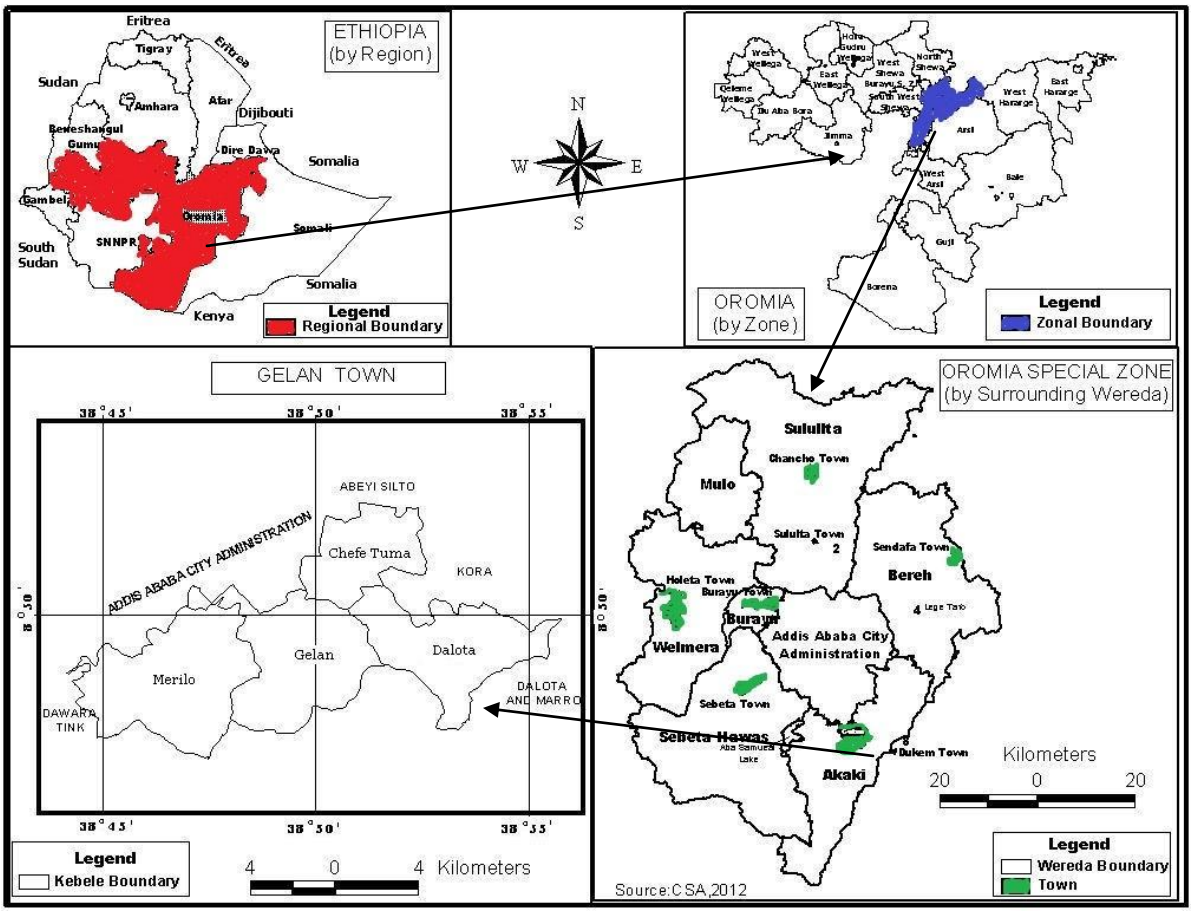
Gelan shares its boundary with Dukem in the east, with Dalotaa and Maroo in the south east, with Kora in the north east, with Abayi Silto in the north, with Addis Ababa in the west and north western and with Dawara tino (Abba Samuel dam) in the south west directions.

Information obtained from NMS (2013) indicates that the mean annual rainfall of Gelan ranges between700mm to 800mm and the average temperature of Gelan is 17^0C (62.6^0F).

The landscape of the study area is more or less plain. But there are also different mountains like Gara bushu, Tulu guracha, Orobo, Wadensoo, Tulu Tikii and Dhakasedeen. There are four small rivers in the study area. These are Dangora, Gogecha, Fincha and Danon.

Although the city of Gelan established in recent years, the local and foreign investment increased from time to time because of its nearest distance to Addis Ababa, infrastructure, favorable climatic conditions, its geographic location on the way of import- export of the country, etc.

Figure 3.1 Geographical location of the study area



3.1.2. Demographic Realities of the Study Area

According to official statistics, Gelan had 32, 689 inhabitants in 2013 (DAO, 2013). One of the impressive features of this town is that it have been undergoing rapid urban population growth over the last couple of years.

The main official explanations for the rapid growth of population in the study town were natural population growth, high rural-urban migration, urban-urban migration and labor in-migration (DAO, 2013). Of the major drivers of rapid urban population growth, according to the same sources, emanated predominantly from high labor in-migration; this was attributed to the rapid expansion of investments in the manufacturing

industries and the accompanying job and employments opportunities created on casual and permanent basis.

According to the Oromia Urban Local Government Proclamation No. 65/2003, Article 6 (1), towns and cities in Oromia are categorized into four levels based on their population count. Cities with more than 90,000 inhabitants are categorized as the 1st level. Cities or towns with residents between 45,000 and 89,000, 10,000 and 44,999 and 2,000 and 9,999 are categorized as the 2nd, 3rdand 4th levels, respectively (Megeleta Oromia, 2003). Based on these classifications, Galen, with respective populations of 32,689, (PAO, 2013) fall within the 3rd category.

The dominant ethnic composition of Gelan is Oromo (81.24%) with the dominant language Afaan Oromo, followed by Amharaa (17.1%) and other nationalities (1.66%) The most common religions are Christianity (96.66%), Muslim (1.83) and other traditional believes (1.03%).

3.2 Methodological Issues

3.2.1 Study Design and Sampling Techniques

The study was used a cross sectional study design to collect both qualitative and quantitative data from primary and secondary sources. Various methods were applied to assess rural livelihood diversification based on education, gender, age and wealth.

Household Survey was conducted with selected sample households in the study area. The questionnaires administered to 90 sample households, which were selected on the basis of stratified random sampling by using simple lottery method without replacing the selected ones with their full consent to cooperate and participate in surveying process. The list of households in each sample kebeles were taken to form a sample frame to select sample

households. Before the selection of sample households, the households of each kebeles were stratified in to three wealth groups; better-off, middle, and poor households which are locally known as Duresaa, Giduu Galessa and Iyessaa respectively. This was to ensure that the household sample drawn per kebele represents the full range of livelihood circumstance to be found in the kebeles. The kebele administrators, development agents and other key informants were the major organs that classified households in to different wealth groups based on the local definition of wealth and determinant assets. In all research sites, the possession of productive assets such as farmland, draft animals, breeding livestock, and perennial crops/plants were the major criteria that kebele key informants used to classify the households in to different Wealth groups. According to the key informants of the kebeles, the households in each wealth group have the following characteristics.

The better off households own more than 12 *kert* farmland, at least three pair of oxen, 5-7 breeding cattle and small ruminants (sheep and goats). Further, they are food secure all year round. A middle category of households are defined by owning 6-12 *kert* farmland, 2 pair of oxen, 2-5 breeding cattle and small ruminants, and they are, except lean seasons, food secure.

The poor are usually resource poor households. Poor households are with less than 6 kert landholding, one pair or no ox, similarly one or nil breeding cattle, sheep and goat; these wealth groups are food insecure for much of the year, and depend on selling labor for survival. According to the key informants the proportion of households in the identified wealth groups estimated to be 19 better-off, 45 middle and 26 poor.

The sample households were then selected randomly from each stratum using a proportional stratified sampling technique. Therefore, a total of 90 household heads were selected for the survey. The proportion of households in respect to their residing kebeles can be seen in the table below.

Table 3.1 Proportion of sample households in each kebele by farmer's wealth group

Kebele name	Sample frame households	Sample households						Total sample
		Iyessaa/Poor		Gidu Galessa/ Middle		Duressaa/ Better-off		
		Freq	%	freq	%	Freq	%	
Chafee Tumaa	318	11	32.3	17	50	6	17.7	34
Tulu Gurachaa	155	5	29.4	7	41.2	5	29.4	17
Mareno	367	10	25.6	21	53.9	8	20.5	39
Total	840	26	28.9	45	50	19	21.1	90

3.2.2 Data Sources and Types

The study employed both primary and secondary sources to generate appropriate data. Primary data were collected from rural households, the woreda administration, rural development and agricultural bureau, and development agents of the study area. On the other hand, secondary data were collected from relevant documents such as different office documents, magazines and bulletins obtained from the woreda as well as rural and agricultural office of the study area. In addition, published and unpublished books, websites and various research books were viewed in the area of livelihood diversification. Besides, important documents from any other stake holders were used as sources of secondary data. Various publications of the Oromia Regional State bureaus and offices such as Agriculture and Rural Development Bureau (ARDB), Bureau of Finance and Economic Development, Oromia Credit and Saving Share Company (OCSSC) and others

were the major sources of information. Besides, relevant theoretical literatures and empirical studies done in the country were reviewed.

3.2.3 Data Collection Instruments

Methodological triangulation was used to generate primary data through open ended and close ended type of survey questionnaires, in depth interview and Focus Group Discussion (FGD).This triangulation were done because of its advantage to increase the reliability of data hence the validity of the study, which otherwise could have been affected by limitations of each single data collection methods.

A. Household Survey Questionnaire

The survey questionnaires used for this study comprise a set of questions for household survey. The survey mainly aimed at providing information on livelihood diversification. It also covered the socio-demographic background variables such as sex, age, literacy status, and marital status. The survey questionnaire was used both close ended and open ended questions.

B. In-depth Interview

The in-depth interview questionnaires were developed with the intentions of getting richer information than what is usually available from surveys. Here, unstructured questions were used so as to give freedom for respondents to express their ideas by their own words without restriction. In the interview instrument the researcher provided questions for the experts of the woreda and kebele official's about the trends of livelihood diversification in the study area for the past ten years. Information on community resources such as roads, public transport, schools, health, access to markets and

services; on livelihood resources, diversity of crops and other livelihood activities were be points of discussion.

C. Focus Group Discussion (FGD)

This method of data collection was arranged with the purpose of supporting the data obtained from the household survey. Two groups in each kebele, each group consisting of 6 individuals (4 male household heads and 2 female household heads) were participating in the discussion. The composition of focus groups in each kebele is one group from poor wealth category and the other from better-off households, and the selection was made purposively. For FGDs, discussion guides were developed in advance.

3.2.4 Methods of Data Analysis

The study used both qualitative and quantitative data analysis to meet its objectives. Qualitative data from open ended survey questionnaire, Focus Group Discussion (FGD) and in depth interview were analyzed using description, narration as well as crosschecking their validity and reliability with the quantitative data set. According to (Creswell, 2009) qualitative data analysis is conducted concurrently with gathering data, making interpretation and writing reports. After collecting the necessary data, the researcher categorized, combined, synthesized and thereby analyzed the collected data. Before the actual analysis of the data, the collected data was stored and categorized in accordance with its source and type. Quantitative data analysis was made using SPSS (Statistical Package for Social Science) software from the field in survey questionnaires.

CHAPTER FOUR

LIVELIHOOD RESOURCES OF THE SAMPLE HOUSEHOLDS

4.1. Description of the Survey Data

The survey covered 90 households in 3 kebeles. The data is divided in to different sections including demographic characteristics, social services, farm/agricultural activities (crop production, animal husbandry and forestry), non-farm activities (trade, handicraft and others), off-farm employment (wage labor), income and some related supplementary issues.

4.2. Demographic and Socio-Economic Characteristics of the Sample Population

Understanding the dynamics of social differentiation and the challenges of wealth at the household level is an important aspect of livelihood studies. The demographic and socio-economic characteristics of the households are important in affecting the livelihood of the households and are the major reason in choosing livelihood strategies in order to bring sustainability (Ellis, 2005).

In addition, the determinants of wealth and stratification of wealth groups vary from one area to the other. Various studies identify land, oxen and other livestock, as well as access to those resources. Therefore, variability in access to these resources is considered as explanation to differentiations in rural societies (Chapman and Woldekiros, 1999).

Table 4.1 Demographic characteristics of the sample households

Household sex	**Frequency**	**%**
Male	78	86.7
Female	12	13.3
Total	90	100.0
Household age	**Frequency**	**%**
20-35	14	15.5
36-40	15	16.8
41-55	40	44.4
56-70	19	21.1
71-85	2	2.2
Total	90	100
Household family size	**Frequency**	**%**
2-5	45	50
6-10	41	45.6
11-13	4	4.4
Total	90	100
Households place of birth	**Frequency**	**%**
Rural	84	93.3
Small rural towns	6	6.7
Total	90	100

Source: Household survey (2016)

As shown in Table 4.1 out of the total households 86.7% were headed by males while the rest 13.3% were headed by females. Most of the heads (50%) were found to have a family size of 2-5 people.45.6% of the heads were found to have 6-10 family size and the remaining 4.4% of the households had a family size of 11-13. Moreover most of the heads (61.2%) were between the age of 36 and 55. While (23.3%) were above 55 years of age and the remaining 15.5% of the heads were between the age of 20 and 35.

The place of birth for the majority of the households (93.3%) was rural and for the remaining 6.7% were small rural towns.

Table 4.2 Household dependents in the study area

Number of household dependents	Household dependents (years)				Total	
	0-14		>65			
	No	%	No	%	No	%
0	18	20	60	66.7	78	43.3
1	15	16.7	18	20	33	18.3
2	34	37.8	12	13.3	46	25.6
3	13	14.4	0	0	13	7.2
4	7	7.8	0	0	7	3.9
5	3	3.3	0	0	3	1.7
Total	90	100	90	100	180	100

Source: Household survey (2016)

As shown in Table 4.2, the majority (66.7%) of the households were found to be without dependents over the age of 64. Households with 1 dependent over the age of 64 were 20%.While the remaining 13.3% of the households were with 2 dependents above the age of 64.

Most of the households (37.8%) were with 2 dependents under the age of 14. 16.7% of them were with 1 dependent under the age of 14. 14.4% of them were with 3 dependents under the age of 14. 7.8% of them were found with 4 dependents under the age of 14. 3.3% of the households were with 5 dependents under the age of 14. While the remaining 20% of the households were found without dependents under the age of 14. The average dependency ratio per household head in rural kebeles around Gelan town is 2.3.

Many empirical studies have shown that the sex and age of the household heads do have influences on household's livelihood strategies in general and on livelihood diversification in particular. As revealed by body of literature, female-headed households and women in general have poor access to and control over resources and are less likely to diversify high return activities than their counterparts. Several sources also showed that the age of the household is also considered as one factor in affecting the entrepreneurial ability of people and thus their pattern of livelihood activities.

Table 4.3 Demographic characteristics of the surveyed households in each kebele

Houshold characteristics	**Chafee Tumaa**		**Tulu Gurachaa**		**Merenoo**		**Total**	
Sex	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
Male	29	85.2	13	76.4	36	92.3	78	86.7
Female	5	17.8	4	23.6	3	7.7	12	13.3
Total	34	100	17	100	39	100	90	100
Age	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
20-35	4	11.8	3	17.7	7	18	14	15.6
36-40	7	20.6	4	23.5	4	10.2	15	16.7
41-55	17	50	6	35.2	17	43.6	40	44.4
56-70	6	17.6	3	17.7	10	25.6	19	21.1
71-85	0	0	1	5.9	1	2.6	2	2.2
Total	34	100	17	100	39	100	90	100

As indicated in Table 4.3, out of the total 90 households surveyed, 78(86.7%) were male headed households, and 12(13.3%) were female headed households. When the sample households were disaggregated by kebeles, the percentage distribution of male headed households in Chafee Tumaa, Tulu Guracha and Marenoo kebeles were 85.2%, 76.4% and 92.3% respectively. The rest 17.8%, 23.6% and 7.7% of the households of the respective kebeles were female-headed households. These figures indicate that female headed households in Tulu Guracha were greater than the rest two kebeles.

With regard to age the majority of the household heads were in working age group. The mean age of the respondents was 46.7 years of old (maximum 72 years and the minimum 23 years). From the respondents, 15.6% were between 20 and 35 years, 16.7% were between 36 and 40 years, 44.4% were between 41 and 55 years, 21.1% were between 56 and 70 years and the remaining 2.2% were between 71-85 years of age

Table 4.4 Socio-economic characteristics of the households

No. Household education	**Frequency**	**%**
Illiterate	51	56.7
Literate	39	43.3
Total	90	100.0
Distance of primary school	**Frequency**	**%**
<30 minute	12	13.3
30 minute-1hr	54	60.0
1hr-1:30hr	23	25.6
1:30hr-2hr	1	1.1
Total	90	100.0
Distance of health service	**Frequency**	**%**
<30 minute	5	5.5
30min-1hr	24	26.7
1hr-2hr	61	67.8
Total	90	100.0
Distance of market place	**Frequency**	**%**
30min-1hr	14	15.6
1hr-1:30hr	38	42.2
1:30hr-2hr	38	42.2
Total	90	100.0
Households livelihood activities	**Frequency**	**%**
Agriculture	57	63.3
Off-farm	3	3.3
Non-farm	5	5.6
Agriculture and Non-farm	25	27.8
Total	90	100.0
Households farm size	**Frequency**	**%**
<0.5 ha	2	2.2
0.5ha-1ha	12	13.3
1ha-1.5ha	23	25.6
1.5ha-2ha	31	34.5
2ha-3.5ha	22	24.4
Total	90	100.0

Source: Household survey

As shown in Table 4.4 the majority of sample households in the study area (56.7%) were illiterate whereas the remaining (43.3%) were literates (the literacy contains those who received literacy certificate and above). Out of those who were literates (35.9%) of the households were found to be in the range of grade 5 to 8. (25.7%) were found to be in the

range of grade 9 to 10. (15.3%) and (12.9%) were with literacy campaign certificate and grade 1 to 4 respectively and the remaining (10.2%) of the total respondents were found with other educational background. The education status of households' heads is an important variable that could determine the livelihood strategies of households. It is, therefore, good to look at the education profile of the households so as to see its implications for livelihood diversification. Information from the profile of Gelan shows that in Gelan there are 8 kindergarten, 4 first cycle (1-4), 4 second cycle (5-8) and 2 high schools and 1 preparatory school.

All the respondents have access to the nearest school. Out of them the majority (60%) reported that it would take between 30 minute-1hr to reach the nearest primary school while 13.3% and 25.6% of the respondents reported less than 30 minute and between 1hr-1:30hr respectively. And the remaining 1.1% of respondents reported that it would take 1:30hr-2hr.

Of those households 67.8% of them reported that it would take 1hr-2hr to reach to the nearest health center and the rest 5.5% and 26.7% reported less than 30 minute and 30 minute to 1hr respectively.

Agriculture is the main source of income for the households in the study area. As shown in Table 4.4 those who practiced only agriculture was found to be 63.3% of the sample households, while, those who practiced only off-farm, only non-farm and those combined agriculture with non-farm accounted for 3.3%, 5.6% and 27.8% , respectively.

The respondents' household economic status was measured in terms of their household farm size. Most of the households (34.5%) were with farm size of 1.5ha-2ha and the rest

2.2%, 13.3%, 25.6% and 24.4% of the household are with <0.5ha, 0.5-1ha, 1-1.5ha and 2ha-3.5ha respectively.

Availability of market for the households' activity is very curtail. With regards to market place it was reported that 42.2% of them reported that it would take 1:30-2hr to reach the nearest market place and the rest 15.6% and 42.2% reported that it would take 30 minute-1hr and 1hr - 1:30hr respectively.

4.3. Household Livelihood Resources

Household need to have access to both tangible and intangible assets to livelihood resources that allow them to meet their needs and improve their situation. The sustainable livelihood framework enables a disaggregated understanding of the resources available to, and the strategies pursued by different individuals, households and social groups within a particular context (Helmore and Naresh, 2001:85). In this regard the type of assets that was owned by individual households and the different factors that affect the livelihood strategy perused in the study area were discussed.

4.3.1. Natural Capital: Land

Land is an important economic resource in the study area and almost all households depends on land for their livelihood. Therefore the size of land owned and farmed by the household is therefore considered to be an important factor determining the result of agricultural production and the relative social and economic position of the households.

Table 4.5 Land accessing mechanisms

Accessibility of land	Frequency	%
Own land	63	70.0
Employed on other land	2	2.2
Rented from land owner	19	21.1
Share-cropping	6	6.7
Total	90	100.0

Source: Household survey

The above table shows that the majority of households (70%) in the study area are having their own land. 21.1% of the households rented farm land from land owners in the area. The remaining 6.7% and 2.2% of the households share-cropping and employed on others land respectively. However as shown in the previous Table 4.4, the household survey revealed that average farm size holding of the sample households was found to be 1.7 hectare whereas the majority of the households were found to be with farm size below the average. From the discussion made with the woreda officials the average farm size reported by the woreda is 2.5 hectar which is incompatible from the average farm size of the sample households, thus this might include the grazing land and other non farmed land of the area and can also be the fragmentation of farmland holding due to the increase of households' size and the farming system of the community is traditional that needs multi directional effort for modernization. Out of the total area of the land 65% (4885.4 hectare) is under agriculture supporting nearly about 1008 households. 80 hectare of the total area coverage of the study area is under irrigation.

In line with this, from the household survey it was found that the size of farm land had been fluctuating in the study area for the past ten years due to various reasons.

Table 4.6 Trends in land holding in the past ten years

Trend	Frequency	%
Decreased	25	27.8
Remained Same	38	42.2
Increased	27	30.0
Total	90	100

Source: Household survey (2016)

With regard to the decrease in the size of farm land various reasons were given in the study area. As shown in Table 4.7 the major reason for the decrease of farmland was found to be sharing among families which accounts for 92% of the households. The other reason was land degradation consisting of 8% of the same population respectively.

Table 4.7 Households' reason for the decrease of farm land

Reasons	Frequency	%
Sharing among families	23	92
Land degradation	2	8.0
Total	25	100

Source: Household survey (2016)

The above table revealed that population pressure was the major factor for the decreased in farm size holding in the study area. In contrast the reason for those with land increase was due to rent from farmers who own large farm land, from those who cannot farm due to old age and gift from family.

4.3.2 Human Capital: Education, Skill and Health

As defined by Carney (1998) human capital refers to the skills and knowledge set, good health and the labor capacity important for the household to pursue different livelihood strategies. Hence, attempts were made to understand the level of literacy among the households' heads and other dependents to identify those activities that require specific skills and knowledge to involve in to some other livelihood activities. This was assumed to provide some insights about village level activities that some households are engaged in to supplement their agricultural livelihood.

Household educational level

As shown from table 4.8 the majority of sample households in the study area (56.7%) were illiterate whereas the remaining 43.3% were literates.

Table 4.8 Household educational level

Respondent educational level	Frequency	%
Illiterate	51	56.7
Literate	39	43.3
Total	90	100.0

Source: Household survey (2016)

Household Skill level

Even though there is no much involvement of non and off farm activities in the study area, the study investigated household level engagements like handicraft, carpentry, blacksmith, petty trade, wage labor and other activities that require certain skills and experiences. The way household level skill related with diversification activities will be discussed in detail in chapter 5.

Households access to health service

As Carney (1998) explained, the physical wellbeing of households is an important productive resource for different livelihood activities. With regard to this, 100% of the households reported the availability of health service to the nearest area.

Health is the other factor that determines human capital. It is generally true that the more you invest in health and education, the more you have productive labor. Information from the profile of Gelan shows that there are about 1 clinic and 4 health posts.

Table 4.9 shows that for 5.5% of the households it would take only less than 30 minute to reach to the nearest health service. For the rest 26.7% and 67.8% it would take 30 minute-1 hr and 1:30hr-2hr respectively.

Table 4.9 Households' distance to the nearest health service

Time taken to reach the nearest health service	Frequency	%
<30 minute	5	5.5
30 minute-1 hr	24	26.7
1hr -2hr	61	67.8
Total	90	100.0

Source: household survey (2016)

Hence the proximity of health service in the area shows that the majority of sample households had not easy access to health service in the study area.

4.3.3 Financial Capital: Credit Service

Financial capital is any economic resource measured in terms of money used by entrepreneurs and business to buy what they need to take their products or to provide their services to the sector of the economy upon which their operation is based, i.e. retail, corporate, investment banking, etc.

Formal Credit Service

One of the factors that determine the amount of financial capital that individual households own is the availability of formal credit service (Woldenhana and Oskam, 2001, 332). However formal rural credit service in Ethiopia is generally underdeveloped and mainly focusing on supplying loans for agricultural inputs delivery (Mulat, 2000).

In this regard 100% of the households in the study area responded for the availability of formal credit institution in the area. The only known microfinance institution in the area

is known as Oromiya Credit, and Saving Share Company(OCSSC) which is government and private owned institution. However 27.8% of the sample households did not benefit from the service while the rest 72.2% benefited. Respondents identified various reasons for not benefiting from credit service in the study area. As shown in Table 4.10 the reasons for 48% of those who did not benefit from credit service was that the interest is high, for 16% and for 8% the reason was not enough money and the time of repayment is very short respectively. The reason for the remaining 28% of those who were not benefited from credit service was both the time of repayment is short and the interest is high.

Table 4.10 Respondents' reason for not using credit services

Reasons	Frequency	%
Not enough money	4	16.0
The time of repayment is short	2	8.0
The interest is high	12	48.0
The time of repayment is short and the interest is high	7	28.0
Total	25	100.0

Source: household survey

Owing to the variation in resource base, financial positions vary among differences households and accordingly their need for credit services also different. From the survey most of the households who had interest in credit service were those with small or no farm land with low income status than those relatively with better farm size holding and income status.

Households reported that within the last twelve months all the sample households who received credit had access to formal credit services.

Remittance

Remittance was found to be insignificant for the sample households in the study area. From the household survey only 5% of the households reported to be the beneficiaries of remittance. The rest were found to be non beneficiaries from any kinds of money transfer in the form of gift or any other way.

4.3.4 Physical Capital: Roads, Transportation, Market, Schools and Clinics

According to the district rural road office, there is 10.3km asphalt road which cross Gelan in to two on the way from Addis Ababa to different cities located on the eastern parts of the country, 12km dry weather road and 25km of all weather roads, which are paved by the community for social services and the new high way road also passes through Gelan having distance of 10km.

From the survey regarding the road type, 82.2% of the household reported that their road type to reach to the nearest main road was Gravel dry weather road. While the rest 15.6% and 2.2% reported to be gravel all weather roads and asphalted respectively. In addition, the survey revealed that the majority (77.8%) of the households had access to transportation with affordable price to the nearest towns during winter season.

Moreover, almost all the sample households reported the problem of availability of market to their products. So for the majorities (42.2%) it would take 2 hour to reach to

the nearest market place. while for 37.8% it would take 1hr and 30 minute and for the remaining 15.6% and 4.4% it would take 1hr and 1:20 respectively.

With regard to availability of education and health service, as discussed so far almost all the sample households had no problem with access to both services in the study area.

4.3.5 Social Capital: Networks, Social Relation, Affiliation and Associations

Social capital consists of networks, social relations up on which people draw when pursuing different livelihood strategies that requires coordinated actions.

One of the social capitals in the study area is *Edir*. It is an association based on funeral relationship. Its purpose is to handle burial ceremonies and assisting with related expenses. Member of the association contribute money every month and also provide with food and drinks for the gusts at the ceremony.

From the discussion made with households it was found that almost all the sample households are members to their association. Similarly the rural communities also support each other in times of wedding ceremonies.

The other social capital is *Ofalla*. It is the other type of social relation that is mainly for economic activities. The exchange of work groups locally known as *Ofalla*, refers to the mobilization of labor among neighbors and friends to work on each other's farm when needed. This is important source of labor especially for those who have no physical and human labor such as the poor, aged and female households.

Therefore, from the focus group discussion *Ofalla* was found to be much helpful especially for female headed households since they have the responsibilities of the house

works and child care. It also encouraged them to involve in non-farm activities since they are helped on their farm.

To summarize this chapter, the type of capital the individual households possessed determines households to pursue different livelihood activities. In this regard the different types of assets that household's posses (i.e. capitals) were discussed. Therefore, this chapter reveled that households have differentiated possession and access to resources that may affect their path in diversifying their livelihood.

In the next chapter, how this differential possession of assets affect livelihood diversification and how livelihood diversification in turn affect the type of assets that households possessed will be shown in detail.

CHAPTER FIVE

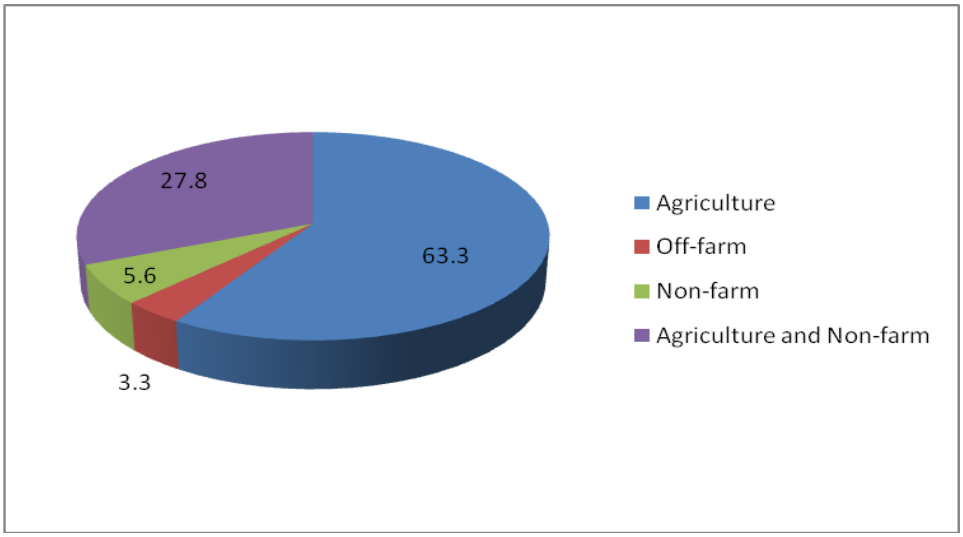
SAMPLE HOUSEHOLDS' LIVELIHOOD STRATEGIES AND THE CHALLENGES OF ITS DIVERSIFICATION

5.1 Description of Household Livelihood Strategies

Livelihood diversification is a way of branching out from traditional farming activities and taking on new farm, off-farm and non-farm activities (Bryceson 1999). Likewise households in the study area pursue livelihood strategy portfolio in their day to day struggle to earn their living and to fulfill their aspirations for improved and better livelihood outcomes.

As shown in Figure 5.1, the majority of the sample households (63.3%) in the study area depend on agriculture as their major sources of livelihood. In addition to agriculture 27.8% of the households are involved in both agriculture and non-farm. The remaining 5.6% and 3.3% of the households are depended on only non-farm and off-farm respectively.

Figure 5.1 Main source of income



5.1.1 Agriculture

Agriculture is the sector given attention in policy documents and in practice on the ground as it is expected to be the source of primary surplus to fuel the economic growth. The livelihoods of the surveyed households were mainly dependent on agricultural activities. The majority of the households in study kebeles undertook mixed farming activities, involving both crop production and animal husbandry .

Crop production is the major agricultural activity undertaken in the study area. Depending on the rank that key informants and focus groups set for different income generating activities based on their share of income contribution for households, crop production was the major source of income (food and cash) for most households.

Table 5.1 Average total production per household per year/ annual

Kebeles	Crops (Quintal)					
	Teff	Wheat	Bean	Maize	Chickpea	Lentil
Chefee Tuma	9.1	11.4	0.9	0.6	14.6	1.0
Tulu Guracha	6.8	9.3	1.1	1.1	13	1.4
Mernoo	7	14	0.7	0.5	14.2	0.8
Average	7.6	11.5	0.9	0.7	13.9	1.0

Source: Household survey (2008 E.C)

As shown in Table 5.1 the average production per household head in rural kebeles of Gelan town is 35.6 quintal.

In order to allow the comparisons and given the similarity of the feed base, it is useful to convert animals of different sizes and species into common reference units. For tropical animal production, the Tropical Livestock Unit (TLU) is commonly taken to be an animal of 250 kg live weight (Jahnke, 1982).

Table 5.2 Livestock size in Chafee Tumaa, Tulu Guracha and Mareno in TLU

Kebele	TLU[1] average gain
Chafee Tumaa	9.9
Tulu Guracha	8.1
Mareno	5.7

Source: Gelan woreda document (2016)

Livestock are assets that households quickly change into cash when they are in need of cash. The average livestock size of Gelan and surrounding area per household is 7.9 TLU. The involvement of households in this activity was determined on households' possession of TLU, which is calculated by weighting animals in terms of Tropical Livestock Units (TLUs).

Agriculture in the study area is dominated by rain-fed agricultural production through traditional system. It includes crop production (87.8%), mixed farming (7.8%), crop production and animal husbandry (2.2%), crop production and mixed farming (2.2%).

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[1]Coefficients of tropical livestock unit for ox/bull=1.1, cow=0.8, heifer=0.5, calve=0.2, sheep=0.1, goat=0.1, donkey=0.5, horse=0.8, mule=0.7, (Workneh, 2006)

From the survey it was known that the majorities of the households were involved in agricultural activities. However, majorities are dissatisfied with it as the sector is full of problems and uncertainties.

Table 5.3 shows that climate (rainfall fluctuation) (35.6%), crop diseases (8.9%), lack of better seeds and fertilizer (4.4%) and other (51.1%), were the major factors affecting agricultural production in the study area.

Table5.3 Factors affecting households' crop production

Factors	**Frequency**	**%**
Rain fall variability	32	35.6
Lack of better seeds and fertilizers	4	4.4
Crop diseases	8	8.9
Other	46	51.1
Total	90	100.0

Source: Household survey

On the above table factors which considered as other indicates that the occurrence of more than one factor. i.e. Rainfall variability and crop diseases(42.2%), Rain fall variability, crop diseases and Rudimentary farming method (4.4%), and Rain fall variability and Rudimentary farming method(4.4%).

Climate and crop diseases are one of the major factors affecting farm production in the study area. According to the information obtained from the focus group discussion in Chafee Tumaa, households who live in *weynadega* faced water logging problem on their farm land that destroys the crop, this usually occurs during the months of July, August, and September and when there is too much rain fail.

A crop disease was also the other factor affecting households' crop production in the study area. The known crop diseases are *wagii* (the drying of crop before harvest) and root cutter or *kurtituu,* which was a great problem of crop production in study area.

During the focus group discussion a farmer has made the following remarks.

> *I have two hectares of land, but I couldn't get enough products even though I spent much of my efforts on the farm. This was so due to water logging and crop diseases like wagi and cut worms (kurtituu). The chemicals for the disease are not provided on time and are always given after we have had the damage therefore I couldn't get enough.*

Provision of agricultural inputs

Households reported that they have problems with the provision of agricultural inputs such as fertilizer, improved seeds and pesticides. Since the inputs are very expensive it is very difficult for the households to afford it. The government facilitates different households to buy it directly. From a focus group discussion a farmer stated the following, which I think is worth to quote directly.

> *'I don't use agricultural inputs even if I want because I wouldn't risk my assets which I may use with the family during summer time.'*

Size of farmland

From the household survey it was found that the average farm holding of the sample households was 1.7 hectares. Participants of the focus group discussion revealed that shortage of farmland was one of the major problems which caused low agricultural productivity in the study area. As it was revealed in Table 4.6, 92% of respondents said sharing farm land with families was the major cause for the diminishing of farm land

holding among the individual households. Supporting this, an old farmer said the following.

> *I used to have large hectares of farm land and food productivity. But now I am left with less than a hectare. The reason is, I have seven children and when each one of them married, they took portion of the land to support their own family. Hence, I am left with less than a hectare with two of my children and my wife. Now I get less production and it's just like hand to mouth living condition.*

Therefore the above discussion showed that population pressure was a problem, which resulted in the reduction of farm size holding and less production in the study area. This would support the theory of Malthus who identified the decrease in food availability as a result of population growth due to resource sharing. (Malthus as quoted in Brown et al, 1998:5)

As discussed in Table 4.5, 21.1% of the households used rented land since they have no or enough farmland for agriculture. However from the focus group discussion, as the rest of the decrease of farm land holding the price of rent for farm land become very expensive. A farmer who was very upset with this situation stated that:

> *I don't have enough own land. I rented a small land from my neighbor. But now the rent is getting higher and higher so at the end of the day I will have nothing left from the farm to feed my family. Government must do something for people like us.*

Rudimentary farming method

From the household survey it was found that the majorities of the households (93.3%) are using traditional tools, oxen and hand tools for cultivating their land and also depend on rainfall agriculture. In addition, based on the information

from household survey the average annual farm income of the households was found to be 42,487.5 birr.

The above section revealed that the majorities of the households in the study area depend on agriculture as their major source of livelihood. However from the previous discussion agricultural sector has faced so many problems as a result it is less productive, unsatisfactory and become the major push factor for the households of Gelan and surrounding area to involve in to other income generating livelihood activities to achieve additional income.

The average income of the sample households from agricultural production was found to be 42,487.5 birr. Moreover, based on information from household survey households who practiced non-farm and off-farm activities in addition to agriculture got additional annual average income of 11,492 birr and 30,000 birr respectively.

5.1.2 Non-farm and Off-farm Activities

According to Figure 5.1, 27.8% of the respondents reported to be involved in agriculture and non-farm activities. The remaining 5.6% and 3.3% of the households are involved in non-farm and off-farm diversification activities in addition to agriculture (63.3%) respectively.

Some of the non-farm activities in the study area were petty trade, involvement in different kinds of handicrafts such as carpentry, remittance, traditional drink and wage labor. The off-farm employment opportunity in the study area mainly refers to agricultural wage labor on someone else's farm. The researcher has tried to make trend analysis in the study area. However, there were no as such clearly registered

diversification activities in the woreda office. Therefore, the researcher focused on the current sample households involving in diversification activities and its challenges.

Table 5.4 Households' non-farm and off-farm activities

Non-farm and off-farm activities	**Frequency**	**%**
Trade	18	54.5
Specializing in different handicrafts	6	18.2
Wage labor	3	9.1
Trade and specializing in different handicrafts	5	15.2
Wage labor and specializing in different handicrafts	1	3.0
Total	33	100.0

Source: Household survey (2016)

In addition, females in the study area were involved in selling traditional alcohol such as *Katikala* and *Farsoo*. Others are engaged in trading such as oil, sugar, salt, soap and other things for the rural people which are brought from Akaki town, Gelan town and Dukem town. A female farmer stated that:

> *I started to involve in trade with the money I have saved before from income I generated from the teff I produced on rented land. Now I have good income and I am paying for school for my two children, one of them is in nursing college and the other in grade 11. I left the agricultural activity because of the expensiveness of land for rent.*

Therefore the above discussion revealed that households realized the advantage of diversification activities as their livelihood strategy to deal with the various problems of agriculture and to pursue sustainable livelihood.

In contrary, involvement in agricultural wage employment is generally low at the study area. As shown in figure 5.1 the income from off-farm activities was found to be relatively low as compared with the income from non-farm activities as a result only those with low economic status are involved in the activities. From the discussion made with key informants, associated the lack of agricultural labor employment opportunities with the decreasing number of better-off farmers at present is much lower than the previous. In relation to this, a farmer who does not have his own land stated that:

> *Rather than working on someone else's land I prefer to help my father on his small farm since I have nothing to gain.*

Therefore households have tried to diversify in various income generating activities in order to improve their livelihoods in study area. However, the majorities are constrained from involving in the activities due to various factors. Therefore the next section observed the various factors affecting households' livelihood diversification in the study area.

5.2 Challenges of Livelihood Diversification

As Table 5.5 shows, no access to market and no knowledge about non-farm activities were found to be the major factors discouraging the sample households from involving in diversification activities which consists 54.6% and 15.2% of the households in the study area respectively. Location may affect households' participation in various non-farm activities. It is associated with market access. Market access and market information is also determined by factors such as distance to markets, access to transport infrastructure and telecommunications.

Table 5.5 Factors discouraging households from diversification activities

Factors	Frequency	%
No access to market	18	54.6
No knowledge about non-farm activities	4	12.2
No access to credit	3	9.0
Fear of losing land if they involve in activities outside agriculture	3	9.0
No access to market and no knowledge about non-farm activities	5	15.2
Total	33	100.0

As discussed in the previous chapter households endowed with various resources. i.e human capital, natural capital, physical capital and financial capital. However the various resources affect households' involvement in livelihood diversification in the study area.

5.2.1 Relationship between Livelihoods Diversification and Various Types of Assets

5.2.1.1 Human Capital

5.2.1.1.1 Household Educational Level

According to Barret et al. (2001) households endowed with education, financial capital or market access necessary to take advantage of relatively high opportunities in the non-farm economy are able to take better advantage of policy reforms or to recover from aggregate shocks.

As Table 5.6 shows from the total sample households who were diversified in non-farm and off-farm activities 72.7% were literates and the rest 27.3% were illiterates.

Table 5.6 Household's diversification activities by education

Respondent educational level	Non- farm and off -farm activities						Total	
	Trade		Wage labor		Specializing in different kinds of handicrafts			
	Fre	%	Fre	%	Fre	%	Fre	%
Illiterate	5	15.1	1	3	3	9.1	9	27.3
Literate	13	39.4	3	9.1	8	24.2	24	72.7
Total	18	54.5	4	12.1	11	33.3	33	100.0

Source: Household survey

The above table revealed that the literates were more involved in non-farm and off-farm activities than that of the illiterates in the study area. This explaine that education had played a great role in the involvement of households in diversification activities in the study area. However, even though the majority of the sample households had access to education, the information obtained from the woreda office revealed that education coverage of the study area was found to be in sufficient for the district.

Besides formal education, the focus group discussions revealed that lack of awareness, trainings and information of households on various income generating activities were found to be the other factor that lagged the involvement of households in livelihood diversification (see Table 5.7)

From focus group discussion a female farmer responded that:

> *I don't have the know-how to involve in any other activities besides agriculture, though the income from it is not satisfactory. So I don't want to take the risk of involving in any other activities which I am not good at.*

Therefore, the above statement explained that in addition to the availability of formal education, households need to have awareness and information on various diversification activities.

With regard to gender, Table 5.7 shows, from the total sample households diversified in the study area 81.9 % were male headed households while 18.1 % were female headed. This shows that female households have better share in relation to their total number compared to male households.

Table 5.7 Households' non-farm and off-farm activities by sex

Sex	Non- farm and off -farm activities						Total	
	Trade		Wage labor		Specializing in different kinds of handicrafts			
	Fre	%	Fre	%	Fre	%	Fre	%
Male	16	48.4	3	9.1	8	24.2	27	81.9
Female	2	6	1	3	3	9.1	6	18.1
Total	18	54.5	4	12.1	11	33.4	33	100.0

Source: Household survey (2016)

From the survey, lack of knowledge was the major constraint for the majority of female heads not to involve in diversification activities whereas engagements in child care and household works were secondary factors.

Table 5.7 also shows that male headed households were more involved in trade and wage labor while more female heads involved in different handicraft works. The focus group discussion revealed that females were found to be more involved in making various kinds of potteries, decorations and traditional clothes. In the case of male headed households, those relatively with low economic status and don't have the capacity to rent others farm land mostly were found to be employed as a wage labors on others farm. On the other case households who possessed enough farm animals were usually paid to cultivate others farm land with their oxen. Moreover in the case of trade the male households had the chance of traveling to different towns, than female heads that were busy to their housework, to bring various goods for the purpose of trading.

Therefore, sex of the household head affects the probability of involvement in various diversification activities in the study area.

5.2.1.1.2 Household Size

As discussed in the previous Table 4.1 the majorities (50%) of the households in the study area were with family size of 2 to 5 and the remaining 45.6 % and 4.4 % of the households were with family size of 6-10 and 11-13 respectively. The average household size of the sample population was found to be 6.3 that exceed the national rural average household size of 5.15 (CSA, 2006).This revealed that households in the study area were found to be large in size.

According to a study made by Kummar et al. (2002) in India where there is dependency on small farm land, large household size act as push factor to involve in to diversification activities since there are many mouth to feed. Similarly a study made by Block and Webb (2001) on Ethiopia, more household size have more hands available for income earning by involving in various income generating activities.

Form the focus group discussion, large household size led to the involvement in various diversification activities due to the availability of more labor in the household. Moreover, those who had no children and old in age were found to be economically low since they do not have enough labor to involve in various activities and increase sources of income. A female farmer stated that:

> *We are only two in the house. My husband and I don't have any children. We used to farm our land but now we don't as you see me I am very old and sick person and so does my husband. So we depend on the income we get from renting our farm land.*

On the contrary another male farmer state that:

> *We are eight in the house. My husband and my two elder sons are working on the farm. The other son is working in the kebele office as a guard and the other drives a car in the town and my two daughters are helping me in selling "Katikala" so we are doing fine.*

Therefore large households' size was found to be one of the push factors for the households of Gelan and surrounding area to involve in diversification activities.

5.2.1.2. Natural Capital

As discussed in the previous Table 4.4 most of the household (34.5%) were with farm size of 1.5-2 hectare of farm land and those with more than 2 hectares were found to be

24.4%. 25.6 %, 13.5% and 2.2% of the households were with farm size of 1-1.5 ha, 0.5-1 ha and < 0.5 ha respectively. However, the majority of sample households' was found to be with farm size below the average.

Results from cross tabulation (Table 5.8) revealed the effect of farm size on involvement of households in various diversification activities.

Table 5.8 Households' involvement on non-farm and off-farm activities by farm size

Land size	**Non- farm and off -farm activities**						**Total**	
	Trade		**Wage labor**		**Specializing in different kinds of handicrafts**			
	Fre	**%**	**Fre**	**%**	**Fre**	**%**	**Fre**	**%**
<0.5 ha			2	6	3	9	5	15.1
0.5he-1 ha	3	9	2	6	4	12.1	9	27.2
1 he-1.5 ha	6	18.1			2	6	8	24.2
1.5 he-2 ha	4	12.1			2	6	6	18.1
More	5	15.1					5	15.1
Total	18	54.5	4	12.1	11	33.3	33	100.0

Source: household survey (2016)

As shown in the above table, households' involvement in diversification activities generally increased for those with relatively larger size. In particular, household's involvement in trade showed significant increase with larger farm size. From the key informant interview, those households with larger farm size had the financial capacity, in comparison with those with relatively small farm size to invest in non-farm activities especially in trade in the study area. In contrary, involvement in wage labor decreased with the increase of households' farm size; this was because those households involved in wage labor were found to be with low economic status and have no or little farm land.

However, household's involvement in various handicrafts did not show significant relation with the change in households' farm size. This may be due to the less number of households involved in this activity.

Similarly, the finding stated by Woldehanna and Oskam (2001) shows that farmers with more farm output have the capacity to join non-farm activities, with the availability to own non-farm equipments.

Ellis (2005) explained that different opportunities and pressures make households to diversify their livelihood activities. Hence even though those households with larger farm land have the opportunities to diversify more than those with smaller farm land, small farm holders in the study area straggle to diversify their activities in order to improve their livelihood. A farmer stated that:

> *Since I have a very small farm land and problem of water shortage I don't get enough products, I tried to involve in some other income generating activities like handicrafts to compensate the farm income but I don't have the skill. I also tried to involve in trading sugar, salt, oil and others from the town but it needs money to buy them in large quantity including the transportation*.

Therefore, in the study area the majorities struggle to diversify in to non-farm activities than off-farm activities since the wage on other farms was very low. As Ellis (2005) stated the nature of diversification differs between better-off and poorer households. The better-off tend to diversify in the farm of non-farm business activities (trade, transport, shop keeping, etc) or salaried employment, while the poor tend to diversify in the form of casual wage work, especially on other farms, while remaining heavily reliant on subsistence crop production.

With regard to the effect of land tenure on diversification, as shown in Table 5.5, 9% of the households reported the fear of losing land as one of the factors that discourage households to diversify in to various diversification activities.

Practicing the focus group discussion revealed that households usually did not worry about saving their land as long as there is a family member on it. Rather most of the participants emphasized on the issue of credit knowledge and information that discourages livelihoods to involves in various income generating activities in the study area.

Thus the above findings supported the theory of agriculture optimists discussed in chapter two, that explained livelihood diversification as emerging from agricultural success. However, farm size was a problem in the study area where the majorities were below the average farm size of the sample households. As a result, the majority did not have the capability to participate in various diversification activities. Therefore, they need to have some sources of financial capital or credit that enable households to involve in various income generating activities.

5.2.1.3. Financial Capital

From the previous section it was revealed that households need to have financial capital to involve in diversification activities since it needs investment. However, the majority of the households did not have the capability to involve. Therefore, the availability of micro finance institution is great importance to enable households to involve in various income generating activities in the study area.

According to Hagos and Demeke cited in Pender et al. (2004), the availability of credit appears to have had important positive effects on non-farm diversification in central

Kenya. However, in Ethiopia it had less positive influence since it is associated with the use of improved seeds and fertilizer which has limited effect on crop production. Therefore, the above statement was found true in the study area where the regional government is highly emphasized on the improvement of agricultural inputs through the provision of credit service. However, the production from agriculture was found to be low and unsatisfactory (refer section 5.1.1)

From the survey the whole (100%) households reported for the availability of credit service in the study area. However, despite the availability of the service 27.8% of households did not benefited the service. In relation to gender, from the total male headed sample households' only 15.5% of the households get access to credit while from the total female headed households 33.3% had access to credit.

From the focus group discussion the minimum and the maximum amount of credit given to the households in study area were 1000 and 3000 birr respectively. The period of returning the loan is between six months and one year with 30% interest rate. As a result the majorities dissatisfied with the credit service and discouraged from involving in available diversification activities.

A male farmer remarked:

> *Since I have small farm land, I needed to involve myself in to other income generating activities to get additional income. As a result, I asked for credit from the Kebele to buy a Bajaj so that I can get good money by providing transportation from here to the town and from the town to here, but they only allow me to borrow 3000 birr which is not even enough to buy the horse.*

A female farmer added that:

> *I took credit from the Oromiya credit and saving share company (OCSSC) and engaged in trade. The money from the trade helped me to support my children. However, since the credit is not enough I couldn't involve in bigger activities that need more money to invest. My wish is to involve in animal fattening if I get the opportunity of sufficient credit.*

However, households in the study area were required to have land or any other assets as collateral to get access to credit. Therefore, those who did not own land and did not have assets of their own did not have the opportunity to get credit.

Although those who have their own assets did not have the interest to be benefited from the credit service since they were afraid of losing their assets of they don't pay debt on time. A female farmer stated:

> *It is good to talk about this problem today because I just went yesterday to the Oromiya credit and saving share company (OCSSC) to ask for credit since I have the idea to engage in petty trade, but I was told that I would not be allowed to get the credit since I don't have my own farm land.*

From the key informant interviews in the woreda office, it was reported that giving credit in the study area was a huge problem since the majorities were not returning on time. As a result the Oromiya credit service forced to consider assets as collateral to take credit.

To summarize, those with relatively bigger farm size were characterized to have better opportunity to involve in various diversification activities in comparison to those with smaller farm land since they have the financial capability to involve. Therefore, for those who don't have enough or no farm land credit were found to be a critical factor to improve

the livelihood of the households since it encourages the involvement in diversification and improvement of livelihoods. However access to credit is highly constrained due to various factors and became the major constraint for livelihood diversification in the study area.

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1. Conclusion

The main objective of this study was to assess rural livelihood diversification in the study area. Accordingly, the study showed as the majority of households in Gelan and surrounding area diversification from the production of agriculture is not enough; they are pursuing subsistence level of living. The study emphasized the need to involve in various income generating activities to improve the livelihood of the households, i.e. diversification.

The majority of households in the study area are still dependent on specific subsistence agricultural activities. Although the study pinpointed that diversification is an important livelihood strategy for the area of Gelan and surrounding area, it was found that various factors affect the involvement of household in diversification activities.

The literacy status of the households is one of the important factors that affect the involvement of households in diversification activities in the study area. It was found that the literates diversified more than the illiterates. However, besides the formal education lack of awareness and information about the various diversification activities constrain the households from involving in the activities.

Credit is another major factor that affects the involvement of households in diversification activities in the study area. Therefore, since the demand for credit service could not be met by the available micro finance institutions it is better if great importance

to devise a mechanism which would pave ways as those NGOs, and other private and government owned banks could involve in the service provision.

Moreover, the study identified that the involvement of households in diversification influenced by households' size in the study area. Large households' size enables the involvement of households in non-farm and off-farm activities due to the presence of more labor. In line with this, the area is characterized by large households' size since the average size of the area excess the national average of households. Therefore in order to absorb the excess labor, private institutions and NGOs should be encouraged to serve as a source of employment opportunities in the area.

Furthermore, those relatively with bigger farm land are found to be more involved in diversification since they are in a better financial position to involve in to non-farm activities. However the majority of households are small farm holders and don't have the ability to involve in non-farm activities. Only few are employed on the farm of the others as off-farms, as a wage labors since the wage is very small.

Therefore it is possible to conclude that households in the study area are eager to involve in the income diversification by involving in various income generating activities if the income from agriculture is not able to satisfy the need of the majority of households. It should be taken to promote various income generating activities, so as to improve their livelihoods rather than depending entirely on low productive activities such as traditional agricultural activities with an alarmingly increasing population and limited farm land.

Finally, a great deal has been learnt from this study but the study has not totally exhausted the problem about non-farm and off-farm activities that prevail in the study

area. Hence it is concluded that further research with large scale studies is needed to enable sufficient information for the development of non-farm and off-farm activities in the area.

6.2 Recommendation

This study showed that farming is not the only sector that the households of the study areas relied on. It was observed that sample households tended to diversify their activities to Non-agriculture to supplement the income gained from agriculture. However, the participation of poor households in activities that yield high return was very low. Their participation and choice of livelihood activities was constrained by several factors. The study found out that poor access to assets (human, natural, physical, social, and financial) at household and community levels and poor responsiveness of the structures and the processes to the needs of the poor were the major constraints that made barrier to their entry to non-farm income generating activities. Thus, the following points were recommended to improve the choices or involvement of poor households in remunerative non-farm activities in the study areas.

In the study, households endowed with resources were found to be involved in non-farm activities having high return than their poor counterparts. Moreover, households who were diversifying more to high return activities were successful in agricultural activities and able to ensure household food security. It is so important to enable the poor intensify/expand their farming activities and agricultural production by improving households access to resources and promote their access to non-farm activities and earnings. It is therefore important to improve the access to assets for the poor. Improving

the natural resource base of the study areas would have significant impact to enhance agricultural productivity and so allow poor households to invest on non-farm activities.

The development of improved agricultural technologies and inputs which are advisable to the poor and appropriate to the local environment should be given due attention. The effort to address the stagnant technology supply would have vital role to enhance agricultural production and productivity and further encourages and improves households' access to diversified income generating activities and growth of non-farm income sources. Credit was also critical factor that constrains households' diversification. The local and regional government with the existing credit institution should coordinate their efforts to set out fair interest rate and facilitate access to adequate working capital; organize and encourage private saving and credit community led institutions. Credit provision need to be linked with training and continuous technical support. Education and skill training have a positive impact on households' involvement in diversified income sources. There should be responsible institutions that organize such services and work in favor of the needs of the poor and promote the growth of the non-farm sector. Lastly, this non-farm income generating opportunity should be sustainable and further reinforced accompanied by other new interventions of non-farm activities in accordance with the available local skills and business know-how. To make competitive and promote its growth, the nonfarm activities like craftworks need to be supported by technologies and need to have a very close link with manufacturing industries.

Road construction and provision of transport service improve their linkage and improving access to market and market information. These facilitate mobility of goods and labor markets; reduce risk and the transaction costs and also increase the efficiency of investment.

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APPENDIX I

ADDIS ABABA UNIVERSITY

DEPARTMENT OF GEOGRAPHY AND ENVIRONMENTAL STUDIES

1. Questionnaire for household survey

The objectives of this questionnaire is to assess rural livelihood diversification in rural kebeles around Gelan town, to identify the determinant factors of livelihood diversification and suggest the ways in which diversified livelihoods will be encouraged. So you are kindly asked to answer the questions genuinely.

Structured questionnaire for generating data on challenges of livelihood diversification

Household Survey

Date of survey_____

Name of Enumerator_____

kebele_____

1. Basic information of the Household

1.1. Role of respondent in the household

A.Husband B.Wife C.If others,specify_____

1.2. Respondent age_____

1.3. Respondent's Educational level

A. Illiterate B. Literacy campaign certificate

C. Grade 1-4 D. Grade 5-8

E. Grade 9-10 F. Grade 11-12

G. Certificate H. If others, specify_____

1.4. Respondent's spouse educational level

A. Illiterate B. Literacy campaign certificate C. Grade 1-4

D. Grade 5-8 E. Grade 9-10 F.Grade11-12

G. Certificate H. If others specify_____

1.5. Respondents place of birth

A. Rural B. Small Rural town C. Big towns

D. Addis Ababa E. If others, specify_____

1.6. Total family size_____

1.7. Number of dependents that are less than 14 years of age_____

1.8. Number of dependents that are above 65 years of age_____

1.9. Sex of the head of the household

A .Female B. Male

2. Livelihood activities and income source of the Household

2.1. What is the main source of income for the household?

A. Agriculture B. Off-farm C. Non-farm D. If other, specify_____

Note: (If the answer for question no.2.1 is "A'' answer question no 3.2-3.6)

2.2. How did you access land holding?

A. own land B. Employed on others land C. Rented

D. Shared land E. If other, specify___

2.3. What is the size of the land (ha= hectare)?

A. < 0.5ha B.0.5-1ha C.1-1.5ha D.1.5-2 ha E. more

2.4. Which of the following agricultural activities does the household engaged in?

A. crop production B. Animal husbandry

C. Mixed farming D. If other, specify____

2.5. If the answer for question "2.4'' is "A'', which of the following item does the household produce mainly?

A. Teff B. Bean C. Wheat D. Maize

E. Barely F. Sorghum G. If other, specify____

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

A. Rainfall fluctuation B. Lack of better seeds and fertilizers

C. Crop diseases D. Shortage or lack of farm animals'

E. Rudimentary farming method F. If other, specify___

2.7. If the answer for question "2.1'' is "C'', which of the following non-farm activities are performed in the household?

A. Trade B. Wage labor

C. Specializing in different kinds of handicrafts D. If other, specify_____

2.8. Where does the majority of income of the households go to?

A. Food B. Clothes C. School for children

D. Hospital and medicine E. Market F. If other, specify_____

2.9. Is the income from agriculture enough to sustain their livelihood other than food consumption?

A. Yes B. No

2.10. If the answer for question 2.9 is "B" what other option do they have to sustain their life?

A. Wage laborer B. Borrow money or gain C. Petty trade

D. Specializing in different handicrafts E. Remittance F. If other, specify_____

2.11. Did the household have an income (in cash or kind) from non-farm or off-farm activities during the last 12 months?

A. Yes B. No

2.12. If the answer for question 2.11 is "A'', what are the factors that encourage households to engage in non-farm activities?

A. Access to market B. Close rural-urban linkage

C. Access to extension services D. Access to information

E. Access to credit F. If other, specify_____

2.13. If the answer for question 2.11 is "B'' what discourage the household to diversify in to non-farm activities?

A. No access to credit B. No access to market

C. No knowledge about non-farm activities

D. Fear of losing land if they involve in activities outside agriculture

E. If other, specify_____

2.14. Does the household practice off-farm activities?

A. Yes B. No

2.15. If the answer for question 2.14 is "A", what are the push factors that encourage households to diversify in to off-farm activities?

A. Shortage of land B. Shortage of farm animals

C. Lack of agricultural input (fertilizer, better seeds and pesticides)

D. Lack of access to credit E. Lack of enough income from agriculture

2.16. If the answer for question 2.14 is "B'', why?

A. Enough farm land B. Involving in non-farm activities

C. If other, specify_____

2.17. Do women in the family involve in diversification activities?

A. Yes B. No

2.18. If the answer for question 2.17 is "B", why?

A. Child care B. Care of the sick and the elders

C. Food preparation for family

D. Relation between the husband and wife E. If other, specify_____

2.19. If the answer for question 2.17 is "A", what encourage them to diversify?

A. Access to education B. Access to information

C. Access to extension services D. Access to credit

E. If other, specify_____

2.20. Reason for those who are not engaged in agricultural activities?

A. The return is small B. Old-age

C. Involving in non-farm activities D. Student

2.21. How is your agricultural production of last season compared with the year before that season?

A. Increased B. Similar C. Very decreased

2.22. Is the production enough to the family for the whole year?

A. Yes B. No

2.23. If the answer for question 2.22 is "B'', at what time of the year are food shortage occurs?

A. January	D. April	G. July	J. October
B. February	E. May	H. August	K. November
C .March	F. June	I. September	L. December

2.24. Do the household member involve in other non-farm activities during these seasons?

A. Yes B. No

2.25. If the answer for question 2.24 is “A’’, what kind of activities?

A. Petty trade B. Wage labor C. Hand crafting

D. If other, specify_____

2.26. What has happened to the size of your land in the past ten years?

A. Decreased B. Increased C. Same

2.27. If the answer for question 2.26 is “A’’, why?

A. Decreased due to government redistribution of land

B. Decreased due to sharing with children

C. Decreased due to land degradation

D. If others, specify_____

2.28. If the answer for question 2.26 is”B”, why?

A. Increased due to gift B. Increased due to rent

C. If others, specify_____

2.29. What do you use for cultivating your land?

A. Oxen B. Rented tractor C. If other, specify_____

2.30. Do you use agricultural inputs?

A. Yes B. No

2.31. If the answer for question 2.30 is “B”, why?

A. Very expensive B. Not available C. Not useful D. If others, specify

2.32. Do you own livestock?

A. Yes B. No

2.33. If the answer for question 2.32 is “A”, how many?

A. 1-3 B. 4-6 C. >6 D. None

2.34. If the answer for question 2.32 is “A’’, do you sell livestock products?

A. Yes B. No

2.35. If the answer for question 2.34 is “A”, is the sales revenue from these products supportive to the household economy?

A. Very much supportive C. Not supportive

B. Less supportive

2.36. Do you have fruit trees?

A. Yes B. No

2.37. If the answer for question 2.36 is "A'', does it have significant effect to the household economy?

A. Yes B. No

2.38. Do you have back yard vegetables?

A. Yes B. No

2.39. If the answer for question 2.38 is <<A>>, does it have significant effect to the household economy?

A. Yes B. No

3. Amount of income source for the last twelve months?

Farm activities	**Income(birr)**	**Non-farm activities**	**Income(birr)**	**Off-farm activities**	**Income(birr)**
Crop production		Trade		Employed on some others farm land	
Animal husbandry		Wage labor			
Vegetables		Remittance			
Fruits		Waving			
Others, specify		Pottery			
		Making traditional drinks			
		Carpentry			
		Blacksmith			
		Others, specify			
Total					

4. Information on social services

4.1. Does the household get any basic health services nearby areas?

A. Yes B. No

4.2. If the answer for question 4.1 is <<A>>, the time taken, in hour to arrive to the nearest health service_____

4.3. Does the household get any educational service for children and adults?

A. Yes B. No

4.4. If the answer for question 4.3 is "A'', time taken from home to the nearest school in hour_____

4.5. Does the household get access to market to their products?

A. Yes B. No

4.6. The time taken from home to the nearest market place to sold their product in hour_____

4.7. Mode of transportation

4.7.1. for household member

A. foot B. Pack animals C. Vehicles

4.7.2. for goods

A. head or shoulder B. Pack animal C. Vehicle

4.8. Is the price of transport expensive?

A. Yes B. No

4.9. The distance from home to the nearest main road, in hour_____

4.10. The type of the nearest main road?

A. Asphalt B. Gravel all weather road C. Gravel all weather road

4.11. Is there credit service in your locality?

A. Yes B. No

4.12. If the answer for question 4.11 is <<A>>, are you benefited from the service?

A. Yes B. No

4.13. If the answer for question 4.12 is<< B>>, why?

A. Not enough B. The time of repayment is short

C. The interest is high D. If other, specify_____

4.14. Has the household receive any credit service during the last 12 months?

A. Yes B. No

4.15. If the answer for question 4.14 is<< A>> from which sources?

A. Government B. Individual C. Relatives D.NGO's

4.16. What type of extension services has the household obtained during the last four years?

Types of extension service	**Yes/No**
Application of fertilizer	
Application of chemicals(herbicide, pesticide, fungicide)	
Use of improved seeds	
Credit and marketing service	
Use of improved practice	
Soil and water conservation	
Animal husbandry	

4.17. Are you beneficiary of the extension service?

A. Yes B. No C. If other, specify

4.18. Is the extension service benefiting the household particularly in diversifying their activities?

A. Yes B. No C. If other, specify

APPENDIX II

ADDIS ABABA UNIVERSITY

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2. Interview guide for key informant's interview

Semi-structured interview for generating data on factors affecting livelihood diversification

Name of kebele _____

Date of Discussion_____

Title of respondent_____

Name of the organization_____

1. Do you think small holder farmers gets enough amount of income more than food consumption? Why?

2. Are farmers encouraged to grow different kinds of crops (on-farm diversification)? How?

3. Do farmers get agricultural input like fertilizer, improved seeds and pesticides at cheaper rate? From where?

4. Are farmers encouraged by the government to involve in to non-farm activities? Are there any policies?

5. Do you think this kind of diversification activities helps the rural people to increase their income and at the same time increase agricultural productivity?

6. What are the trends of livelihood diversification in this area for the past ten years?

7. Is the extension service helps the rural households to diversify its livelihood?

8. Do you think the rural people have access to different social services like education, access to market, credit, health service and infrastructure? Does it have any contribution to rural development? How is the contribution to non-farm activities?

9. Do think the rural people of Gelan and surrounding area benefited from its closeness to the city of Addis and other nearby towns in getting access to market and creation of job opportunities?

10. Do you believe that non-farm activities are one of the ways to get out of poverty and improve agricultural productivity by providing inputs?

11. What should be done in the future in order to diversify household's source of income besides agriculture? How do you tackle factors discouraging livelihood diversification? How do you promote factors encouraging livelihood diversification?

APPENDIX III

ADDIS ABABA UNIVERSITY

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3. Interview Guide for focus group discussion

Semi-structured interview for generating data on factors affecting livelihood diversification

Focused Group Discussion

Name of kebele_____

Date of discussion_____

Name of facilitator_____

Name of specific group_____

1. What are the constraints to agricultural productivity?

Probe (land size, climate, agricultural input, extension program, infrastructure, market…..)

2. Do you practice non-farming activities? Please specify.

Probe (Trade, handicrafts, migration to other places, wage labor, remittance…..)

2.1. What encourage and discourage in order to involve in non-farm activities?

Probe(Credit service, access to market, infrastructure, education, health, land size, extension service)

2.2. Are the non-farm activities support the household economy more than food consumption? Are they helpful to increase agricultural productivity in providing better input?

2.3. Do you involve in off-farm activities? Please specify. Does it have an impact on your livelihood?

3. Do you have Idir and Ekub? Do they have effect on your livelihood?

(For female group only)

4. Do women involve in non-farm activities?

4.1. What discourage and encourage them to involve in to non-farm activities?

Probe (access to credit, education, market, health and family responsibility)

What are their main activities, do you have your own organization? Is it helpful?

5. What are the trends of off-farm and non-farm income within the last five years?

6. What should be done to encourage off-farm and non-farm activities?

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for the Degree in other Universities; and all sources of materials used in this thesis have been appropriately acknowledged.

Name _____

Signature_____

Date of submission_____

This thesis has been submitted for examination with my approval as university advisor.

Name _____

Signature _____

Date of approval _____