Distribution of Common Grazing Land and Conflict among Diverse Claimant Groups:

The Case of Arbawash-Dingira Kebele, Jabitehinan Woreda, West Gojjam Zone, Amhara Regional State

Asabneh Molla

A Thesis Paper Submitted to the Department of Sociology

Presented in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Sociology

Addis Ababa University
Addis Ababa, Ethiopia
March 2014

Addis Ababa University

School of Graduate studies

This is to certify that the thesis prepared by Asabneh Molla, entitled: *The Distribution of Common Grazing Land and Conflict:* The Case of Arbawash-Dingira Kebele, Jabitehinan Woreda, West Gojjam Zone, Amhara Regional State and submitted for partial fulfillment of the requirements of the Degree of Master of Arts in Sociology complies with the regulation of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee and the Advisor:

Internal Examiner_____Signature_____date_____

External Examiner_____Signature_____date_____

Advisor_____Signature_____date_____

Acknowledgement

First of all, I would like to express my deep appreciation to my advisor, Dr. Woldeab Teshome, who gave me an insight on what issues to focus and to include while conducting the study, and for his constructive comments on the overall accomplishment of the paper.

Then, my deep gratitude belongs to my instructor Dr. Yeraswork Admassie for his enthusiastic and academic advice as he helped me decide to prepare my pre-proposal paper titled "The Distribution of Common Grazing Land and Conflict among Diverse Claimant Groups" after observing the other alternative topics I showed to him. I would like to express my deep gratitude to Dr.Abeje Birhanu too for his unreserved advice from the beginning to the end of the paper.

I would like to thank Mr.Luke Scherschel for his unreserved contribution on editing the language of the thesis report.

Had the collaboration of Bitew Alazar and Asres Aschale not been added, getting information from the Woreda and the Kebele administration would have been difficult. Therefore, my heartfull gratitude goes to these two key persons as they have helped me in making a good relationship with the key informants in getting preliminary information.

I do not deny my gratefulness to Bitew Alazar, Fasil Melese, Ehitnesh Azmeraw and Chalachaw Alene as they have allowed me to share their living room for two months.

Finally, I would like to thank all of my family members for all of the support they provided me during my entire academic career starting from the elementary school up to now.

Abstract

This study was conducted with the general purpose of describing and explaining the disagreements and conflicts associated with the distribution of common grazing land in Arbawash Dingira Kebele*. It particularly focused on finding out the purpose and criteria of distributing the common grazing land; the claimant groups, their bases of claim, resources and mechanisms of interest realization; the livelihood effect of, and the preference and attitude to the distributed common grazing land; and the various measures taken and their consequences in mediating the different interest groups.*

In order to answer all the specific objectives, research designs which have both qualitative and quantitative nature were used. Hence, particular methods of research, i.e. focus group discussion, key informant and in-depth interview, documentary research and survey were used in the study so as to meet the specific objectives. In implementing the survey method, a questionnaire was developed and administered to a total sample of 121 household heads who were selected from the two Gotts*,* Kattal *and* Seblan*, which are respectively found in* Arbawash Mariam *and* Arbawash Michael Nius-Kebele*s.*

As the findings indicate, from the early (6 hectares of land was distributed in 1999/2000 E.C.) and late (21 hectares of land was distributed in 2003E.C[1]*.) phases of distribution of the disputed common grazing land it was found that defending some groups and individuals who were plowing the common grazing land and getting benefit for rural households in the name of the church and for youth were the major purposes or reasons for distribution with various criteria. Though there was a situation where access was allowed for all, regardless of any criteria before, during and after the first time of distribution, later criteria became more formalized. In the early phase of the distribution, the claimant groups were the rural households of the three* Nius-Kebele*s. Later, however, the claimant groups were polarized into the rural households of the two* Nius-Kebele*s,* Arbawash Mariam *and* Arbawash Michael *with a various but contradictory bases of claim, mechanism and interest realization. The income obtained from the land, livelihood ratings, the preferences and attitudes of respondents to the distributed grazing land all indicate that most of the rural households in the two* Nius-*kebels seemed unsatisfied on the livelihood effect made by the distributed grazing land for which they have been in conflict. In solving the disagreements and conflicts on the different phases of the distribution, both legal and traditional mechanisms of conflict management had been implemented. However, the traditional mechanism of conflict management was more successful.*

[1] In order to convert Ethiopian Calendar to Gregorian Calendar add seven years to the year mentioned if the year in E.C is after January or add eight years to the year mentioned if the year in E.C is before January

Table of Content

Content **Page**

List of Abbreviations and Acronyms

List of Abbreviations

EPRDF	Ethiopian People's Revolutionary Democratic Front
FAO	Food and Agriculture Organization
FSS	Forum for Social Studies
LUPRD	Land Use Planning and Regulatory Department
OECD	The Organization for Economic Co-operation and Development
UN	United Nation

List of Acronyms

FGD	Focus Group Discussion
RH	Rural Household
RHH	Rural Household Heads
E.C.	Ethiopian Calendar

Local Terms in English

1. Woreda: District
2. Kebele: The lowest administrative level in Ethiopia
3. Nius-Kebele: Sub-division in each Kebele
4. Gott: Sub sub-division in each Nius- Kebele.

List of Tables and Graphs

List of Tables

Content **Page**

List of Graphs

Content **Page**

INTRODUCTION

1.1. Background of the Study

In one way or another, human life depends on land. Humans need land to cultivate food crops, fruits, other plants; to graze their animals; to build houses for a variety of purposes such as for shelter, for school, for health service and for factories; to establish a recreational center. As Batson (2006:8) said, houses and factories, forests and farms, river, roads and railways, mines, quarries, and reservoirs are all fashioned from the land. It offers endless opportunities for development and discovery and hence, it is the source of all wealth. A study conducted by Pons-Vignon and Lecomte (2004:24) also underlined that land is potentially one of the assets worth fighting over as well as a central element in the complex social relations of production and reproduction within which conflict between individuals and groups are bred. From the two studies it is not difficult to state that a diverse group of people have developed varied interest on the land. In order for their interests to be addressed, people form varieties of mechanisms as per their need. Of these mechanisms, they organize themselves into certain interest groups; they create ideologies and institutions; they make revolutions and reforms; they form and support governments that run to their best interest.

There is a probability that population growth and the available land, which has to address the needs of the diverse groups of people, can become incompatible. The imbalance between population growth and the needs of the diverse groups in turn becomes a driving factor for a variety of actions to be taken. It has been seen in history that the colonization of Africa, Latin America and some Asian Countries by Europeans was partly attributed to the search for land and its allied resources. Zimbabwe's Government Action to restore the white occupied land to the

blacks, the 1974-Revolution in Ethiopia with the slogan of “Land to the Tiller”, and the current Ethiopian land reforms (such as redistribution of the land owned by households to those who have none in some regions) are all manifestations of this.

Though there are variations in the approaches to be taken, national and international bodies, nongovernmental organizations, the academic community and scores of other actors have a wide consensus about the need for reforming land tenure systems and relations so as to reduce rural poverty and hunger in developing countries (Ghimire 2001:1). According to him, of the various approaches to land reform, some propose radical land reform measures involving a sweeping appropriation of large holdings and their redistribution to the landless; others want to see restitution of land rights previously taken by powerful groups. Land colonization is another approach which is considered as an alternative to widespread land expropriation and redistribution. Plans are also being developed to interfere in the land market with the intention of making more land available for purchase by the landless. The target of these approaches and their perceived advantages differ greatly among various bodies and actors, particularly in the degree of commitment that is attached. It is this aspect which largely explains why a genuine implementation of land reform measures is missing in most contexts.

As Ghimire(2001:1) posits, the justifications for promoting land reform are many, and some are compelling. He is inclined to say that one of the rationales for supporting land reform is that the vast majority of the population in many developing countries consists of near-landless, landless, rural workers, tenants, and sharecroppers. All these categories of people are among the social groups most vulnerable to hunger and poverty, and they usually have inadequate access to land and other productive resources.

The purpose of my thesis was to clearly depict and explain issues related to the distribution of a certain kind of land at micro level. As it is briefly described in chapter 4, sub sub-section 4.1.2, each Nius-Kebele has its own grazing land owned in group by the member households of the respective Nius-Kebele*s*. However, there are 149 hectares of land located in one of the Nius-Kebele*s*, Arbawash Mariam, which has attracted the attention of the three Nius-Kebele*s*. This land became a point of contention among households of *Bedega* Dingira, Arbawash Mariam and Arbawash Michael Nius-Kebele*bes* when a portion of the land was plowed by the former in 1996. Earlier there was no disagreement among these Nius-Kebele*s* on the grazing land. But it became the center of conflict among different claimant groups after the rules of land use were changed on a portion of the land. It was this change and consequent issues which motivated me to conduct my research on the topic.

1.2. Statement of the Problem

Beyond the macro measures taken by the government at national or regional level, local communities also take their own measure or create a livelihood mechanism by making more land available for cultivation. The search for this type of livelihood mechanism may be driven by various factors. As it is strongly argued by a number of studies conducted so far (Hillman 1990; LUPRD/FAO 1984; Mashalla 1990 as cited in Amare, 1996:11), an increase in population density is the factor which forces people to convert the forest land into cultivation land and the cultivation land into marginal land as well.

In addition, Mashalla (1988:283) has forwarded a solidified argument that pressure on land is not only caused by an increase in human population but also by an increase in livestock population. For this reason forests and woodlands have been cleared indiscriminately for cultivation, and

overgrazing and extensive wood cutting have occurred since the early twentieth century. Hurni and Messerli (1981) who conducted their study in the *Simen* Mountain National Park also stated that population pressure has resulted in the extension of cultivated land on steep slopes even inside the park. Another research pursued by Solomon (2005:55) similarly found that the increasing demand for cultivated land, grazing land and fuel wood must have contributed to the deterioration of shrub-grasslands.

The merit of all the above researches and arguments is that they highlighted the increase in population growth and its ecological impact on the natural resources such as the land itself and the forest while people have been struggling to sustain their livelihood. However, they overlooked and pay little attention to the fact that people are also converting the commonly owned grazing land into cultivated land as one livelihood strategy. The specific role of land dynamics in the emergence of conflict in rural areas was given little emphasis. Hence, I argue that conflict among diverse interest groups, which arises when local communities change their commonly owned grazing land into cultivated land, tends to be obscured in the above mentioned studies. My research has filled this gap by achieving the following objectives.

1.3. Objective of the Study

1.3.1. General Objective

The study was conducted with the general purpose of examining issues related to the allocation of common grazing land for farm land and the conflict that arose among diverse claimant groups in Arbawash-*Dingra* Kebele*,* in Amhara *R*egional State.

1.3.2. Specific Objectives

Under the umbrella of its general objective, the study was conducted so as to answer the following specific objectives. It specifically aimed at:

- Finding out the purpose and criteria for distribution of the common grazing land,
- Identifying the claimant groups, and describing their bases of claim and the resources and mechanisms of interest realization they employ,
- Giving details about the livelihood effect of, the preference for, and attitude towards the distributed common grazing land, and
- Describing the various measures taken and their consequences in mediating the different interest groups.

1.4. Scope of the Study

As indicated in the title and objective, this study was under taken in Arbawash-*Dingra* Kebele,Jabitehinan Woreda, West Gojjam Zone in Amhara *R*egional State. It was limited to finding out issues related to the allocation of common grazing land for farming and the conflict that arose among diverse claimant groups. In addition, whether the distributed land has served its intended purpose or not, and the livelihood effect of the distributed common grazing land on the lives of those who have been given access to the land were briefly described. The preference or attitude of the diverse claimant groups was also assessed parallel to the assessment of the various measures taken and its consequences in mediating the different interest groups.

The rationale behind deciding to conduct this study in Arbawash-*Dingra* Kebele, which is about 400 kilometers away from Addis Ababa, is that the site of the issue studied is located in the Woreda where I come from and it was there I completed my junior, high school and preparatory

education. So, my knowledge of the area made it relatively easy to conduct the study here as opposed to an area that is strange to me.

1.5. Significance of the Study

Since the study has successfully achieved its specific objectives, it will

- Serve as a stepping-stone for other researchers who are interested in the same or related issues at any other time.
- Give awareness about the livelihoods of the households who have gotten access to distributed land since the study has found out whether the distributed common grazing land has served its intended purpose in the Kebele,
- Provide academic knowledge by shedding a sociological light on the bases of claim presented and the resources and mechanisms employed by each claimant group.

1.6. Limitation of the Study

The following are the major limitation of this research.

- There was also no previous similar scale developed in measuring the attitude of household to the distributed common grazing land. As a result, I was forced to develop my own scale for this purpose by testing its reliability and assuring its validity as well.
- The map of study area is not included in the study as there was no available map of the Kebele. Hence, self-drawn map is presented.

2. REVIEW OF RELATED LITERATURE

2.1. Land, Rural Livelihood, and Conflict

Land, as it is argued by Pons-Vignon and Lecomte (2004:24), is a fundamental and necessary aspect of life in rural areas, and paramount source of livelihood in places that are characterized by a scarcity of productive assets. There is no doubt that rural households' livelihoods are related to land and landed resources. As Tsegaye (2012:1) stated, land is the main resource on which most rural households depend and agriculture is the main source of their livelihoods. The importance of land to rural households is still indubitable although the sources of rural livelihood are recently diversified both across and within countries. These rural households engage in farming, agricultural wage labor, employment in rural non-farm economies and migration.

Land is necessary not only for the survival of rural people but also fundamental for human existence in general by serving the multi-needs of human beings. In his speech, delivered on the eve of World War I, Sir Charles Fortescue Brickdale (cited in Batson, 2006:8), Chief Land Registrar of Great Britain, lauded the bountiful fruits of the land secured by a century of peace in Europe. He stated that;

> *Land is the place of all shelter, in the city, the town, the village, and the home. It is the source of food, of materials for construction and manufacture, of coal, gas and oil, of springs and rivers and other essentials for life. Indestructible, immovable, it is the foundation of all human activity. Houses and factories, forests and farms, river roads and railways, mines, quarries, and reservoirs are all fashioned from the land. It offers endless opportunities for development and discovery. It is the source of all wealth.*

As it is underlined by Pons-Vignon and Lecomte (2004:24), land is one of the most worthwhile resources that has a potential for conflict. For them, land is a powerful entity that has an effect in shaping the complex social relations of production and reproduction. The UN-HABITAT (2009:17) also emphasized that land is one of the fundamental assets necessary for a human living both in the rural and urban setting. It further stresses that land and housing assets are central to livelihoods in both urban and rural post-conflict contexts, and hence, access to appropriate land and property is crucial to the development or achievement of independent livelihoods. This holds most obviously for agricultural land, pastures, fisheries and forests in rural settings but also applies to urban areas, where secure tenure can be crucial to maintaining small businesses.

The importance of land in making livelihood and shaping the various complex social relations 0f production and reproduction has been given a due emphasis in studies conducted so far. In addition, in literatures related to issues of conflict, the importance of resolving contradictions and tensions of all kinds (political, economic or social) so as to build long-term peace has firmly been acknowledged. However, this strong recognition does not say much about the specific role of land dynamics in the outbreak or persistence of violence. Although land combines strong economic and emotional values, to the extent that "people's behavior in relation to land mirrors the general state of interaction among members of society" (Pons-Vignon and Lecomte 2004:24), the distinctive function it plays in the emergence and long continuance of conflict has not been well spotlighted.

Land is increasingly becoming a source of conflicts in Africa for changes in some underlying factor. In Sub-Saharan Africa, where land access has traditionally been characterized as relatively egalitarian, land is increasingly becoming a source of conflicts due to a variety of

attributing factors. Among the underlying responsible factors, influences such as population pressure, agricultural commercialization, and urbanization have played a role in the increasing number of land conflicts (Yamano and Deininger, 2005:1).

Conflicts that arise due to land and land related concerns are not resolved by, as Yamano and Deininger(2005) argued, the current land tenure systems in Sub-Saharan Africa since these land tenure systems may not be well-equipped and capable enough to manage the issue at hand. In addition, in many African countries, precedence is given to formal institutions of land administration and they were often simply superimposed on traditional structures without a clear delineation of responsibilities and competencies. Without clear indication of obligations and competencies, a mere belief that formal institutions have a relative greater importance over traditional informal structures may have a restrictive implication on those formal institutions to go farther in their outreach and in their social legitimacy as well.

2.2. The History of Conflict Over Land

Although it is difficult to find empirical evidence that traces the exact date when conflict over land and landed resources did start, it is possible to find literature on numerous conflicts that have occurred in world history because of land and environmental resources. The unresolved clash between Israel and Palestine in the Gaza Strip and West Bank; the developmental Plan of the Brazilian government in the Amazon which displaced seventy thousand people and drew a reaction from Chico Mendes who started the Rubber Trappers' Union in response to the development and destruction of the forest at the cost of his life in the 1970s; ethnic and civil warfare in Congo which involved many of the Congo's neighboring countries; the continuing civil war in Sudan; and the disagreement between Ethiopia and Eritrea over a small piece of

land which has caused a long and bloody war are only some of the recent conflicts in the world which have partly resulted from land and landed resources (Benson, 2001).

Historically, Conflict over land in Africa particularly in Sub-Saharan Africa, has been explained in association with the existing land tenure systems in each country. For example a study conducted in Kenya by Potti (2005:56) asserts that land rights 'allocated according to custom' are not necessarily free of struggle. Fight and conflict over land among individuals and groups has been the case for quite some time. Struggles were very intense in colonial times, partly because 'custom' was being written up (and sometimes invented), and even pre-colonial land allocations were not devoid of tension. There is no doubt that the struggle between colonizers and the colonies in the 1950s and 1960s was driven mostly by the interest to control the land and natural resources.

The legacy left by colonizers in Africa, for example in our neighboring country Kenya, has become a major source of conflict. Land not only becomes a source for conflict but it also has the power to shape the political agenda and strategies of governments and opposition parties. As Medard (cited in Anseeuw and Alden 2010:19) stated it,

> *Several major conflictual episodes over land have been documented in Kenya's history. Land alienation through European settlement in the first half of the twentieth century and the structure of power introduced by the colonial government (centralization, territorial and administrative control) led to the Mau Mau War (1952–60). Control over land exerted by administrative chiefs in the African reserves and the eviction of 'squatters' from the White Highlands in the Rift Valley Province and from forest reserves resulted in cases of strongly resented landlessness. Since independence (1963), landlessness constitutes one of the state's main official concerns. At the same time, however, the distribution of land for political gain and the mobilization of*

communities by promising them land have been major political strategies in Kenya.

In Ethiopia, varieties of conflicts have occurred in its history. Of these conflicts, the conflict between the monarchial family and its supporters, and the rest of the population is one that could be taken as a typical example of conflict over the land. Since it was believed that the "land is the property of the king" the peasants were expected to give the lion's share of their produce to the tribute collectors of the king. The relationship between the monarchial family and its beneficiaries, and the peasants over the land was exploitative and unfair. This relationship was later challenged by the peasants in order to obtain land for livelihood. Currently, it is not uncommon to hear of land related conflicts that occur among farmers, pastoralists, and between farmers and pastoralists. As Ayalneh and his colleagues (2006:134) stated, the presence of scarcity of land has resulted in conflicts among rural households in Ethiopia. This in turn has produced high levels of household vulnerability. For them, the over-exploitation of the hillsides, lead to perpetuation of poverty and food insecurity since clearly defined property rights and management plans were absent.

2.3. Explanations on Land Use Change and Conflict Over Land

Man in his history has actively managed and transformed the world's landscapes for millennia. One of the largest contributory factors that resulted in land use change is agriculture. Agriculture has been the greatest force of land transformation on our planet. Much of the agricultural land has been created at the expense of natural forests, grasslands, and wetlands that provided valuable habitats for species and valuable services for humankind. The pace of agricultural land transformation has been particularly rapid in the last 300 years. This has happened due to the

historical fact that humans have increased agricultural output mainly by bringing more land into production (Ramankutty, 2006:11-19).

In Sub-Saharan Africa, according to Ramankutty, land was used mainly for hunting, gathering, herding, and shifting cultivation before the 19th century, and for some settled agriculture before the imposition of colonial rule in the late nineteenth century. In the pre-colonial period, demographic and economic needs allowed for land cleared for cultivation to be left fallow for long periods or abandoned as cultivators moved on and cleared new land. After the 1930, population growth and European demand for export crops were the two factors that led to the cropland expansion (Ramankutty, N. 2006:11-19).

For Ramankutty, populations increased from improved public health provision, as well as the absence of the wars, epidemics, and famines. The area under export crops expanded significantly because colonial governments needed the revenues they provided in order to recover from the worldwide depression of the 1930s. In addition, by the 1930s, the railroads and most of the other major transport routes were in place in colonial Africa, and it became feasible to begin development of areas that had hitherto been inaccessible. This combination of demographic pressure and economic incentive has continued to the present.

2.3.1. Peñas' Explanatory forces for landscape and land use change

Although environmental variables influence both human and natural patterns of landscape and land use changes, the major contributions are inevitably human-mediated and are promoted by several underlying processes or driving forces (Peña, *et al*, 2007:108-110).

According to Peña, *et al* (2007), the following are explanatory forces or models for landscape and land use changes.

Political and economic driving forces

Political driving forces are among the factors which contribute to landscape and land-use change and they are strongly interlinked with **economic driving forces** as land use change is made due to economic needs and pressures. The economic needs and pressures are expressed and reflected in political programs, laws and policy of the government at national, regional and local level. As per Peña, *et al* (2007), in their study of urban planning, they have found out that most of the laws and policies are directly connected to assessments of urban planning and water management. The principal policy of land-use change at municipal level is the drawing up of a General Urban Plan, which serves as a tool to administer the land. It defines, for example, the areas disposed to change from cropland to urban. This kind of land reclassification is in accordance with political ordinances, but this also sometimes represents a quick method of enrichment and speculation as the price of land can and does change dramatically from before to after a revision of the plan. For example, the value of the land may increase due to its role in tourist attraction.

The above argument can also have an extended implication to argue that land use change in rural areas would be made in response to the increasing economic needs and pressures. It would not be wrong if a person argues that rural local and regional governments take a political response and make a land use change in order to reduce the imbalance between the increasing population pressure and the increasing demand for agricultural land so as to meet the economic needs of the rural people. Population pressure also has the power to force rural households or families to search for an additional farming land in every available mechanism.

As Clay and his colleagues clearly stated;

> *Demographic pressure forces farmers to travel farther from their homes in search of additional land. While they sometimes manage to purchase these distant parcels, increasingly they must rent them. In other cases, farmers acquire holdings from the breakup of commonly-held lands. While close to some households, these formerly communal lands are often many kilometers away. Farmers in land-scarce settings will operate whatever holdings they can to ensure their families' needs.* (Clay, et al 1994:5)

Technological driving forces

For Peña, *et al*, (2007), technological driving forces maintain advances in the development of civilization. By implication, these driving forces have contributed to the shaping of the landscape and the change of land use. Basically, technological factors have been used to improve resource management, land productivity and the quality of life. For example, in situations where water is less available and becomes the most restrictive resource, dams can be built and recycling will be done by means of sewage plants or by desalinization plant construction to obtain fresh water. This is to mean that the land which has been used for any purpose other than agriculture could be used for agriculture because new technology is built upon it.

Beyond land use change, technological modernization, such as industrialized agriculture, has influenced some social changes and farming trends to condition the shift of many fields from traditional dry crops to drip-irrigated systems, with the associated intensified use of fertilizers, pesticides, and the introduction of foreign crop varieties (Peña, *et al*, 2007).

Natural driving forces

As Peña, *et al*, (2007) argues, natural driving forces include site factors (spatial configuration, topography, and soil conditions) as well as natural disturbances such as drought, wildfires and floods. These factors can induce long term global change and land-use change as well.

The natural attractiveness of the land, the weather conditions surrounding that particular land, the location of the land (for example being located near a sea or river) can provide numerous services and infrastructure for leisure and relaxation activities. The fact that a given piece of land is located in semi-arid conditions which are characterized by drought periods of several years and torrential rain falls in certain seasons means that the environment has adapted to these circumstances accordingly. However, human pressure over the natural environment may cause an amplification of disturbances, i.e. during drought periods, it is more vulnerable to wildfires. Torrential rain falls may also provoke major damage to infrastructure due to the intensity of the rains over short periods of time. To place this in context, in some cases more than half the annual rainfall may occur in one day. These events may trigger substantial flash floods in susceptible urban areas, particularly those that are built near or over drainage channels.

Cultural driving forces

According to Peña, *et al*, (2007), cultural driving forces shape landscapes and cause land use changes. These are then interpreted by individual landowners. In turn, people shape landscapes according to their beliefs, in order to achieve a good quality of life. The evolution of cultural perspectives through which the territory is managed is strongly interlinked with associated **socioeconomic drivers**. For example, traditional agriculture as the principal source of income was challenged during the 1960s as the industrial model

emerged in European countries such as Spain. Equally, irrigated and non-irrigated land values declined during the same period. Consequently there was an extreme gap between the price of a hectare of terraced dry cropland (2,721 €/ha), irrigated cropland (5,723 €/ha), and urban cropland (716,041 €/ha). These extreme inequalities between land-use prices are designated by the General Urban Plan and determine land-use change patterns.

Although the above study is conducted in urban context, the argument can be extended to explain the reason why rural people are changing the forest and grazing lands in to agricultural land to meet their need for farming income sources.

2.3.2. The Land Tenure Based Explanation

According to FAO(2002:27-30) Report, there is a close association between tenure and conflict over land as it is found that the competing claims for control and use of land may provoke conflicts in the society. The presence of high population growth and the emergence of changing economic factors have huge potential in increasing competition for access to land. This competition usually has to be regulated by a society's tenure rules which are developed in response to dynamic social, economic and political relationships. The power of tenure rules in regulating the emerging competition is not always effective. It is when these tenure rules are unable to sufficiently adjust to rapidly changing circumstances, the chance of conflict increases.

For FAO (2002), the pre-existing customary tenure systems are mostly incompatible with the emerging competitive needs of the population. According to FAO (2002) report, customary tenure systems usually originated in areas where resources were extensive compared with the population. Consequently, when modern tenure laws are imposed on customary tenure rules, the

shared social consensus between the various holders of rights has a high probability of breaking down and as a result it opens the door for possible conflicts. The impacts of change and uncertainty increase when there is confusion and conflict between customary rules and modern laws.

2.3.3. The Theory of Political Economy

The main argument for the political economy explanation of conflict over land comes from the concept of political economy. As Ramella (2007:3433) said, "political economy refers to a current of study that analyzes the reciprocal influences among economic, social, and political factors and their impact on how activities are regulated in different institutional contexts." Hence, in the context of this study, the political economy explanation is used in order to describe how the economic, social, and political factors attributed to the distribution of common grazing land and related conflicts and disagreements.

One of the various scholars who used the political economy argument to explain issues related to conflict over land is Simmons (2004). In his study(Simmons, 2004:184), *the Political Economy of Land Conflict in the Eastern Brazilian Amazon*, he found that conflict over land results from power struggles over the region's abundant resources, which have been structured and restructured within a multifaceted political economy.

For Simmons (2004), conflict happens due to the presence of scarce or limited resources. The disagreement among Egypt, Sudan, and Ethiopia over the control of Nile river, cross-border disputes over oil between Iraq and Kuwait, and environmental degradation-created by overexploitation of resources are prime examples of resource-scarcity conflicts. However, what triggers more conflict is not the scarce nature of the resource but its abundant availability. To

support his argument, he presented numerous empirical studies such as the different violent conflicts that occurred among diverse groups in Ecuador and Nigeria for the control of oil, in the Democratic Republic of Congo for the control of gold, and in Sierra Leone and Liberia for the control of diamond. Since he is a proponent of the resource abundant argument, for him, it is the resource-based wealth that incites greed-driven conflict. According to him, "Primary commodities, especially high-value resources such as oil and diamonds, are attractive to ruling elites, and, consequently, their capture may spark struggles between and within states for territorial control" (Simmons, 2004:184). According to the resource abundant argument countries whose economies are dependent on the export of primary goods are more prone to political instability and conflict. Resource abundance is even linked to governments plagued with poor economic growth and instability, two factors that create greater vulnerability to conflict.

According to Simmons (2004), land conflict in the Brazilian Amazon is explained by abundant resources and weak institutions which create competition for resources within the frontier. The presence of immature tenure institutions and the aggressive nature of production and exchange relations found in places far from the long arm of the law contribute to land conflict in the region. The lack of a land tenure system that is compatible with frontier expansion and the unstable social structures, particularly the antagonistic relations between large landowners and peasant farmers, is the cause for land conflict. The failing land titling and the existing social structure allow for land conflict to emerge as class struggle between individuals differentiated by material wealth and ability to mobilize political power. The exploitive relations between capitalist and non-capitalist economies during the process of frontier expansion is also an explanatory factor for land conflict. For example, conflict arose in the region when physical

coercion was used to force nomadic nut gatherers to extract resources and as large-holders expelled squatters in the process of land appropriation and consolidation.

Beyond the institutional and structural accounts, the need to increase herd size and expand pastures facilitated land concentration which emerges on the basis of both the evolution of small ranching operations and the exercise of social power by privileged groups. For Simmons, this would in turn result in social disagreements that may lead to land conflict. The discovery of abundant valuable resources, such as rubber and nuts triggered settlement programs and caused a large displaced population attracted to the seemingly abundant land (Simmons 2004).

2.3.4. Conflict Theory

A theoretical explanation of conflict over land can also be found in the central assumption of "conflict theory". The basic idea of conflict theory has a paramount contribution in understanding conflicts over land that occur among diverse claimant groups. Its central argument revolves around natural resources which are scarce in nature. Hence it would not be a mistake to apply this theory in explaining conflict over land as land itself and resources in it are among scarce resources.

According to Sanderson (2007:662), the following are the main assumptions of Conflict theory:

> *(1) conflict or struggle between individuals and groups who have opposing interests or who are competing for scarce resources is the essence of social life; (2) competition and conflict occur over many types of resources in many settings, but power and economic resources are the principal sources of conflict and competition; (3) conflict and struggle typically result in some individuals and groups dominating and controlling others, and patterns of domination and subordination tend to be self-perpetuating; (4) dominant social groups have a disproportionate influence on the allocation of resources and on the structure of society.*

The assumption of conflict theory implies that land use change in a certain area is an indication of limited availability of land for farming. In addition, the various disagreements and conflicts among diverse claimant groups is a reflection of the presence of opposing interest groups who are competing for the scarce resource: farm land. The land given to certain groups [after a land use change is made]can be taken as one among the many types of resources in many settings in which competition, emergence of opposing interests of diverse groups, and conflict would arise. The assumption that "conflict and struggle typically result in some individuals and groups dominating and controlling others" Sanderson (2007:662) will give a sound argument since only certain groups are allowed to have access to the land and have a dominating power over those who are claiming but not allowed to obtain the access.

2.4. Previous Empirical Findings on Conflict over Land

In Sub-Saharan Africa, a study conducted by Le Meur, *et al*. (2006:27) found out that there are three sets of factors regarding changes that favor and facilitate tensions and conflicts over land, landed resources and natural resource access in a specific contexts and combinations. These are demographic and environmental factors, law and developmental factors, and the political, policy and economic factors.

Demographic factors such as incremental population pressure by migrations and the rise of stock numbers in areas of commercial production have an influence that increases competition for resources between individuals and groups. In addition, the rate of competition for natural resources is facilitated and affected by environmental factors since phenomena like dryness, volatility in climate, and soil erosion make resources scarce and constitute some resources

(irrigated areas, pastures, dry season water points, wetlands in dry lands) strategic and overvalued.

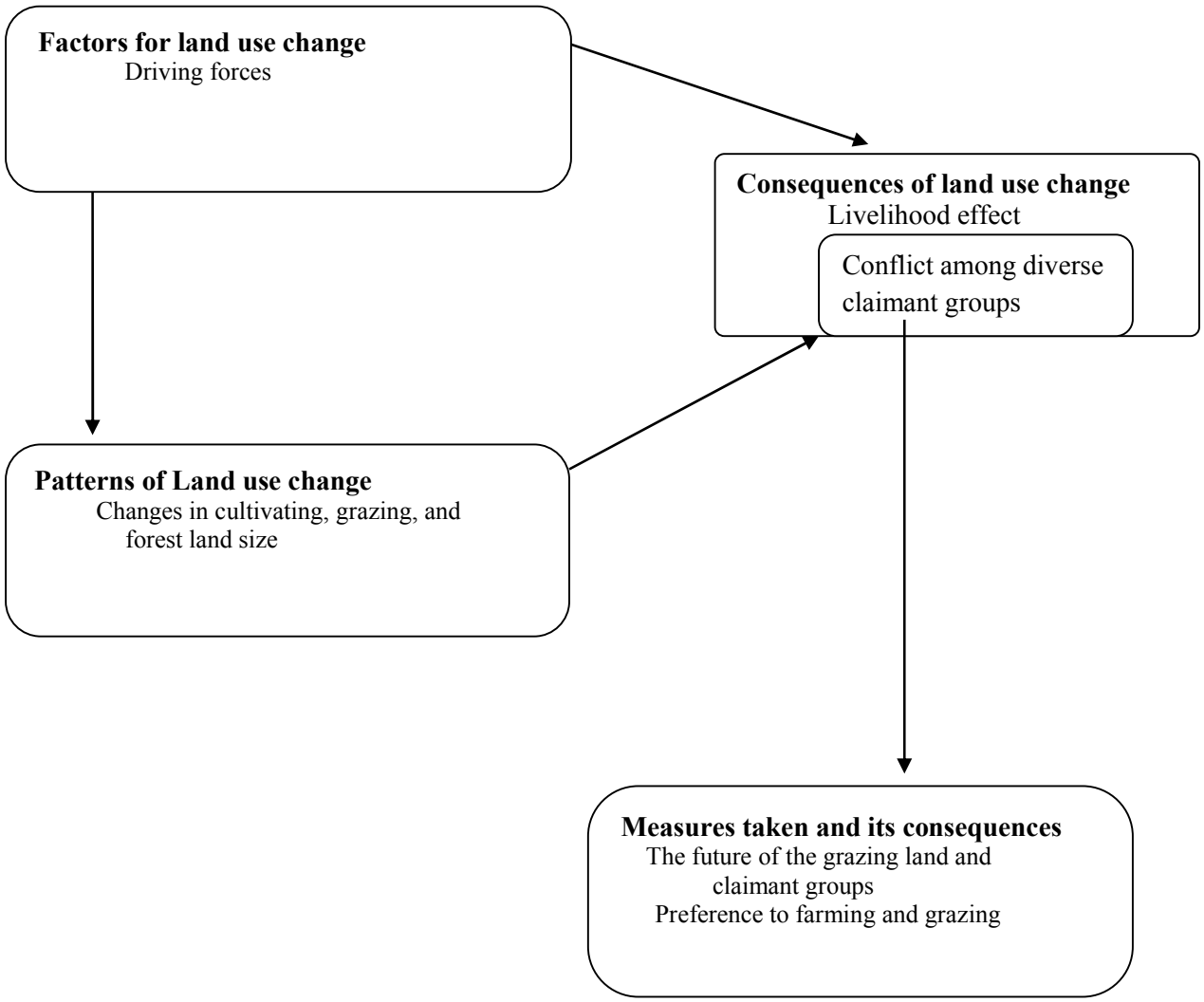
Among the legal factors, opposing incidences or contradiction between national and customary borderlines, the presence of enforced registration and entitlement against customary rights, unsuccessful decentralization toward local institutions, and the probability to resort to opportunistic administration and ward courts in land affairs contribute to the overlooking of local interest. Developmental factors such as external interference made by the states or nongovernmental organizations can also reset local natural resource management systems and help new claims and disputes emerge. Le Meur and his colleagues have found from literatures that combined effects of these factors contribute to create "open moments" within which competing interests rise up. Within these moments, some "well-connected" actors can claim new competing rules to reset institutions and take over. These moments enact opportunistic behaviors and situational adjustment.

The action of urban elites such as the state agents, merchants, investors, and politicians to capture near-urban resources, the dispossession of smallholders by land tenure policies, laws which are nationality based on ethnic claims of control over landed resources, the reduction of rights of migrants and pastoralists, the reduction of women's rights in some rural societies, and social group's competition over landed resources and water access are among the socio-political factors which can create tension and forge conflict over land and other natural resources. Economic factors, for example commercialization and commoditization are restructuring African agrarian systems to change toward enclosure, individualization, and production and land markets. The capture of land by national and international investors for commercial agriculture, tourism, conservation, and mining speculations also have their own implication on conflicts over

land and landed resources. In general, socio-political and economic factors make social status-based inequalities over landed resources access which contribute to tensions through the fact that people, especially the un-favored people, think these inequalities are not legitimate. In addition, people who have high social-capital, people who are "well-connected", are more able than those who have less social connections to use conflicts to get land, implement land concentration and enclosure, and begin processes of exclusion at the expense of the others.

2.5. Conceptual Framework

The following figure shows the relationship between the different variables. It is this figure which I used as a conceptual framework for guiding the overall accomplishment of the study. It was drawn by reading various literatures.



3. STUDY AREA AND RESEARCH DESIGN

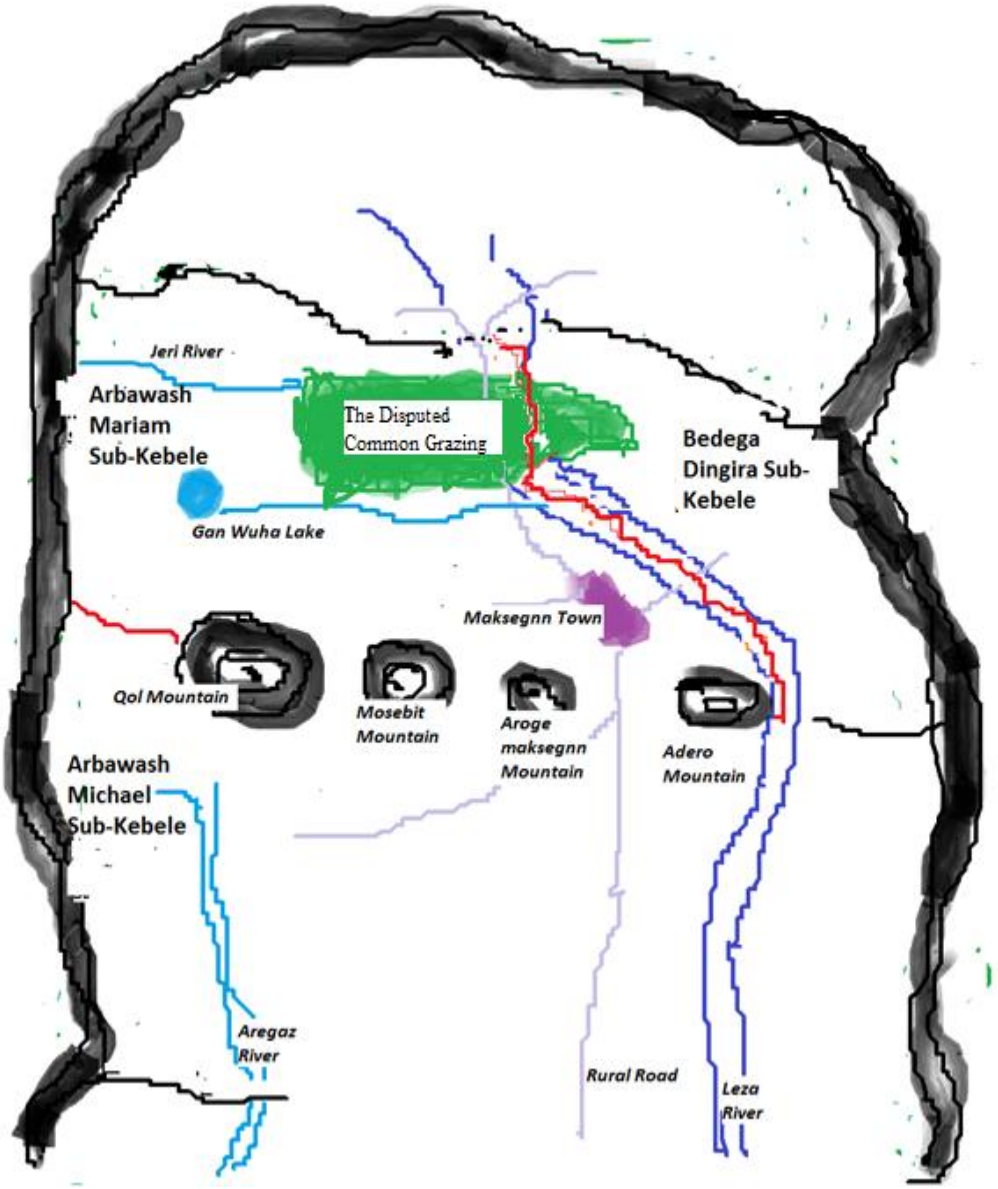
3.1. Study Area

3.1.1. The Topographic Features

Landscape

The landscape of Arbawash Dingira Kebele looks like a "natural stadium". The Kebele and its surrounding areas are encircled by mountains that reach a maximum height of around 3000 meters or more above sea level [as estimated by the employee of the Kebele Information Center]. This mountain is called Dingira. The various mountains have enclosed all of Arbawash Mariam and half of *Bedega*-Dingira Nius-Kebeles. Two Gotts from *Bedega*-Dingira Nius-Kebele, Addis *Amba* and *Demij*, are found on the top of the mountain. On the other hand all parts of Arbawash Michael Nius-Kebele are located outside of this "natural stadium". Generally, the study area and its nearby surroundings can be described as both a level field and a grassy plain with plateau lands and mountainous ranges as well. According to the Kebele Information Center, 50% of the Kebele land is a level field used for farming and grazing while 40% of its area is mountainous which can be used for farming as well. The rest 10% are bare and stony land and with highly mountainous peaks and gorges that can never be used for farming. A self-drawn picture of the topography of the study area is provided on next page.

Graph 3.1. Map of the study area



Source: Self-drawn

Key:

- The tick black colors indicate the mountainous region which surrounds the study area
- The thin black colors the boundary of the Kebele.
- The red line is used to indicate the boundary of the three Nius-Kebeles.
- The blue lines indicate the rivers
- The green color is used to indicate the disputed land.

Area of Land Coverage

The size of the Kebele is not properly known. However the area of land coverage used for farming, grazing, forest, and various institutions can give a clue about the area of the Kebele.

Table 3.1. Size of Land coverage used for different purpose in the Kebele

S.No.	Purpose	Area [in hectare]
1	Farming Land	1390.66
2.	Grazing Land	317.2625
3.	Forest Land	86
4.	Swampy Place[used for grazing, grass is grown for house's roof coverage]	100
5.	Public Institutions [School, Administrative Center, Health center for both humans and animals, Developmental Association, Farmers' Union]	7.75
6.	Non-Governmental Institutions [Churches]	4.75
7	Non Arable Land [stony place]	211.82 [Estimated]

Source: The Kebele Information Center

Table 3.2 shows the size of grazing land possessed by each Nius-Kebele. As Table 3.1 and Table 3.2 show there are 317.2625 hectares of grazing land in the Kebele. Of this land, 168.2625 hectares is specified for each Nius-kebel without any claim made by the other. However, the 149 hectares of grazing land that are located in Arbawash Mariam Nius-Kebele have been the source of contention among the three Nius-Kebeles.

Table 3.2. The Area of Grazing land Possessed by Each Nius-Kebele

Rural Nius-Kebele	Gott	**Area [In hectare]**	**Total**
Arbawash Mariam	*Asameg*	12	48.0125
	Kattal	3	
	Kurnchin	25	
	Ly Yegindo	6	
	Rayt	1	
	Tach Yegundo	1.0125	
	Mariam-Silsila Grazing Land [not specified to a certain Gott]		149
Arbawash Michael	*Gechin*	3	36.25
	Qorenchin	6.25	
	Seblan	25	
	Tebi	2	
Bedega Dingira	*Addis Amba*	11	84
	Demij	5	
	Senakil	41	
	Yekumbal	15	
	Zengebal	12	
		Total	317.2625

This is the land claimed by different interest groups

Source: The Kebele Information Center

Type of Soil and Climate

In terms of soil type, according to the Kebele information center, 60% of the land is red soil while the rest 40% is black soil. Both can be used for farming. Regarding the climatic condition, the Kebele has a moderate climate [*woyna dega* which covers 75% of the year] and warm climate [*qollama* which covers 25% of the year].

3.1.2. Demographic and Socio-Economic Characteristics

Population Profile

According to the data obtained from the Kebele Information Center, the Kebele has a total population of 7731 with 3788 males and 3943 females in in the year 2004. The number of rural households in each Nius-Kebele is shown in table 3.3.

Table 3.3. The Number of Households in each Nius-Kebele

Rural Nius-Kebele	Gott	Number of Rural Households		Total	
		Male Headed	*Female Headed*	Gott	Nius-Kebele
Arbawash Mariam	*Asameg*	65	15	80	539
	Kattal	54	21	75	
	Kurnchin	65	24	89	
	Ly Yegindo	65	24	89	
	Rayt	56	24	80	
	Tach Yegundo	111	15	126	
Arbawash Michael	*Gechin*	88	10	98	308
	Qorenchin	67	7	74	
	Seblan	50	18	68	
	Tebi	59	9	68	
Bedega Dingira	*Addis Amba*	73	3	76	488
	Demij	109	18	127	
	Senakil	108	4	112	
	Yekumbal	61	14	75	
	Zengebal	83	15	98	
Total		1114	221	1335	1335

Source: The Kebele Information Center, 2004

As Table 3.3 shows, the number of male headed households are greater than the number of female headed households in each Nius-Kebele in particular and the Kebele in general. Based on this data, it is possible to say that most of the households in the Kebele are male headed. Even the ratio of the number of male headed households to the number of female headed household is 5 to 1. This is an indication that the number of female headed households is less than the number of male headed households.

Landholding Size

The following table shows the landholding size of rural households of the study area

Table 3.4. Landholding size of rural households

Landholding Size [in hectare]	Number of Rural Households
[0,0.5]	218
(0.5,1]	449
(1,1.5]	418
(1.5,2]	176
(2,2.5]	43
(2.5,3]	10
Above 3	4

Source: The Kebele Information Center, 1998

From Table 3.4, it can be observed that most of the rural households in the Kebele have a land holding size that ranges 0.5 hectares to 1.5 hectares. Only very few of the households have a land holding size of 2.5 hectares or more.

Socio-Economic Activities

The main means of livelihood for the rural households in the Kebele and its surrounding areas is farming. Hence, it is the basic economic activity that takes the lion's share of each household's available working hours. The rural households also support their means of livelihood with animal husbandry. In addition, there are other sources of extra income though the degree of influence in affecting the lives of most of the rural households may not equal that of farming. These activities include beekeeping, hen- breeding and rural trade of a various sorts. In addition, iron smithing, clay-making, weaving, jewelry making and tanning are some of the activities by which some groups earn their main means of livelihood.

The rural households have also organized themselves as per their church and the various associations [locally known as *mahiber*] based on monthly holidays for the purpose of helping

each other during the difficult times and strengthening their sense of belonging or social ties during the good times as well. In addition, *Idir* and *Debo [Wonfel]* are the main traditional associations by which the rural households share their feelings of sadness when a person dies [with *Idir*] and work together [with *Debo*] while cultivating and gathering crops. However, *Debo* is now leaving its place for "Yelimat Serawit" [Development Army] which is being implemented by the government. Accordingly, the households have to organize themselves in a "one to five leadership" group for collaborating, for making it easy for the local government to access the rural households, and for controlling almost all their activities and daily life. In addition there is one farmers' union which is responsible for providing agricultural inputs, sugar, tea, and soap for members who are organized under the "one to five group leadership" and members of EPRDF.

3.2. Research Design

3.2.1. General Research Approach

A case study approach was used as a means of empirical inquiry for investigating the phenomena related to the distribution of common grazing land and emerging conflicts among diverse claimant groups. The reason behind selecting this approach was that the issue studied is typical of cases of land distribution. The distribution of common grazing land to certain groups for farming and associated conflict is one of the cases of land distribution and land use change. This approach rests on the assumption that by studying the typical cases through intensive analysis, it will be possible to draw generalization that is applicable to other cases of the same type (Kumar, 2005:113).

Since the study has described and examined the rationale for distributing the common grazing land, the various justifications, resources and interest preserving mechanisms used by claimant

groups and it has discovered the various measures taken and their consequences in mediating the different interest groups, an intensive study approach was employed. In this aspect the research followed a qualitative approach. Also, in order to describe the livelihood effect of the distributed common grazing land and to categorize the claimants groups' preference to grazing and farming the distributed land, an extensive study accompanied by quantification was used. Hence, this research has used the quantitative approach. In addition, since those data expressed in number were given meaning or interpretation, the research has used a qualitative approach. So, this study has employed triangulation in its overall accomplishment of the specific objectives.

In reference to the contact periods made with the respondents, interviewees and focus group participants, a cross- sectional study design was used in conducting this study. The reason behind using this study design is that it was difficult in the absence of any sponsor to go frequently in collecting data in the study area. Basically the objective of this research was not oriented in examining a dynamic process which involves change over time. But it was concerned with gathering data at one point in time to meet its objectives. Hence, this study design was appropriate in the lack of a sufficient budget or ample time.

3.2.2. Specific Methods of the Study

In its method of study, this research employed an in-depth interview, focus group discussion, survey and documentary research. By employing all these methods of research, the study has followed a methodical triangulation approach. The reason behind using a methodical triangulation approach was that each method provides supplementary information for the other and one method also checks the information obtained from the other.

3.2.2.1. Key Informant Interview and Indepth Interview

A key informant interview was made to 3 Kebele officials, who were selected by employing a purposive sampling technique. The officials were interviewed in order to find out whether the intended purpose of the distributed common grazing land was achieved, to identify claimant groups (their bases of claim and the resources or mechanisms they employed to realize their interest), to describe the livelihood effect of the distributed common grazing land to those who have an access, and to describe their preference to grazing and farming the distributed land.

In addition, an in-depth interview was made to 15 household head interviewees [8 household head interviewees from Kattal Gott and 7 household head interviewees from Seblan Gott], who were selected by purposive sampling technique. Individual household heads were selected by convenience sampling technique. These heads of household were asked to describe their bases of claim, to describe the resources and mechanisms they employ to realize their interest, to give details about the livelihood effect of the distributed common grazing land to those who have an access, and to identify their preference for grazing and farming the distributed land.

3.2.2.2. Focus group Discussion

Five focus group discussions were held and the focus group participants were chosen by employing purposive sampling technique on the bases of their Gott and whether they are household heads or not. Individual household heads were selected by convenience sampling technique. The first and the second focus groups [10 participants from Kattal Gott and 8 participants from Seblan Gott] encompassed household heads of the Gotts. The third and the fourth focus groups [9 participants from Kattal Gott and 9 participants from Seblan Gott] were the youth groups. The fifth focus group [3 participants from Kattal Gott and 3 participants from

Seblan Gott] was the village elders group which was chosen from the two Nius-Kebeles, Arbawash Mariam and Arbawash Michael.

The reason behind employing focus group discussion was that it gave basic information describing the measures taken and their consequences in mediating the different interest groups. In addition, this method was selected for the reason that it provided supplementary information describing the claimants' bases of claim and the resources and mechanisms they employed to realize their interest. It gave details about the livelihood effect of the distributed common grazing land to those who have an access and it identified their preference to grazing and farming the distributed land.

3.2.2.3. Survey

The survey method was used in order to give a detailed description about the livelihood effect of the distributed common grazing land. In addition to giving a detailed description about what livelihood effect the distributed common grazing land had, the survey method was used for the purpose of assessing the preference and attitude of the claimant groups towards the distributed common grazing land. It was also used for the purpose of describing the criteria for accessing the distributed common grazing land.

Questionnaire

A survey questionnaire was developed and administered to the selected sample of household heads. The survey instrument was prepared in order to answer questions about the criteria used in order for households to have access to the distributed common grazing land or what livelihood effect it had for the households. In addition, the survey was developed to categorize the claimant groups' preferences to grazing and farming the distributed land and to assess the households' attitudes to the land as well. In measuring the attitude of household heads to the distributed land

a reliable [with Cronbach's alpha=0.854, and with split half Spearman-Brown Coefficient =0.849] and valid questionnaire was developed. See annex I on the data collection instruments part.

Sample Size and Sampling Technique

The study was conducted by taking a representative sample from the two Nius- Kebele*s,* Arbawash Mariam and Arbawash Michael, at household level. Since, the claimant groups were from these two Nius-Kebeles, first a sample of Gott from each Nius-Kebele was selected by applying the simple lottery method on SPSS. Then, all households which belong to the two different Gotts were totally enumerated. Accordingly, Kattal Gott[from 6 Gotts] and Seblan Gott [from 4 Gotts] were selected from Arbawash Mariam and Arbawash Michael Nius-Kebeles respectively. According to Arbawash Dingira Kebele Information Center, there are 75 and 68 rural households which are respectively found in Kattal and Seblan Gott. Of these figures, I managed to get information from 70 households of Kattal Gott and 51 households of Seblan Gott through their respective household heads. Each of the Gotts is representative of the Nius-Kebeles in which they are selected since all the Gotts in one Nius -Kebele are found with one side opposite to the other as far as their interest to the distributed common grazing land is concerned. Hence, the Gotts that are located in each Nius -Kebele are homogenous regarding their claim to the grazing land. In addition, all the Gotts in each Nius-Kebele are found with similar socio-economic activities. Consequently, sampling a Gott from each Nius-Kebele and enumerating all the households would ensure the representativeness of each Gott for their respective Nius-Kebele.

3.2.2.4. Documentary Research

While each of the three methods of the study were employed to generate mainly primary data, documentary research was also used in generating secondary data in order to gather socio-economic and other background information about the study area and population.

3.3.3. Method of Data Analysis and Presentation

The gathered data was analyzed and presented qualitatively by describing, explaining, and interpreting each raw datum and case. It was analyzed quantitatively through the application of statistical procedures, manly with SPSS. After the data was gathered and analyzed with the appropriate methods, it was organized and presented on tables and graphs. While the above techniques of data presentation were used mostly for quantitative data, in order to present the qualitative data gathered from the key informants, in-depth interviews, and focus group discussions, narrative and interpretive activities were done.

3.3.4. The Basic Unit of Analysis and Observation Unit

In this study the household was taken as a major social arena of analysis in the understanding of the distribution of common grazing land and conflict because of the fact that the household is the unit of production and consumption in the rural areas.

In addition, the household is a place in which many socio-economic interdependencies take place between or among the individual members. Ellis (2004:18) also solidifies this argument. As he said the household is the paramount unit of social and economic analysis since the view is taken that individual action like that of men, women, youth or any member of the household cannot be interpreted separately from the social and residual space they inhabit. Even the definition of housing as a private space for families and friends to live together by sharing common concerns

(Green and Haines 2002:114) can also be a reason for using household as a unit of analysis. Household heads were the observation units.

3.3.5. Conceptualization and Operationalization of Major Variables

From the following major variables of the study, household size, landholding size and income related variables were independent variables while the livelihood effect, preference and attitude were dependent variables. These variables are conceptualized and operationalized as follows.

Table 3.5. Conceptualization and operationalization of Main Variables

Concept	Variable	Indicator	Measurement Process	Level of Measurement
HH Size	Members of a household	The number of people who are living in the same dwelling	Counting of the members	Scale
Landholding Size	Land possession	The area of land owned by households	Asking household heads how much hectares of land their household owns	Scale
HH Asset	Farm Asset	Average Total agricultural production from their landholding size in the years 2004 and 2005 E.C.	Asking household heads to list the type, amount of produce [in kuntal] , estimate the price [in birr]in each year	Scale
	Livestock Asset	The number of domestic animals possessed by each household during the time of the study	Asking household heads to list the type of animals and estimate their price	Scale
HH Income	Extra Income	Every sources of income other than income from agriculture and domestic animals	Asking household heads to list all sources of extra income and estimate it	scale
	Livestock Income	Income obtained by selling animals and its products	Asking HH heads at what price they sold animals and its products	scale
	Income from the distributed common grazing land	The average income during the maximum and minimum years of production[in birr]	Asking household heads the quantity[in kuntal] and price[in birr] of the produces	scale
Livelihood Effect	Livelihood Effect	The income change brought by the distributed grazing land on the households	Asking household heads to describe and rate on their own	Ordinal
Preference	Inclination [Preference]	The choice made in favor of either farming or grazing the distributed land but not both	Asking household heads what they choose and what for.	nominal
Attitude	Attitude	Using Likert scale to measure the households' view to the distributed land	Asking household heads to rate for each items and computing the total	Ordinal / scale

3.3.6. Ethical Consideration

Starting from its beginning to its accomplishment, the research was conducted as per the ethics of social research. Nothing was done without the full consent of the subjects of the study or in a way that violates their human dignity and freedom. The study was conducted in a way that does not harm respondents, interviewees or key informants and focus group discussants.

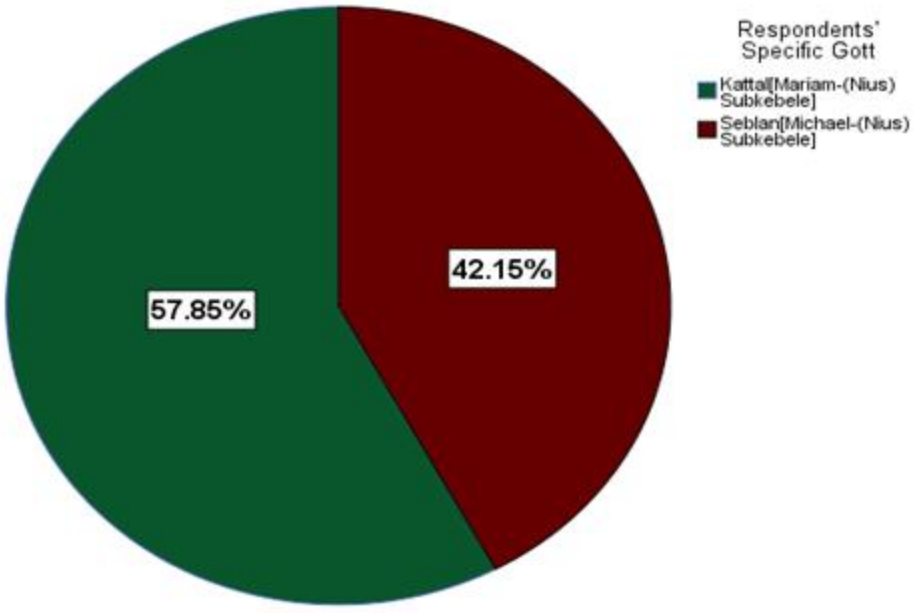
4. RESULT AND DISCUSSION

4.1. Socio-economic Background of Interviewees, Discussants and Respondents

This section mainly presents the socio-economic background of survey respondents and the sample households. The socio-economic background of interviewees, key informants, and focus group discussants is given on annex 4.1 and annex 4.2

4.1.1. Specific Gott, Sex, Age and Educational Status of Respondents

Graph 4.1. Specific Gott of Respondent Household Heads



Of the total 70 (57.85%) Kattal Gott respondents, 50 (41.3%) were males and the rest 20 (16.5%)were females. On the other hand, from the total 51 (42.15%) Seblan Gott respondents 35 (28.9%) were males and 16 (13.2%) were females. This figure shows that the number of female household heads in both Gotts was small. As the binomial test of proportion[see on Annex 4.4]

also shows, there was a significant difference between the proportion of female household heads and male household heads in the two Gotts and the total sample too as the p-values (0.00,0.01 and 0.00) in the three cases are less than the alpha value ($\alpha = 0.05$).

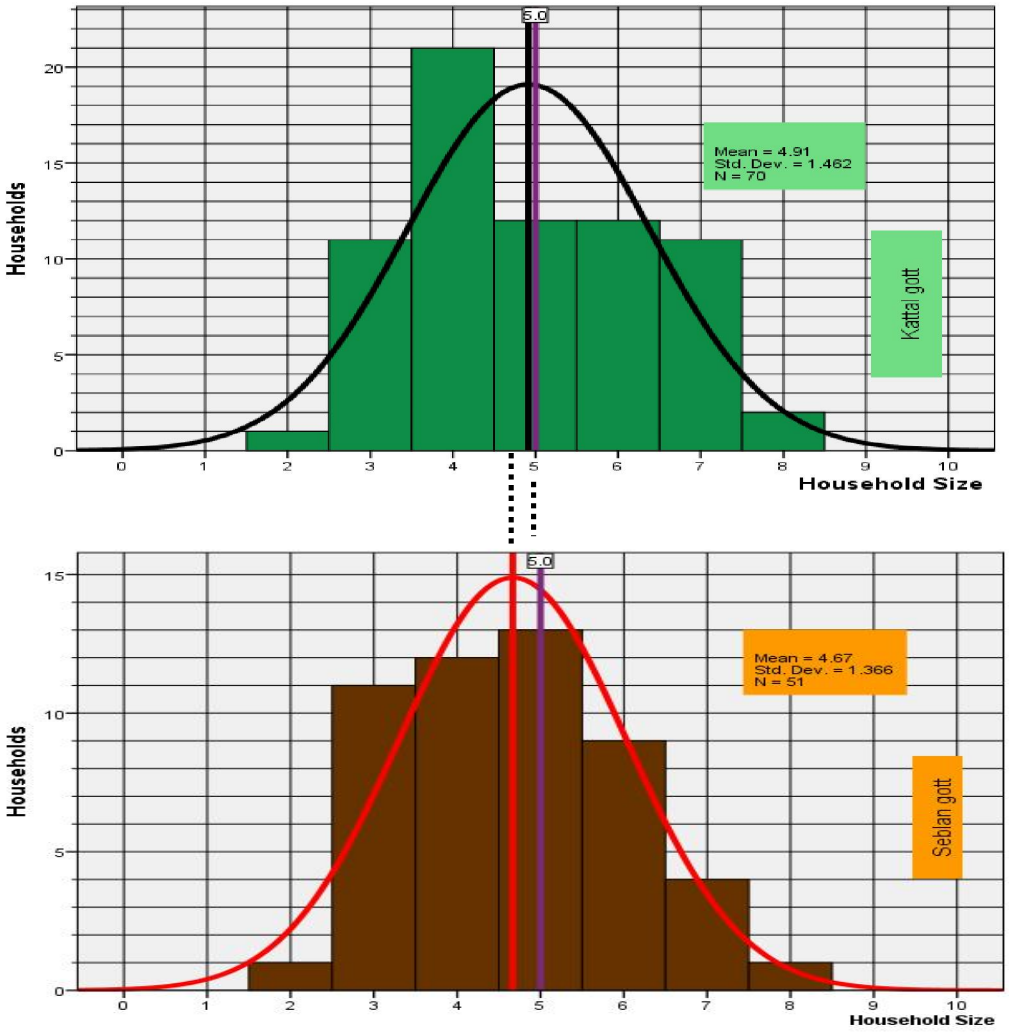
The household heads from Kattal Gott had a mean age of 46.8714 years while that of Seblan Gott household heads had a mean age of 46.3137 years. In both Gotts, more than half of household heads (54.3% from Kattal and 51.9% from Seblan) were found above their respective mean age. On the other hand, the rest 45.7% and 45.1 % respondents (from Kattal from Seblan Gott respectively) had an age below the mean age. In order to know whether the difference in the mean age of the two Gott household heads was significant, an independent sample t-test was applied since the age of respondents of the two Gotts was normally distributed [see Annex 4.5]. As it is clearly shown on Annex 4.6, the p-values (Equal variances assumed =0.713 and Equal variances not assumed= 0.703) are not less than the alpha value ($\alpha = 0.05$). This is to mean that the mean ages of the household heads of the two Gotts were not differing significantly.

In terms of academic status, 28 (23.1%) and 21 (17.4%) household heads from Kattal and Seblan Gott respectively were not able read and write. On the other hand, 30 (24.8%) household heads from Kattal and 23 (19.0 %%) household heads from Seblan were found able to read and write. Academically being able to write and write, in this research context, refers to the cognitive ability to read and write which is acquired through formal or informal education. The rest in both Gotts were in an academic status that can be labeled as an elementary school level of education. For specific details of sex, age, educational and marital status of household heads of the two Gotts see annex 4.3.

4.1.2. House Hold Size and Land Holding Size of Sampled Households

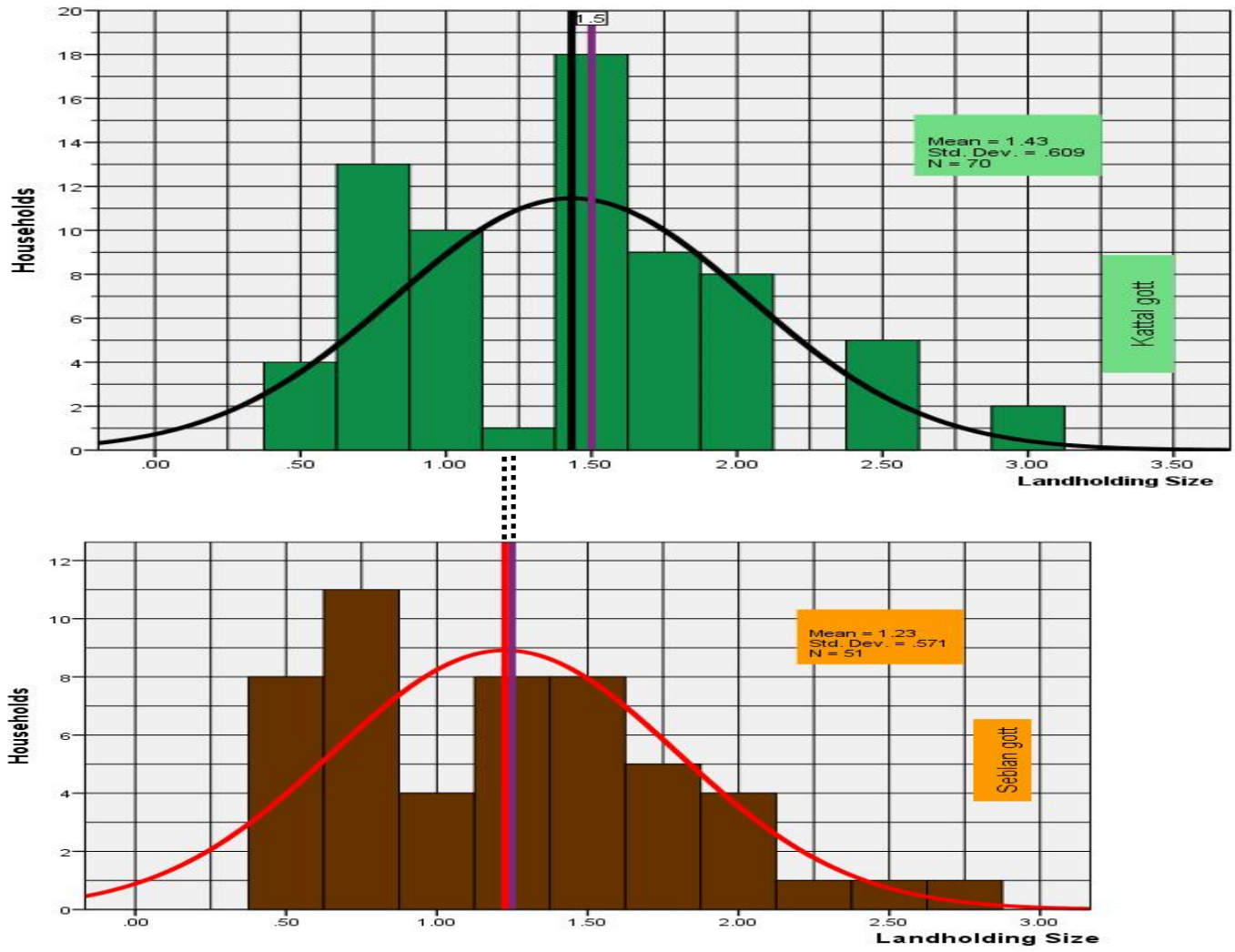
As Annex 4.7 shows, the average number of household members for Kattal and Seblan Gotts were 4.91 (~5) and 4.67 (~5) with standard deviations of 1.462 (~1) and 1.366 (~1) respectively. Based on their respective average household size, nearly 64.3% and 72.5 % of households from Kattal and Seblan Gott were found to have size below the mean while the rest 35.7% and 27.5% of households had a household size greater than the mean.

Graph 4.2. The normal distribution of the Household Size of the two Gotts



In both Gotts [see graph 4.2], the majority of households had a household member less than five. From my personal observation of the past and the current household size in the study area, the number of members of a given household who are residing in one roof seems decreasing as compared to the past in the both Gotts. This might be because of the shortage of resources available in the household.

Graph 4.3. The normal distribution of the land holding size of the two Gotts



The average land holding size of Kattal and Seblan Gott households were 1.4321 and 1.2255 hectare with standard deviations of 0.60929 and 0.57065 respectively. Forty percent and 45.1% of households from Kattal and Seblan Gotts respectively were found with a land holding size

which is less than the mean while the remaining 60% and 64.9% of households from the respective Gotts had a land holding size above their respective means. This can be interpreted that the average number of households in each Gott has a land holding size of below 1.5 hectares. In other words, a member of a given household in both Gotts will not have even a quarter hectare of land. This, in turn, may enforce household members to search for additional land.

Since the two variables were normally distributed [see Annex 4.7], an independent sample t-test was applied so as to examine whether the differences in the mean number of people in each household and landholding size of the households of the two Gotts were significant. Based on this test (see Annex 4.8), the difference on the mean household size of the households of the two Gotts was not significant since the *p-values* (Equal variances assumed =0.346 and Equal variances not assumed= 0.341) are not less than the alpha value ($\alpha = 0.05$). In addition, as it is shown on Annex 4.8, the difference between the mean landholding size of households of the two Gotts was not significant too as the *p-values* (Equal variances assumed =0.061 and Equal variances not assumed= 0.059) are not less than the alpha value ($\alpha = 0.05$). This is to mean that the two Gotts were found with nearly equal average household and landholding size. In other words the difference in the average household size, and land holding size of the two Gotts was not large.

Correlation between Household size and land holding size

In order to have a look at the type of relationship which exists between the two variables (household size and land holding size) Pearson's correlation was used as it is indicated on Annex 4.9. The result shows that both in the Gotts and the total sample, the p-values (=0.000 for the Gotts and the total sample) are less than the alpha value ($\alpha = 0.01$). This implies the correlation between the two variables was significant. As the calculated score shows on the table Kattal Gott

scored a correlation coefficient r=0.75 while Seblan Gott scored a correlation coefficient r=0.79. On the other hand, the correlation coefficient of the two variables for the total sample was 0.76 which is larger than that of Kattal Gott but smaller than that of Seblan Gott.

In terms of magnitude, all the three correlation coefficients are largely greater than 0.5 (the point where the correlation coefficients are labeled as moderate). As a result it will not be a mistake to state that the relationship between the two variables was strong. The correlation coefficient in the three cases is positive. This denotes that there was a positive relationship between household size and landholding size in both Gotts as well as the total sample. Positive correlation indicates that high scores in one variable go with high scores on the other variable so a household which has a large number of household members tends to have a large land holding size and vice versa.

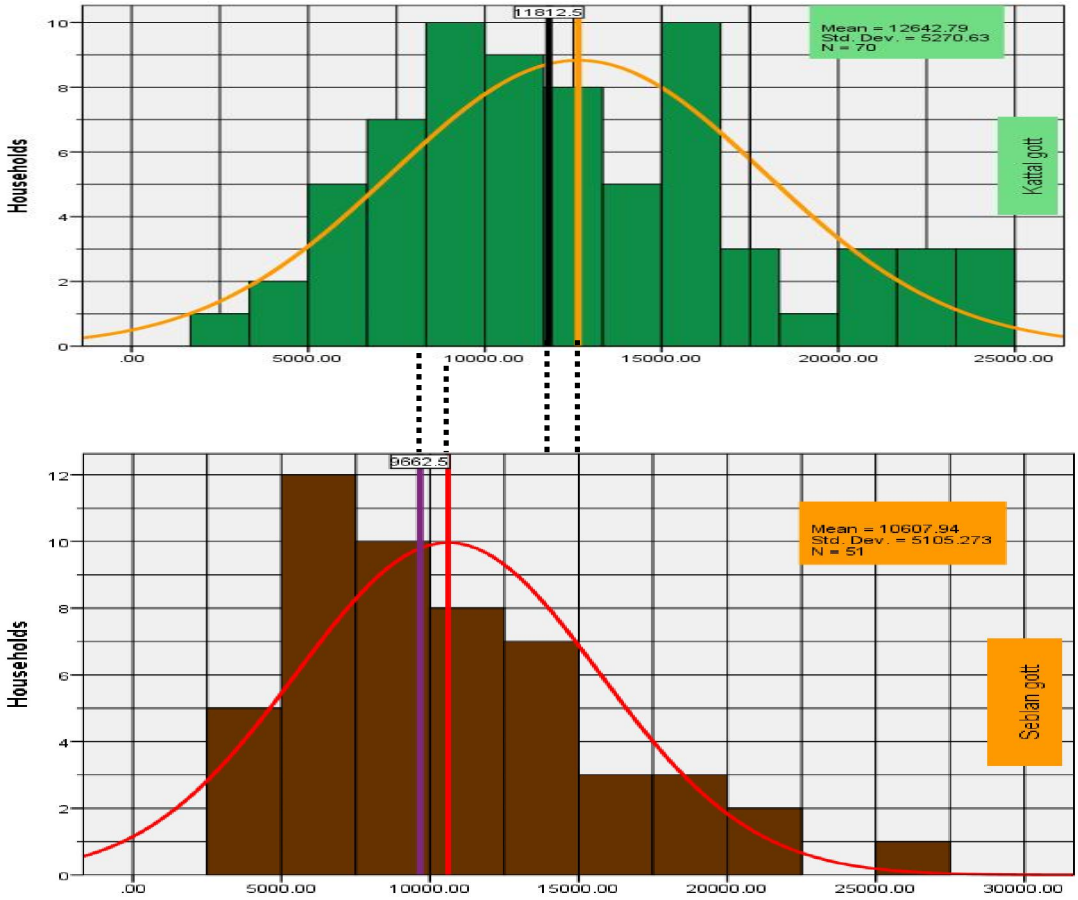
4.1.3. Households' Asset and Income

Farm Asset

In order to describe the amount of farm asset generated annually by the rural households of the two Gotts, first respondents were asked to list the type and quantity of each crop they produced for the years 2004 and 2005 E.C. They were also asked to estimate the unit price of each produce (the price of one *kuntal*(=100 killogram) product in Ethiopian birr. Then the total price of each type of produce and the total price of all produce in the two years of production were calculated through SPSS. Finally, the average of the two years of production was computed so as to estimate the amount of farm asset obtained yearly by the households [see Annex 4.10]. In order to give a further description and comparative analysis about the annual farm asset of the two Gotts, the normal distribution of agricultural or farm asset of rural households was tested [see Annex 4.11]. As a result the variable was distributed normally in Kattal Gott but not in Seblan

Gott. Graph 4.4 also shows that the distribution of farm asset is positively skewed which implies more than half of rural households in both Gotts earn an annual average farm asset below their respective mean.

Graph 4.4. The annual average farm asset distribution of rural households



Note: The x-axis on the three graphs represents the amount of asset [in birr] and the black and wine color lines on the normal curves are the medians of the respective Gotts

However, the Kurtosis of Kattal Gott is negative which is by definition Leptokurtic curve while that of Seblan Gott is positive which is by definition Platykurtic. This implies that the annual average farm asset of rural households of Kattal Gott is distributed far from the mean as

compared to Seblan Gott. It is by applying the non-parametric tests that a comparative analysis about the two Gotts was given as shown on Annex 4.12.

As the Hodges-Lehman estimate given on Annex 4.12 shows the difference on the medians of the two Gotts (11811.25 birr for Kattal Gott and 9662.5 birr for Seblan Gott) was 2148.75 birr. This difference is found in the interval between 295 birr and 3912.5 birr with a 95% confidence interval. The Median test indicates that the medians of the two Gotts were the "same" and hence the difference was not significant. The Moses extreme reaction test also shows that the ranges of the two Gotts (21240birr for Kattal and 22500 birr for Seblan) were not differing significantly. However, the Mann–Whitney U test clearly indicates that each rural household's score of average annual farm asset was found to differ significantly from one Gott to another.

The percentiles from Annex 4.11 also tell that 25% of households from Kattal Gott and Seblan Gott have an annual asset below 8574.3750 birr and 6575.0000 birr respectively. On the other hand, the median of the two Gotts indicates that while 50% of the rural households from each Gott has a score below the median, the other half of each Gott has an annual average farm asset above the median. The 75^{th} percentiles of the two Gotts indicate that 75% of rural households from the two Gotts have an annual average farm asset that is below 15903.1250 birr and 12950.0000 birr respectively. The top 25% of rural households from the two Gotts were found to have an annual average farm asset that is above 15903.1250 birr and 12950.0000 birr respectively.

Correlation between Farm Asset and Landholding Size in rural households

Although every person expects a direct relationship between land holding size and farm asset as long as the circumstances of production are normal, it is worthwhile to describe the strength that

the two variables have across the two Gotts. As Annex 4.13 shows, land holding size and agricultural asset were positively correlated which was significant at $\alpha = 0.01$ in both Gotts and the total sample. The degree of strength was also very high in all three cases($r=0.864$ for Kattal Gott, $r=0.952$ for Seblan got and $r=0.902$ for the total sample). All this implies that rural households which have larger land holding size were found with higher agricultural asset in both Gotts and the total sample as well.

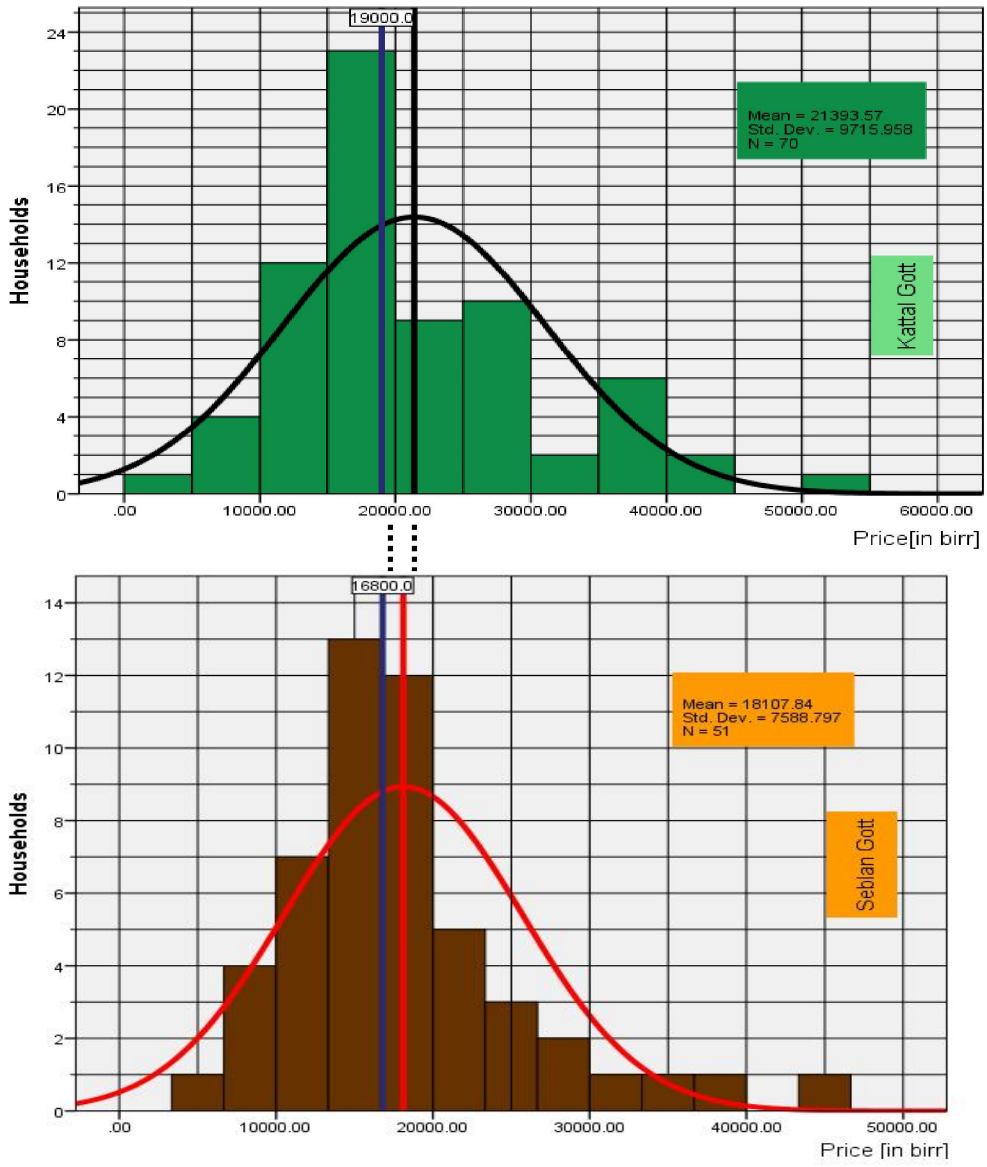
Livestock Asset

So as to give a detailed description and analysis of asset obtained by rural households from domestic animals, first household heads were asked to list the type and the respective number of domestic animals possessed by their households. Second, the household heads were asked to estimate the unit price of each domestic animal as per the market demand during the time of survey. Finally, respondents estimated the total price of each type of domestic animals and the total price of all domestic animals possessed by sampled households (see Annex 4.14) was calculated by using SPSS. In order to give descriptive details of the respondent estimated total price of animal possession of the two Gotts and a comparative analysis, a normality test was computed by SPSS. As seen in the graph, the variable werewas not distributed normally in either Gott [see Annex 4.15 and graph 4.5].

As Graph 4.5 also shows, the distribution of the respondent estimated total price of all animals possessed by rural households in the two Gotts is positively skewed which implies more than half of the rural households in both Gotts were found to have domestic animals with a respondent estimated total price of below their respective mean.

In addition, the Kurtosis of the distribution of the two Gotts is positive. The fact that the two Gotts have platykurtic distribution implies that the respondent estimated total price of all animals possessed by rural households in the two Gotts is distributed in a steep, stubby curve with a short tail that is nearer to the mean. The presence of non-normal distribution calls for non-parametric tests.

Graph 4.5. The distribution of respondent estimated total price of all animals possessed by rural households during the survey



Annex 4.16 summarizes the non-parametric tests run on SPSS for the purpose of giving a comparative analysis of the estimated total price of all animals possessed by rural households in the two Gotts. From Annex 4.16 it is clearly seen that the difference between the medians of the two Gotts was 2600.00 birr as it is given by the Hodges-Lehman estimate. This difference is found in the interval between 100.00 birr and 5400.00 birr with a 95% confidence interval. The Median test indicates that the medians of the two Gotts were not the same and hence the difference was significant. On the other hand, the Moses extreme reaction test shows that the ranges of the two Gotts were not differing significantly. The Mann–Whitney U test clearly indicates that each rural household's score on the respondent estimated total price of all animals possessed was found to differ significantly from one Gott to another.

The percentiles from Annex 4.15 also tell that 25% of households from Kattal Gott and Seblan Gott have domestic animals with an estimated total price of below 15325.00 birr and 13500.00 birr respectively. The medians of the two Gotts on the other hand indicate that while 50% of the rural households from each Gott have domestic animals with an estimated total price below their respective median, the other half from each Gott have an annual average farm asset above the median. The 75^{th} percentiles of the two Gotts indicate that 75% of rural households from the two Gotts have domestic animals with an estimated total price that is below 27325.00 birr and 20300.00 birr respectively. The top 25% of rural households in each Gott were found to have domestic animals with estimated total price that is above 27325.00 birr and 20300.00 birr respectively.

Correlation between Landholding Size and Livestock Asset

As long as land and domestic animals are among the main properties of rural households, presenting their relationship is worthwhile. For this purpose Annex 4.17 has summarized the correlation between land holding size and domestic animal possession in terms of estimated total price. As Annex 4.17 shows, land holding size and the respondent estimated total price of domestic animals possessed by rural households were positively correlated which was significant at $\alpha = 0.01$ in both Gotts and the total sample. The degree of strength was also strong in all three cases($r=0.690$ for Kattal Gott, $r=0.707$ for Seblan Gott and $r=0.703$ for the total sample). All these imply that rural households which have larger land holding size were found with higher respondent estimated total price of domestic animals possessed in both Gotts and the total sample as well.

Livestock Income

The comparative description of domestic animals of rural households given before is based on how many domestic animals rural households have and the respondent estimated total price of each animal. In addition, household heads were also asked the direct cash income obtained by rural households from each type of domestic animal by renting and selling the animals and the animals' products starting from the year 2004 E.C. Then, this was summarized into direct cash income obtained by rural households by renting and selling the animals and the animals' products since the year 2004 E.C (see Annex 4.18). A test of normality on the total cash income obtained by rural households on the average of the two years was also computed [see Annex 4.19]. As it is indicated on Annex 4.19, the annual total direct cash income obtained by rural households of the two Gotts by renting and selling the animals and the animals' products were not normally distributed. The scores of the two Gotts were also positively skewed. This implies that the

majority of rural households in the two Gotts were found to have a score below the mean. The two Gotts have a median difference of 500 birr. This difference was not significant as the median test shows on Annex 4.20. The Moses extreme reaction test shows that the ranges of the two Gotts were not significantly different. The Mann–Whitney U test clearly indicates that each rural household's score on the annual total direct cash income was not found to differ significantly from one Gott to another.

In addition, the heads of rural households of the two Gotts were also asked to list the indirect services obtained by each household from the various domestic animals. Their answer was summarized by producing cross tabulation between animal possession and the type of indirect service obtained by rural households (see Annex 4.21).

Other Sources of Income

In order not to overlook any other sources of income sources of rural households, household heads were asked to identify those work in which they have been engaged since 2004 E.C. Those who were engaged in work were also asked the amount of extra income obtained by their household since 2004 E.C. This response is summarized on Annex 4.22.

As it can be seen from Annex 4.22, of those rural households who engaged in extra income activities, the majorities in both Gotts obtain an estimated amount of income which is not greater than 1500 birr since the year 2004 E.C. Through this it can be interpreted that the involvement of rural households in extra income activities other than farming and animal husbandry is low.

4.2. The Rationales and Parameters of Distributing the Common Grazing Land

4.2.1. The Primary Purpose of Distributing the Common Grazing Land

Before describing the intended objective of distributing the common grazing land and the criteria of its distribution, it is essential to present first what was said by one of the key informants. As this key informant, whose name is Yigzaw (a former Kebele leader and currently a member of Kebele council), clearly stated it, the reason for distributing the common grazing land begins with an incidence that happened in the year 1996 E.C. According to him, the residents of *Bedega*-Dingira Nius-Kebele (one of the three Nius-Kebele*s* in Arbawash-Dingira Kebele) started to plough the surrounding common grazing land including the land that later became the object of contention between the other two Nius-Kebeles (Arbawash Mariam and Arbawash Michael Nius-Kebeles). These two Nius-Kebeles, as a response to the first Nius-Kebele*,* also started to plough illegally on the other side of the disputed land so as to prevent further expansion of the former. Though "district administration" from Jabitehinan Woreda tried to mediate the opposing groups, the disagreement ended on *Tahisas*[2] 11, 1999 E.C with the interference of village elders at that time. As a result, the two Nius-Kebeles gained a control of the disputed land and the boundary was demarcated and delimited. From that time onwards the land which was plowed had to become grazing land as the initial target of the two Nius-Kebeles was achieved. Meanwhile, some individual land holders [households which own land other than the common grazing land] of Arbawash-Mariam Nius-Kebele were also plowing the nearby common grazing land illegally. At the same time, in order to stop the illegal grazing land takers, the household heads of Arbawash-Mariam Nius-Kebele started to plow the land in the name of

[2] Tahisas in E.C refers to the month "December" in Gregorian Calendar

"development for the church" [generating income to the church] in the 1999/2000 E.C year of crop production. As one interviewee from Kattal Gott also said,

> *We were plowing the land in the name of our church so as to stop those individuals who were expanding their landholding size and getting more benefit at the expense of us [the majority of residents]. We started plowing the land for common use and to our church by preventing the individuals from further expansion. Actually we were giving little share of the produce to the church. The produce was large in gross. But it became too small when we divide it individually.*

Amid these situations, according to Yigzaw, some residents who had government positions [including Yigzaw] and youth started to present a question on behalf of youth to have a sole claim over the land by justifying that some household heads were plowing the land illegally. Accordingly, those household heads of Arbawash Mariam Nius-Kebele were forced to stop plowing the common grazing land in 2000 E.C by the order of the then Kebele leader. But, at the same time, the youth of this Nius-Kebele were legally given grazing land to plow as a group. According to focus group discussants of Kattal Gott household heads, the size of the land was 5 hectare. Immediately after the youth of Arbawash Mariam Nius-Kebele started plowing the land, the residents of Arbawash Michael Nius-Kebele started to ask whether their youth could gain access too. Because of the refusal of the Arbawash Mariam Nius-Kebele residents, they entered into disagreement and conflict. As a result of the mediation made by the village elders of the two Nius -Kebeles, the youth of the new claimant Gott were also given a 1 hectare land to plow. As per two key informants, Yeshigeta and Noah[3], the grazing land given to Arbawash-Michael Nius-Kebele youth was 1 hectare while that of Arbawash Mariam Nius-Kebele was 5 hectares. From household head focus group discussants of Arbawash Michael Nius-Kebele it was found

[3] Yeshigeta is the land administration and use expert while Noah is the natural resource conservation expert of the Kebele

that an additional amount of land was given to the youth of their Nius-Kebele though exactly how much was unknown. As it was said by Yigzaw, the respective hectares of grazing land were distributed legally to the youth of the two Nius-Kebeles. As this key informant described,

> *The common grazing land was given to those youth who were in the age of 15-29 years, youth who had no land at all, youth who had no additional means of income or whose means of living was only agriculture, youth who were uneducated and without taxable land, youth who dropped out from their education, and youth who had finished their education but unemployed. The land was given to those youth who fulfill these criteria with the purpose of making them earn a good means of livelihood.*

According to Seblan and Kattal Gott household head focus group discussants, the household heads of Arbawash-Mariam Nius-Kebele began to plow additional vast grazing land for themselves in 2003 E.C. Consequently, the household heads of Arbawash Michael Nius-Kebele accused the household heads of Arbawash Mariam Nius-Kebele of illegal invasion and plowing of the common grazing land. The justification given by the household head focus group discussants of Kattal Gott was that some individuals in their Nius-Kebele were still plowing and expanding more than before. They began plowing again by rationalizing that the individual land holders were taking more land from the common grazing land. Therefore, the individual land holders had to be forced to stop from plowing their Nius-Kebele common grazing land so that the common grazing land could benefit the community and the church as well.

However, the accusation, with the justification that they and their church also deserved some land, continued from the other Nius-Kebele. Therefore, they invited "district administration" from the Woreda to stop both from quarreling and getting into conflict each other. Even, as stated by the two focus group discussants, measures to the extent of imprisonment of some household heads from the two Nius-Kebeles were taken. Since they were told that unless they

solve their problem by agreement, the disputed common grazing land would not be plowed or would be given to an investor, the two Nius-Kebeles arrived at consensus through the village elders chosen from the two sides. Consequently, none of the household heads in the two Nius-Kebeles were allowed to plow any piece of land. The two churches [Saint Mary Church and Saint Michael Church] were given a hectare of land each. According to Yeshi Geta, with the afore mentioned parameters and purpose, the youth of Arabawash Mariam Nius-Kebele were given 18.5 hectares of land while that of Arbawash Michael youth were given 2.5 hectares of land. From 45 individual land holders, 12 hectares of land which was taken formerly from the grazing land by expansion were turned back to the common. Though additional claims by Arbawash Michael youth and unresolved cases of some expanding individual land owners in the nearby grazing land were still there, all these agreements took place in 2004 E.C.

Reasons for Making Land Use Change

The presented incidence and objectives of distributing the common grazing land raise one basic question: Why did the rural households change the grazing land into farmland? According to the former responses given by key informants, interviewees, and focus group discussants, it is well understood that the reasons behind plowing the common grazing land were many. The first was to stop those who expanded both at Nius-Kebele level (the case of the first conflict between Arbawash Mariam and Arbawash Michael Nius-Kebeles on one side and *Bedega*-Dingira Nius-Kebele on the other) and at individual level (the justification given that Arbawash Mariam household heads were plowing the land to prevent the expansion of individuals in the nearby common grazing land). The second was to give benefit to the church. Almost all the former primary data is inclined to justify the second purpose. I would say that this was not a major purpose behind the plowing of the common grazing land. The reasons that (1) in the end, the two

churches were only given a hectare of land each, (2) one interviewee said that only little produce was given to the church and (3) youth focus group discussants of Arbawash Michael Nius-Kebele stated that the household heads of the two Kebeles were plowing the land in the name of the churches but for their advantage only. All these have lead me to strengthen my argument. The third purpose was to benefit the youth. The target groups and the criteria set for access and its end purpose are a good indication of the third rationale of distributing the common grazing land, at least in principle if not in practice.

As it is indicated in the beginning of sub-sub section 4.2.1 the households of *Bedega*-Dingira Nius-Kebele chose to obtain farming land by plowing the common grazing land that is located in Arbawash-Mariam Nius-Kebele. One reason is that most of the rural households of *Bedega*-Dingira Nius-Kebele are located on the steep side of the Dingira and *Bedega* Mountains where, according to Yeshigeta and Noah, the quality of the land for farming is low and diminishing from time to time due to soil erosion and deforestation. In contrast, the quality of soil of the disputed common grazing land is good for farming. It was these two factors which attracted the rural household of *Bedega*-Dingira Nius-Kebele to plow the land in 1996. This finding is similar with the natural driving force model of land use change explanation as argued by Peña, *et al*, (2007) who stated that natural driving forces can induce long term global change and land-use change as well.

On sub section 4.1.2, the mean household and landholding size of the total sample was 5 members and 1.345 hectares respectively. The ratio of land holding size to household size is 0.27:1. This is to mean that each member of a given household will have 0.27 hectares of land on average. This ratio implies that there is an imbalance between the household and landholding

size of the total sample which represented the other two Nius-Kebeles. As a result, one can say that though Arbawash Mariam and Arbawash Michael Nius-kebels were justifying that the reason behind plowing the land was a mechanism to stop both *Bega*-Dingira Nius-Kebele and individual land holders, population pressure and insufficient farming land might have forced them to plow the land as well. This finding goes parallel with the study conducted by Le Meur, *et al*. (2006:27) which stated that demographic pressure is one of factors which favor and facilitate tensions and conflicts over land, landed resources, and natural resource access in specific contexts and combinations.

As it is mentioned in section 4.2.1, the first access for youth of Arbawash-Mariam Nius-Kebele to the grazing land was made possible by the political interference of the then Kebele administrator as he allowed the youth to plow a portion of the grazing land for the purpose of economic benefit. The explanation presented by Peña*, et al,* (2007) also stated that political reasons are among the immediate factors which contribute to land-use change and they are strongly interlinked with underlying economic factors as land use change is made due to economic needs and pressures.

4.2.2. The Criteria of Distributing the Common Grazing Land

Based on the results [see sub section4.2.1] obtained from key informants, interviewees and focus group discussants, being a member of the Nius-Kebele, being under the umbrella of the church [to be a member of a specified church, Saint Merry Church or Saint Michael Church], having a youth in the household, having an unemployed youth in the household, having a youth who could not read and write, having a dropout student in the household, and having a youth without

taxable land were the listed criteria for the rural households to have access to the distributed common grazing land.

In order to describe the criteria given in detail and in a comparative way, household heads of the two Gotts were asked about their first and second [current] access and the reason for access too. Table 4.1 shows the access status of the households of the two Gotts for the first and second [current] time.

Access Status of Rural Households to the Distributed Common Grazing Land

Table 4.1. Access Status of Households to the distributed common grazing land

		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
Did your household get an access to the distributed common grazing land when it was distributed for the first time?	Yes	70	100.0%	57.9%	51	100.0%	42.1%
	No	0	0.0%	0.0%	0	0.0%	0.0%
Does your household have an access to the distributed common grazing land currently?	Yes	51	72.9%	42.1%	41	80.4%	33.9%
	No	19	27.1%	15.7%	10	19.6%	8.3%
Does your household have access to the distributed common grazing land both when it was distributed for the first time and currently?	yes	51	72.9%	42.1%	41	80.4%	33.9%
	no	19	27.1%	15.7%	10	19.6%	8.3%

As it is clearly seen on Table 4.1 all households of the two Gotts had access to the distributed common grazing land when the land was distributed after the settlement of the dispute by the village elders. However in the second phase, not all households were allowed to have access to the distributed land though the majority in both Gotts had access. In both phases there was a difference in the magnitude of the land accessed by the two Gotts.

In order to see that whether the difference in proportion of households who have access to those who do not is significant within each Gott and the total sample, and to see whether the proportion of households who have access to those who do not in one Gott differed significantly from one Gott to the next, chi-square test was used. From Annex 4.23 it is quite visible that there was a significant difference between the proportion of households which have access to the distributed land to those household which do not have access in both Gotts and the total sample as well since the *p-values* (=0.000 for the Gotts and the total sample) are less than the alpha value ($\alpha = 0.05$) with one degree of freedom. In addition, the table of cross tabulation on the access status of rural household and their Gott with a chi-Square test [see Annex4.23] shows that the difference between the two Gott*s'* rural households which have access to the distributed grazing land was not significant since the *p-value* (=0.338 or 0.393) is greater than the alpha value ($\alpha = 0.05$) with one degree of freedom. In other words, the number of rural household heads who got access to the distributed land in Kattal Gott is similar to that of Seblan Gott. In the same manner, the number of rural household heads who did not get access to the distributed land in Kattal Gott is similar to that of Seblan Gott.

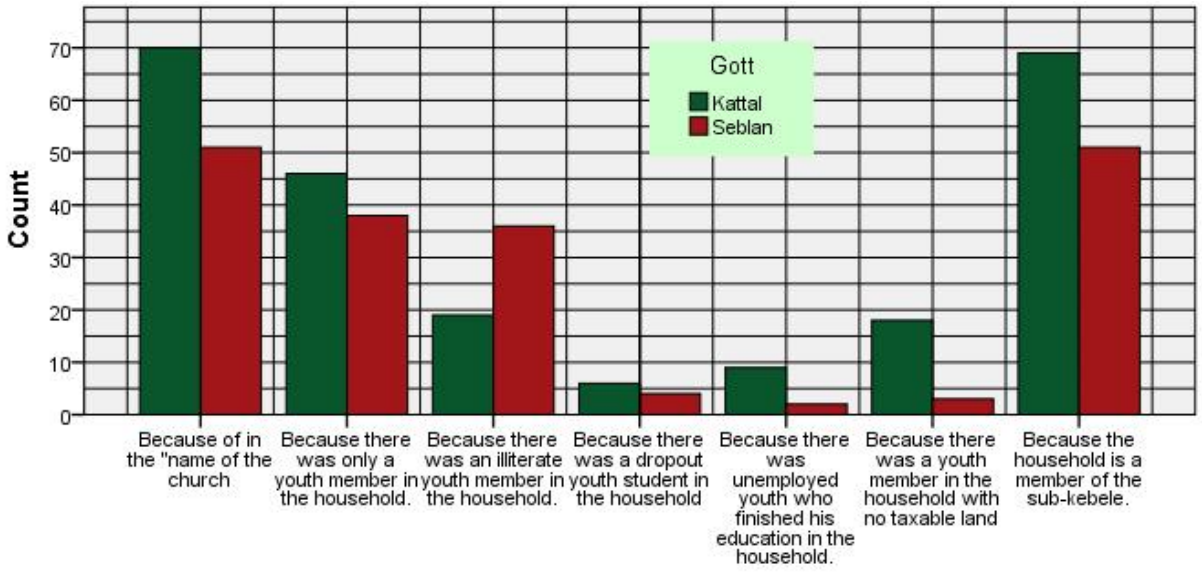
Parameters for Accessing the Distributed Common Grazing Land

For the purpose of identifying what criteria [4]of distribution were used and giving a descriptive analysis whether these criteria were in line with statements made by key informants, interviewees and focus group discussants, household heads of the two Gotts were asked to tick and list the reasons for getting and denying access in the two phases of distribution. As graph 4.6 shows, being under the umbrella of their respective church [in the name of the church], having a household which is a member of the Nius-Kebele, and having only a youth member in the

[4] The criteria may not be mutually exclusive variables as they were directly taken from key informants, interviewees and focus group discussants.

household were the top three reasons for the rural households of the two Gotts to have access to the distributed common grazing land. The presence of a youth member who does not read and write in the household was also the other reason for the rural households of the two Gotts to have access to the distributed land.

Graph 4.6. Reasons chosen by household heads that accessed the distributed common grazing land when it was distributed for the first time



The reason that the household has a youth member without taxable land was the justification given by the 18 rural household heads of Kattal Gott for having access to the land. The presence of a dropout student from school and an unemployed youth who finished his education were the bottom two reasons for rural households to have access to the distributed common grazing land in Kattal Gott as mentioned by a few respondents of the Gott. On the other hand, the presence of unemployed youth, a youth without taxable land ,and drop out student from school were the lowermost reasons mentioned by the rural household heads of Seblan Gott [for more detail see Annex 4.24].

To find whether the responses of rural household heads of the two Gotts were significantly different on each reason or not, a chi-square test was applied. From Annex 4.25 it is clearly noticeable that all the p-values (asymptote significance) of the variables for Kattal Gott chi-square tests are less than the alpha value ($\alpha = 0.05$) with one degree of freedom. This is to mean that the proportion of household heads that preferred the given variable as a reason for having access to the land is significantly different from the proportion of household that do not prefer the same variable as a means of accessing the distributed land for the first time. To be a member of the Nius-Kebele, the presence of a dropout student in the household and the presence of unemployed youth who finished his/her education in the household were the variables on which the proportions of preferences of household head respondents differ significantly. The difference between the proportions of responses that chose the variables to those who did not choose the variables was highly significant. The presence of only a youth member in the household, the presence of a youth member in the household who did not read and write, and the presence of a youth member in the household with no taxable land were the variables on which the proportion of household head responses differs significantly. However, though the difference of the proportions on these variables was significant, it is not as high as that of the former three variables since the chi-square test result was lower.

On the case of Seblan Gott, the presence of unemployed youth in the household, the presence of a youth in the household with no taxable land, and the presence of a dropout student in the household were the variables on which the difference of the proportion of household head responses was highly significant. The presence of a youth who do not read and write in the household and the presence of only a youth member in the household were also the other

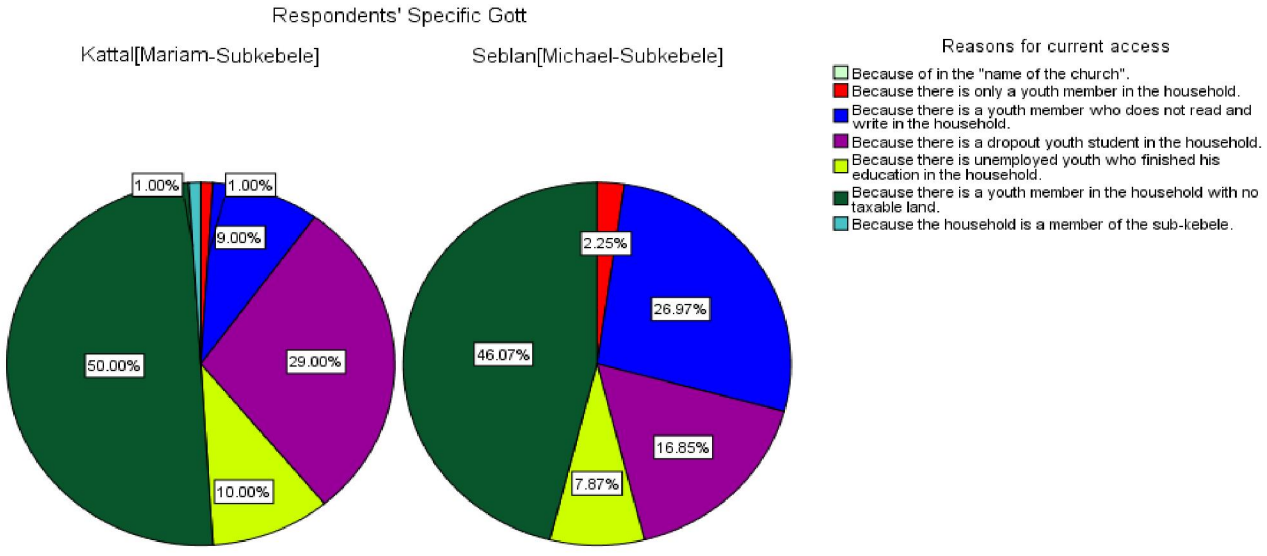
variables on which the proportions of responses differ significantly though the level of significance is not as high as the former variables.

From the total sample main row chi-square test, it is shown that to be a member of Nius-Kebele, to have a dropout student in the household, and to have unemployed youth in the household were the variables on which the difference between the proportion of household heads who chose these variables as a reason to that of household heads who did not choose these variables was highly significant. The presence of a youth member without taxable land in the household was also the other variable in which the difference on the proportion of responses was highly significant. In addition, the difference between the proportion of responses on the variable, the presence of only a youth member in the household, was also significant though it was not as high as the before mentioned variables. The difference between the proportion of responses on the variable, the presence of a youth who do not read and write in the household, was not significant. This can be interpreted to say that the number of household head respondents who preferred this variable as a reason for access to the distributed common grazing land, as compared to the number of those who did not prefer, was similar.

As Annex 4.25 displays on the cross tabulation main row, there are variables on which cells have an expected frequency of less than 5. This violates the chi-square test application rule which states that with 1 degree of freedom is necessary to have a minimum expected frequency of five in each cell to apply chi-square. With more than 1 degree of freedom, there should be a minimum expected frequency of one in each cell and an expected minimum frequency of five in 80% or more of the cells (Cramer and Howitt, 2004: 23). Accordingly, the comparison of the two Gotts focuses only on cells of variables which do not violate this rule. As the chi-square test table shows the p-values (=0.000 for the first variable and 0.004 for the second variable) are less than

the alpha value ($\alpha = 0.05$) for the two variables, the presence of a youth in the household who do not read and write and the presence of a youth in the household without taxable land, with one degree of freedom. These were the two variables on which the rural household heads' response of the two Gotts for the same level of response significantly differs. In other words, the number of Kattal Gott household heads who obtained access to the distributed land for the first time due to the presence of a youth who do not read and write in the house household was significantly smaller than that of Seblan Gott household heads with the same reason. On the other hand, the number of Kattal Gott household heads who recieved access to the distributed land for the first time due to the presence of a youth without taxable land was significantly higher than that of Seblan Gott household heads with the same reason. In the same manner, survey respondents were also asked the reason for current access to the distributed common grazing land. Their response is summarized in the following graph.

Graph 4.7. Reasons chosen by household heads that accessed the distributed common grazing land when it was distributed for the second time



From graph 4.7 it is observed that the presence of a youth in the household without taxable land, the presence of dropout student, and the presence of an unemployed youth who finished his/her education in the household were the upper most reasons for Kattal Gott households to have access to the distributed land for the second time. On the other hand, being a member to the Nius-Kebele, having only a youth member, and having a youth member who does not read and write in the household were the lowest reasons for having access to the land in Kattal Gott as only very few respondents choose these variables. In the case of Seblan Gott, the presence of a youth in the household without taxable land, the presence of a youth member who did not read and write, and the presence of a dropout student in the household were the top three reasons for having access to the land as mentioned by many respondents. However, having only a youth member and having a youth member who did not read and write in the household were the lowest reasons for having access to the land [for more detail see Annex 4.26].

In order to find out whether the proportion of responses on each reason differed significantly or not, chi-square test was used. As Annex 4.27 clearly shows for the Kattal Gott main row, the presence of only a youth member in the household, the membership of the household to the Nius-Kebele, and the presence of a youth in the household without taxable land were the three variables on which a highly significant difference was observed between the proportion of rural households who preferred the variables as reasons for accessing the distributed common grazing land to those who did not. This is due to the fact that the p-values or asymptotic significance values (=0.000 for the three variable) are less than the alpha value ($\alpha = 0.05$) with larger chi-square test results. In addition, the presence of unemployed youth and the presence of a youth who did not read and write in the household were the other variables on which a significant proportional difference was observed on the response of rural household of Kattal Gott. On the

case of the Seblan Gott main row, a significant difference between the proportion of responses was observed only on the variables: the presence of only a youth member in the household and the presence of unemployed youth in the household.

For the total sample main row, the proportion of household head respondents who chose the variables as a reason for second round access to that of household head respondents who did not choose the same variables as reasons for access was significantly different in the four variables. The membership of the household to the Nius-Kebele, the presence of a youth in the household without taxable land, the presence of only a youth member in the household, and the presence of unemployed youth were the variables in which there was significant difference between the number of household head respondents who preferred the variables as reasons to those who did not.

Annex 4.27 also shows that the same level of response from rural household heads significantly differs only on the variable, the presence of a youth in the household who did not read and write. Hence, the number of Kattal Gott household heads who recieved access to the distributed land for the second time due to the presence of a youth who did not read and write in the house was significantly smaller than that of Seblan Gott household heads with the same reason.

In order to have a look at the consistency of reasons or parameters for accessing the distributed common grazing land during the first and the second [current] phases of access, a table was produced [see Annex 4.28]. As per Annex 4.28, being under the umbrella of the churches, being a member of the Nius-Kebele, and having only a youth member in the household were the three top reasons for recieving access to the distributed common grazing land for the first time. Each of these variables was chosen by more than half of respondents. In addition, the presence of a

youth who does not read and write was the other variable chosen by 45.5% of household head respondents as reason for access the first time. However, the presence of youth member in the household with no taxable land, the presence of unemployed youth in the household and the presence of a dropout youth student in the household were the least common reasons for having access to the land the first time as each variable was chosen by below one quarter of the household head respondents.

Annex 4.28 also shows that the presence of a youth member in the household with no taxable land was the first primary reason for having access to the distributed land for the second time as the variable was chosen by 98.9% of household heads. The presence of a dropout youth and a youth who does not read and write in the household were also the reasons respectively chosen by 47.8% and 35.9% of the respondents as a reason for receiving access to the land for the second time. On the other hand, the presence of only a youth member in the household, the membership of the household to the church and the Nius-Kebele were the lower most variables chosen by very few or no respondents as a reason for access to the land for the second time. As compared to top reasons chosen by the majority for first time access to the distributed common grazing land, the uppermost reasons chosen by the majority [more than a quarter] of household head respondents for accessing the distributed land during the second time were closer to the parameters or criteria set by the Kebele.

In order to have a look at the percentage of respondents who choose a variable as a reason for access the first time and also chose the same variable as a reason for access to the land the second time, a cross tabulation between reasons for first time and second time access was made. As it is clearly indicated on Annex 4.29, there were no respondents who recieved access to the distributed land due to their household being a member of the church in either the first or the

second time. In the same manner, the number of respondents who mentioned the same reason for both first and second access was less than 25 %. This shows that how much the criteria were different for respondents for accessing the distributed land in the two-phase distribution of common grazing land. From the table it is also possible to find respondents who preferred different variables for the different time of access. For example, 75.2 % of respondents who preferred the presence of youth without taxable land in the household as a reason for second time access had also preferred household's membership to a church and Nius-Kebele as a reason for first time access.

By counting values within cases [by counting the number of "yes" for each respondent], the following table was obtained so as to count the number of respondents who chose one, two, three or four reasons for accessing the distributed common grazing land. It was obtained by counting those individuals who provided one, two, three or four reasons on SPSS.

Table 4.2. The number of respondents who preferred different reasons for access to the land

Number of reasons for second time access	Frequency	Percent	Valid Percent
One reason	6	5.0	5.0
Two reasons	76	62.8	62.8
Three reasons	9	7.4	7.4
Four reasons	1	.8	.8

So, Table 4.2 shows the number of respondents who gave one, two, three or four reasons for their access to the distributed grazing land. As per Table 4.2, 62.8 % of the total sample selected two reasons while 7.4% and 5.0% of respondents respectively chose three reasons and one reason for access to the distributed land. Since the majority of respondents prefer two reasons for second [current] time access, a table [see Annex 4.30] was produced for the purpose of identifying the number of respondents who preferred two reasons at the same time for accessing

the distributed land. Accordingly, of those who chose two reasons, 46.7% of respondents from the total sample preferred "the presence of youth member in the household with no taxable land" and "the presence of a dropout youth student in the household" as reasons for accessing the distributed land. The other 35.95% of household heads, on the other hand, chose "the presence of youth member in the household with no taxable land" and "the presence of youth member in the household who doesn't read and write" as reasons for their household access to the land. Rural household heads whose household did not have access to the distributed land for the second time were also asked to tell the reasons for the denial of the access. Consequently a variety of reasons were given and these responses are summarized on a table [see Annex 4.32].

Was the land distributed as per the parameters?

From the qualitative data analysis given on sub section 4.2.1, it is possible to observe two sets of criteria for accessing the distributed common grazing land-formal (officially-legal) and informal criteria (unofficial-normative). In the early phases of distribution of the common grazing land, it was clearly seen that group [Nius-Kebele] membership regardless of any other parameter was enough for households to have access. Whether the landholding size of a household was small or large, it was equally possible or equally impossible to have access to the land. In addition, being under the umbrella of a particular church was also an unofficial standard for household heads and youth to recieve access.

But in the latter episode of the distributed common grazing land and related events, issues became more formalized as they came to the attention of government bodies. Pre-conditions for access became more formalized when decisions were passed two times in favor of only youth's access to the land and age limits were specified. Not having taxable land, lack of additional

means of livelihood, and educational and employment status of youth were further formal parameters for recieving access to the distributed common grazing land.

Each criterion seems to be too ambiguous to inhibit or allow youth to have access to the distributed common grazing land. A critical observer can understand easily that the stated principles have open room for violation. For example, how can the age limit of every claimant youth be certified given that finding exact age in rural areas is difficult? It is also true that there is high probability that all members of a rural household live under one roof and with one taxable land that is shared together by the members. So, how can youth without taxable land or with taxable land be assured? One of the criteria allows student dropouts to have access to the distributed land. Might this be a means for rural households to enforce their youth members to stop their education provided that land is one of the most valuable assets in the rural areas? Even the household size of the households was not taken in to consideration though there was a strong correlation[*r=0.75* for Kattal Gott, *r=0.79* Seblan Gott] between household size and land holding size.

In order to identify the type of relationship between the land holding size and current access of rural household a cross tabulation with Eta directional measure was applied. As it is observed from Annex 4.31, it was found that rural households of the two Gotts with no current access very slightly tend to have a large land holding size [when land holding size is dependent variable]. On the other hand rural households with large land holding size moderately tend to have no current access to the distributed common grazing land [when current access is dependent variable]. This is due to the fact that large numbers in one variable [large land holding size] go with large numbers in the other variable [current access=2(No)]. Fortunately, although land holding size was not taken in to account, there was an implicit tendency that rural households with large land holdings were without current access to the distributed land.

4.3. The Claimant Groups, Their Bases of Claim, and Their Resources and Mechanisms of Interest Realization

4.3.1. The Claimant Groups

As it is described in sub section 4.2.1, in the early incidence of plowing the land of contention, the two major claimant groups were the residents of *Bedega*-Dingira Nius-Kebele and the residents of Arbawash Mariam and Arbawash Michael Nius-Kebeles. The dispute was ended in 1999 by the mediation of the then village elders.

After the disagreement between the two groups was over, some individual land holders who have land in the nearby common grazing land and some residents of Arbawash Mariam Nius-Kebele confronted each other as the former were expanding their land by plowing the common grazing land while the latter had to stop this expansion in the "name of the church" by plowing the land in a cross sectional way for the 1999/2000 E.C year of production. Soon after, the youth of Arbawash-Mariam Nius Kebele started a sole claim over the land through a legal intervention. As a result the household heads of Arbawash Mariam Nius-Kebele were forced to stop plowing the common grazing land in favor the youth in 2000. This was followed by the request of Arbawash Michael Nius-Kebele household heads for land to be distributed to their youth. Though they were refused initially, the youth of Arbawash Michael Nius-Kebele were allowed to have some disproportional access.

In 2003 household heads of Arbawash Mariam Nius-Kebele began again plowing the land with the justification that they had to stop some individual land holders who were still expanding. At the same time, household heads of Arbawash Michael Nius-Kebele were also plowing the common grazing land for themselves and their church as well. After a series of quarrels, the

village elders temporarily solved the disagreement in 2004 by giving equal amounts of land to each church but disproportional sizes of land to the youth of the two Gotts. Similar to the youth and household head focus group discussants of Seblan Gott, the youth of Arbawash Michael *Sub*-Kebele (backed by their household heads) were still asking for additional land but their requests have not yet been answered. From 2004 onwards, claims on the land have been polarized into two groups. These are the youth of the two Nius-Kebeles ultimately supported by their household heads.

4.3.2. The Claimant Groups' Bases of Claim, and Their Resources and Mechanisms of Interest Realization

Tracing the same lineage [same settler or developer], common inheritance, and same sacristan[5]

From the key informant interviews held it was found that households heads of Arabawash Michael Nius-Kebele had been using "belonging to the same line of descent", "possession of a shared heritage on the whole land of the Kebele", and "the embracing of the two churches under the one sacristan" as a justification for initial access as well as current for their youth to receive an additional share of the distributed common grazing land. The interviewees, household heads, and youth focus group discussants of Seblan Gott similarly share this stance. For example, in justifying the same line of descendent one of the household heads' focus group participants of Seblan Gott said,

> *We are one of the ten descendants with one father named as* Arbawash*. The ten descendants are Gechin, Sebln (the root of the current* Seblan Gott*), Galn, Qorn, Niwazn, Asameg, Gundn, Rayt, Kurinchn and Adero (the root of the current* Kattal Gott*). If this is undeniable fact accepted by*

[5] Though two nius-kebeles have different churches, the two churches have one sacristan who is in charge of sacred activities and objects.

everybody, why not our youth receive an additional land from their heritage? Are our youth "backyard cabbage"?

All interviewees, household heads, and youth focus group discussants of Kattal Gott did not deny that they belonged to the same line of descent, possessed a shared heritage on the whole land of the Kebele, and the embraced the two churches under the same sacristan. As one of the household head focus group participants in Kattal Gott said, their father [Arbawash] had given *Silsila* [the disputed land] for their cattle, *Gob* for the production of *Dagusa* and *Borebor[Ambuattima]* for the production of barley in common. But what they did not agree on was the question of additional land for the youth of the Seblan Gott [Arbawash Michael] household heads. As one household head interviewee stated, "because we belong to same line of descent, possess a shared heritage on the whole land of the Kebele, and the two churches are under the same sacristan, we allowed their youth to have access the land. But they are asking for more and more".

Attribution to be under the Leadership of the Same Kebele vs. the Right of each Nius-Kebeles to possess the Nearby Grazing Land

In addition to belonging to the same line of descent, sharing a heritage on the land, and being under one person who is in charge of the sacristy in the two churches, Seblan Gott claimant groups also justify that they have a right for their youth to have additional access to the distributed common grazing land because they are governed by the same Kebele leader. However, Kattal Gott residents have not accepted any request for additional claim to the land. As household head focus group discussants of Kattal Gott said, they had permitted them [Arbawash Michael Nius-Kebele youth] to have access to the land because both [youth of the two Nius-

Kebeles] belong to the same line of descent, possess a shared heritage and have the same sanctuary or temple.

But a question of an additional claim is unacceptable for the household heads of Arbawash Mariam Nius-Kebele. As a justification for the rejection of the additional claim presented by the household of Arbawash Michael Nius-Kebele, the household head focus group discussants of Kattal Gott said that each Nius-Kebele has a right to control the respective grazing land for its own consumption without the involvement of other far Nius-Kebeles. Given this legal right they had even rejected the requests of households of Arbawash Michael Nius-Kebele for first access let alone the request for additional access in the second round. Giving additional grazing land to the youth of Arbawash Michael Nius-Kebele would be foolishness for household heads of Arbawash Mariam Nius-Kebele as the former have their own land to graze while the latter is attributing to legal principle of sole controlling the land.

The "why ours?" Justification

Geographically a large portion of the farming land of Arbawash Mariam Nius-Kebele is found in the vicinity of Arbawash Michael Nius-Kebele*'s* farming land and on its nearby grazing land. For this reason, the residents of Arbawash-Michael Nius Kebele feel that a large portion of the farming land of Arbawash Mariam Nius-Kebele residents belongs to them [Arbawash-Michael HHs]. Arbawash-Michael Nius-Kebele residents believe that the current farmland of Arbawash-Mariam Nius-Kebele residents was a grazing land and they believe it is their [Arbawash-Michael Nius-Kebele residents'] property, though it was commonly grazed by Arbawash Mariam Nius-Kebele too, before it had been plowed by Arbawash-Mariam HHs.

As household head focus group discussants of Kattal Gott said, residents of Arbawash Michael Nius-Kebele had been warning the residents of Arbawash Mariam Nius-Kebele starting from the

first phase of the distributed common grazing land that if they did not get additional access for their youth they were going to plow the large farming land of Arbawash Mariam Nius-Kebele residents. The household head focus group discussants of Seblan Gott had also a similar consensus on what was said by focus group discussants of Kattal Gott that the Nius-Kebele to which they belong would either plow or graze the nearby land possessed by Arbawash Mariam Nius-Kebele residents as it formerly belonged to them. However, this would be impractical as it would leave the households of Arbawash Mariam Nius-Kebele with almost no farmland and therefore result in conflict.

Reference to the Co-operative fighting of Past Challenges came from other Nius-Kebele

As it is mentioned in sub section 4.2.1, the claimant group [HHs of Arbawash Michael Nius-Kebele] which had been denied additional access to the land in the two phases of the distribution fought on the side of the claimant group [HHs of Arbawash Mariam Nius-Kebele] which is forbidding additional access to its youth currently. This incidence is well recognized by one of the key informants, all interviewees, and household head focus group participants of the two Gotts.

Households of Arbawash Michael Nius-Kebele presented this collaboration as a justification to have access during the first round and to receive additional access in the current round. As the household head focus group participants of Seblan Gott said, they [households of Arbawash Michael Nius-Kebele] had been with the households of Arbawash Mariam Nius-Kebele both during the bad and good times. However, residents of Arbawash Mariam Nius-Kebele have not accepted the request of additional access for the youth of residents of Arbawash Michael Nius-Kebele.

Appeal to district administration vs. Preference to Village Elders

Earlier in sub section 4.2.1 it was mentioned that when the household heads of Arbawash-Mariam Nius-Kebele began to plow additional grazing land for themselves in 2003 E.C, a large number of household heads of Arbawash Michael Nius-Kebele presented the case to the Jabitehinan Woreda Government officials. This was effective as it resulted in the interruption of household heads of Arbawash Mariam Nius-Kebele from plowing the land.

The two claimant groups entered into an agreement in 2004 as both were told by "Woreda government officials" that if they did not solve their dispute through agreement, the disputed land would be given to an investor. Both in the first and second phases of distributing, the common grazing land village elders had a powerful influence on the rural households of the two claimant groups in making them arrive at least at a temporary solution for their disagreement.

Influencing Village Elders through Bribery and Intimidation

In order for their request of second round access and their additional claim for their youth to be answered, rural households of Arbawash Michael Nius-Kebele influenced the village elders who were chosen to mediate the two claimant groups. As the village elder focus group participants said, some residents who might have been delegated by the Arbawash Michael Nius-Kebele started to invite the elders for local drinks like *areqe* and *tella* and modern drinks such as beer on weekends. They were unaware of the true intentions of the residents until they began to ask them for favors. Soon they started to distance themselves from such situations. Some of those residents began to send warning messages to the village elders although the threats were not implemented. According to participants, one of their members excluded himself due to intimidation.

Separating Churches from Celebrating Annual Holidays Together

According to Village elders and household head focus group participants of the two Gotts and key informants, the two Nius-Kebeles went to the extent of separating the two churches and preventing them from celebrating epiphany together for half a decade starting from the first phase of land distribution. As household head focus group discussants of Kattal Gott said, the first motive for separating the churches came from the residents of Arbawash Michael Nius Kebele as a mechanism for expressing their dissent.

Grazing, Stealing and Setting Fire to Harvested Crops in both Distributed and Individual land Holdings

In times when disagreements between the two claimant groups were tense, the "disgusted" claimant group resorted to unacceptable measures towards the other group with the intended purpose of bringing harm. From household head focus group discussants of Kattal Gott it was found that some youth of Arbawash Michael Nius-Kebele sometimes grazed the crops of Arbawash Mariam residents that were seeded on the distributed common grazing land. They also stole and set fire after the crop had been harvested and accumulated. The same thing was repeatedly done to the crop which was sowed on their individual land holding, especially on the farming land which is located in the nearby farming and common grazing land of Arbawash Michael Nius-Kebele residents.

Do the claimants' bases of claim have anything to do with the issues of land tenure?

In the situation where there is only one direction to expand landholding size with regards to the common grazing land and there are various bases of claim, past and present land tenure rules practiced in the area must be reviewed. If the claim of every claimant group is seen from the perspective of the past tenure system, the grazing land belongs to all households of the rural

Kebele and every member of the Kebele has the right to graze its animals though not to plow individually. The customary land tenure system on which the application of the land reform proclamation was based gave all the households an equal access to the grazing land in the past and the households used the grazing land without any disagreement or conflict. But disagreements and conflicts began to arise after the two Nius-Kebeles reacted to the other Nius-Kebele and individual land holders who started plowing the land for their own use at the expense of the others.

As it is mentioned in sub-section 4.2.1, the two Nius-Kebeles won over the other Nius-Kebele and individual land holders. Later, however, the two friendly Nius Kebeles enterd into conflict as the first started plowing the land with various reasons mentioned already and with a sole claim of ownership. The Nius-*keble* that presented a sole claim stated that there was a rule and principle laid at the legal level which backed their claim. As it was stated, in the current perspective of land tenure system, each Nius-Kebele and Gott has a sole right to use its surrounding grazing land for grazing. It was by using this current tenure right that the sole claimant group [HHs of Arbawash Mariam Nius-Kebele] was plowing the grazing land for its own advantage and soon resulted in conflict with the other Nius Kebele as Arbawash Mcihael Nius-Kebele also started to plow the same grazing land while stating the past tenure rules and other reasons as well. From this it is understood that the incompatibility between the past and present tenure systems became one of the factors of disagreement between the two Nius-Kebeles.

Previous studies supported the incompatibility between the tenure rule and its probability of inducing conflict. For example, according to FAO (2002) report, the modern emerging competitive needs of the population which usually originate in areas where resources are extensive compared to the population, result in the breaking down of the shared social consensus

between the various holders of rights. The incompatibility between the pre-existing customary tenure systems and the modern emerging competitive needs of the population may also open the door to possible conflicts. Similarly, Yeraswork Admassie (2000:39) clearly underlined that customary property rights are prone to erosion through spontaneous process with negative outcome and the modernization of customary property rights through legislation is probably the only way to guarantee small farmers' continued access to the land.

As it is stated in the literature, Yamano and Deininger (2005:1) argued that conflicts that arise due to land and land related concerns are not resolved by the current land tenure systems since these land tenure systems may not be well-equipped and capable enough to manage the issue at hand. Precedence is given to formal institutions of land administration in many African countries and they are often simply superimposed on traditional structures without a clear delineation of responsibilities and competencies. The formal institutions may also have a tendency to go farther in their outreach and in their social legitimacy as well. All these previous findings have implications that must be taken into considerations while evaluating the advantages and disadvantages of new tenure rules in comparison to the past customary rules. These researches indicate that identifying the drawbacks of the modern land tenure rules and filling the gap by finding room for the customary tenure rules will result in the reduction of conflict that arises in relation to land and landed resources.

4.4. The Livelihood Effect of, and Preference and Attitude towards the Distributed Common Grazing Land

4.4.1. The livelihood Effect of the Distributed Common Grazing Land

From the View Point of key informants, focus group discussant and Interviewees

Interviewees, Focus group discussant and key informants were asked to talk about the livelihood effect of the distributed common grazing land. Their response was not uniform. As two out of three key informants stated, the distributed common grazing land has become a good source of income. As Noah (by profession a natural resource conservation expert in the Kebele) underlined, plowing that land would bring a positive livelihood effect to the youth since the distributed common grazing land is not good for most of the animals, especially in the summer season. The mud is difficult for sheep and goats and it also has a smell that prevents cattle from grazing. The distributed grazing land also produces a grass called *wajima* which kills cattle during the rainy summer season. For this reason Noah believes that if the land is used for farming, it can bring positive economic change to the youth although the problems of dividing the distributed land are still there. This idea is also shared by another key informant, Yeshegeta, who is an expert of Land administration and usage. However, one key informant, Yigzaw, opposes this idea. He stated that using the land for grazing is good as it is possible for all to graze cattle, sheep, goats, donkeys, horses, and mules without conflict. For him, the land can also be used for bee keeping and other economic activities too. With this range of usage, the land can benefit not only the youth but also the households of the two Nius-Kebeles as well.

The household focus group participants of Kattal Gott were in consensus that the distributed land would give them the most benefit if it were used for grazing rather than farming. According to them, although they fear that a large number of horses and donkeys that come from the rural town are going to graze, the land would be a good means for supporting their livelihood if it was open for their animals to graze. They believe that their youth have not received good benefits as the youth only bring to the household a small amount of yearly crop produce, which is usually less than one *kuntal*. However, the youth focus group participants of Kattal Gott had a different position. All had a similar stance that the land would give a sounding livelihood effect if it were used for farming instead of grazing. But they admit that an additional amount of land had to be given to them in order for the livelihood effect to be high. From this request for additional land it is understood that the youth are not satisfied with the livelihood effect brought by the land they possess now.

The household head and youth focus group discussants of Seblan Gott saw the livelihood effect of the distributed common grazing land from the perspective of their landholding size [their share from the distributed land]. For them the livelihood effect would be large if additional land were given to them and if the government helped and intervened in the situation for shared development. According to them if the plowing of the distributed land continues in the way it is now, it would result in no change in their livelihood though they believed that it had brought change to Arbawash Mariam Nius-Kebele residents. In their view, youth of Arbawash Mariam Nius-Kebele had stopped going to deserts [which are far places] in order to search for a job for means of livelihood in the summer season and they were receiving a benefit from their large share of the distributed land. The two focus group discussant of Seblan Gott prefer the land for

farming only if additional land is given to them. If not, they prefer the land to be used for grazing as they could graze their animals without conflict.

From the village elder focus group discussants it was found that five out of six had the same opinion of the livelihood effect of the distributed common grazing land. As they said, the land is not giving an appropriate benefit to the youth. Even the reason behind plowing the land for them was not to bring an increment to the livelihood of the residents but to stop their neighbors [*Bedega Dibgira* Nius-Kebele residents] who were expanding their landholding. They said that as per the agreement when the land was distributed, the youth had to plow the land in association and then leave the land for the next generation of youth. But the youth continued to plow the land without benefit. Only one participant supported the plowing of the distributed common grazing land by the youth. As he argued, farming the distributed land is good if it is managed properly.

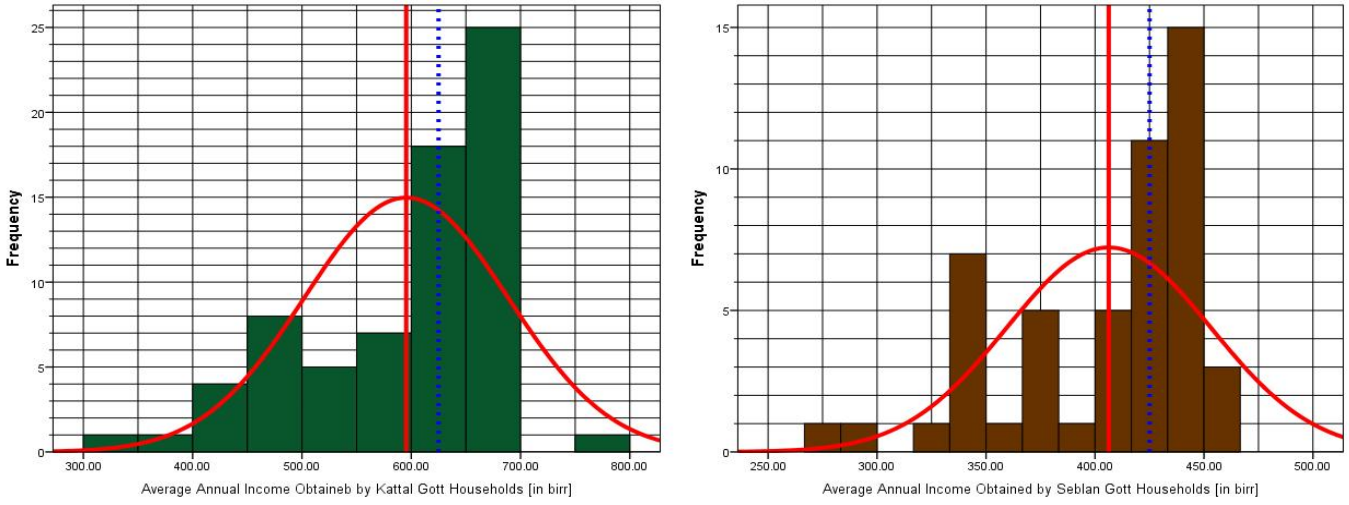
The position of interviewees on the livelihood effects of the distributed land was also based on comparing the advantages of farming or grazing. Accordingly, five out of eight household head interviewees from Kattal Gott said that using the land for farming is good for their youth as it changes their livelihood while the three who opposed this idea said that the benefit would be better if the land was used for grazing. In the case of Seblan Gott, six out of seven interviewees stated that unless they were given additional land to plow, it would be better if the land were not used for farming.

From the View Point of Household Head Survey Respondents

In order to examine the livelihood effect of the distributed common grazing land as per survey respondents, first, the type of produce and its price during the maximum and minimum years of

production was identified. Second, the total income obtained during the maximum and minimum years of production was computed with SPSS. Third, the average annual income obtained from the distributed common grazing land was calculated from the average of the maximum and minimum years of production [see Annex 4.33]. Finally, some descriptive statistics were computed by SPSS to describe the livelihood effects of the distributed common grazing land on the two Gotts [see Annex 4.34] and the following graph was drawn.

Graph 4.8. The distribution of Average Annual Income [in birr] Obtained from the Distributed Common Grazing Land by the rural household of the two Gotts



As it is shown on Annex 4.34 and graph 4.8, the average annual income obtained from the distributed land was not normally distributed in the two Gotts. The negative skew of the two Gotts tells that the majority of households in each Gott earn an average annual income from the distributed grazing land which is greater than their respective mean. Even the medians of the two Gotts strengthen this fact as both are above the respective mean of the Gotts [the broken lines on the two graphs show the medians of the two Gotts]. Though it was small, the kurtosis of the Gotts was greater than zero, which indicates that the average annual income obtained from the

distributed land by each rural household in the two Gotts clustered around their respective medians.

Since the distributions were not normal, the comparative analysis of the average annual income obtained from the distributed land by the two Gotts was based on the non-parametric test. Accordingly, a non-parametric independent sample test was run on SPSS [see Annex 4.35]. From Annex 4.35, the two Gotts have a median difference of 200 birr. As the Independent-Samples Median Test shows, this difference was also significant. In addition, the two Gotts have a difference on their ranges [see Annex 4.34] and this difference was significant too as Independent-Samples of the Moses Test of Extreme Reaction show on Annex 4.35. The Independent-Samples of the Mann-Whitney U Test also show that the distribution of the average annual income obtained by Kattal Gott Households was not the same as that of Seblan Gott Households. From Annex 4.34, it is observed that the maximum, the minimum, the range, the mean and the median for the two Gotts were less than 1000 birr. With this observation in mind, how could one say that the distributed grazing land has made a huge change on the livelihood effect of the rural households of the two Gotts? For me, those focus group participants, interviewees and key informants who opposed the plowing of the distributed land and preferred the land for grazing seem correct. As this statement is not a sole guarantee to be accepted in a generalized way, household respondents [whose households have accessed the distributed land at least once] of the two Gotts were asked to rate the livelihood effect that the distributed common grazing land can make with a chi-square test [see Annex 4.37]. A Cross Tabulation between Respondents own rating of the livelihood effect that the distributed common grazing land can have and each time of access was also made [see Annex 4.36].

As it is shown on Annex 4.37, the number of respondents in each level of response does not significantly differ for the two Gotts as the *p-value* (=0.130) is not less than the alpha value ($\alpha = 0.05$) with three degrees of freedom. In other words, each percentage of those household heads who said very low, low, high, or very high in Kattal Gott did not differ significantly from that of Seblan Gott. However, the proportion of respondents in each level of response within each Gott was significantly different since the *p-values* (=0.000 for the two Gotts) are less than the alpha value ($\alpha = 0.05$) with three degrees of freedom [see Annex 4.38]. This is to mean that the number of respondents who preferred a certain level of agreement in Kattal Gott was significantly different from to those respondents who preferred other levels of response within that Gott. The same is true for Seblan Gott.

By recoding the first two levels of responses into "Low Effect on Livelihood" and the bottom two levels of responses into "High Effect on Livelihood", the rating of respondents can be polarized and becomes easy to understand. From Annex 4.39, it is observed that the number of respondents in each level of response does not significantly differ for the two Gotts as the *p-value* (=0.105) is not less than the alpha value ($\alpha = 0.05$) with one degree of freedom. In other words, each percentage of those household heads who said "Low Effect on Livelihood" and "High Effect on Livelihood" in Kattal Gott did not differ significantly with that of Seblan Gott. In addition though there was a difference between the proportion of respondents in each level of response within each Gott, the difference was not significant in both Gotts as the *p-values* (=0.094 for Kattal Gott and =0.484 for Seblan Gott) are greater than or close to equal to the alpha value ($\alpha = 0.05$) with one degree of freedom [see Annex 4.40]. Therefore from the polarized rating of respondents it is possible to conclude that the number of respondents who said that the distributed common grazing land has brought high livelihood effect on the

households was similar [close to fifty, fifty in proportion] to the number of respondents who said that the distributed common grazing land has brought low livelihood effect on the households.

4.4.2. Preference between Farming and Grazing the Distributed Land

The preference of key informants, interviewees and focus group discussants was highlighted earlier on sub-section 4.4.1. In this sub section, the preference (from grazing to farming) of household head respondents of the two Gotts is presented. While assessing the choice between farming and grazing, household head respondents were also asked to give their preference for the two in comparison with giving the land to an investor [see Annex 4.41].

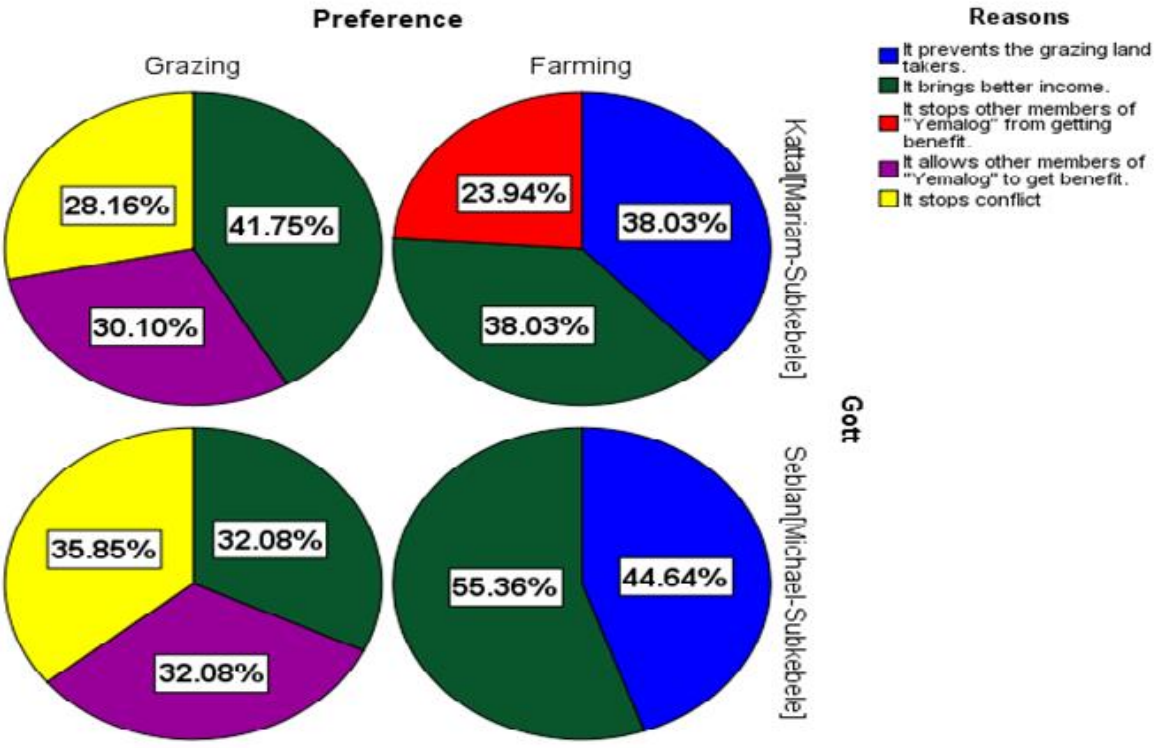
The First Choice of Household Head Respondents from "Grazing" to "Farming"

As it is observed from Annex 4.42 the *p-value* (=0.016) is less than the alpha value ($\alpha = 0.05$) with one degree of freedom. This implies that the number of respondents in each level of response does significantly differ for the two Gotts. In other words, the percentage of those household heads that preferred "Grazing" in Kattal Gott and the percentage of those household heads that preferred "Grazing" in Seblan Gott did differ significantly. The same is true for "Farming" preference in the two Gotts. However, even though there was a difference, the proportion of respondents in each level of response within each Gott was not significant as the *p-values* (=0.056 for Kattal Gott and =0.123 for Seblan Gott) are greater than the alpha value ($\alpha = 0.05$) with one degree of freedom [see Annex 4.43].

Reason for the Preference of Household Head Respondents from "Grazing" to "Farming"

Household head respondents were also asked to give the reasons [listed below] for their preference [see details on Annex 4.44]. Then a cross tabulation between the reason and Gotts was made with a chis-square test [see Annex 4.45]. As it can be seen from Annex 4.45, more than 20% of cells in the two categories of preferences have expected cell counts less than 5. This forbids the calculation of chi-square test. For this reason, pie graph was used as a means to analyze the household heads' reasons for their preference in the two Gotts.

Graph 4.9. Household Heads' Reason for Preferring Grazing and Farming the Distributed Land



As it can be seen from Graph 4.9, better income, benefit for other members [out of the two NiusKebeles], and conflict deterrence were respectively the first, second and third reason chosen by Kattal Gott household heads for preferring the land for grazing. On the other hand, deterrence

of conflict, better income, and benefit for other members were the reasons chosen by Seblan Gott household heads for preferring the land for grazing. Better income, prevention of grazing land takers and preventions of other members getting benefit were the reasons chosen by Kattal Gott Household heads for preferring the land for farming. For Seblan Gott household heads, generation of better income and prevention of grazing land takers were the main reasons for preferring the land for farming.

Association between Household Heads' preference and Livelihood Rating

In order to see the relationship between the preference and livelihood rating of household head respondents, a Pearson chi-square test was used and summarized on Annex 4.46. As it is clearly depicted from Annex 4.46, the *p-values* (=0.000 for the two Gotts) are greater than the alpha value ($\alpha = 0.05$) with one degree of freedom. This implies that there was a significant association between household heads preference and livelihood rating [the value levels of one variable goes with the value levels of the other variable, 1 with 1 and 2 with 2]. Therefore, household heads who preferred grazing also said that the use of the distributed land for farming had a low effect on livelihood while those households who preferred farming said "high livelihood effect".

4.4.3. Attitude of Respondents towards the Distribution of Common Grazing Land

4.4.3.1. Analyzing the Attitude of the Household Heads in Various Techniques

In order to examine the attitude of the respondent household heads towards the distribution of common grazing land, a ten-item Likert-scale measurement with four levels of response was used [see the items and their item number on the survey questionnaire].

In terms of the level of response for each Individual items

In investigating the attitude, first household heads' responses to each individual item were identified and summarized by interpreting what each level of response meant [see Annex 4.47]. Second, summarized statistics were computed for the interpreted responses [see Annex 4.48]. At this stage it was possible to talk about the opposing or favoring attitude of respondents towards the distributed common grazing land in terms of the individual items by comparing the calculated or observed mean [see on Annex 4.48] and expected mean [(1+2+3+4)/4=2.5 which is found far from 2 and 3 with an equal distance] of the level of responses in each item. For example, the observed mean of levels of response of the two Gotts for item 1 are 2.27[for Kattal] and 2.75[for Seblan]. The former is less than 2.5 and close to 2 [opposition] while the latter is greater than 2.5 and close to 3 [Favor]. In other words, due to the first response, Kattal Gott household heads have a negative attitude towards the distributed grazing land, while Seblan Gott household heads have a positive attitude towards the land. In the same way, Kattal Gott household heads have a negative attitude towards the distributed grazing land as seen in the second, third, fourth, fifth, sixth, eighth, and tenth responses while Seblan Gott household heads have a positive attitude to the land as seen in all ten responses.

In order to check whether the proportion of respondents who choose one level of response for a given item is significantly different from the proportion of respondents who choose other level of response for the same specific item within a Gott, one sample chi square test was used as shown on Annex 4.49. Accordingly, the proportion of household head respondents who choose a certain level of response was significantly different from the proportions of other household heads that choose other levels of response for the second, fourth, fifth, sixth, seventh and ninth questions within Kattal Gott. However, it was only for the eighth and ninth questions which the proportion of household head respondents who choose a certain level of response was significantly different from the proportions of other household heads that choose other levels of response for Seblan Gott. From this it is understood that the majority of items in Kattal Gott have created a significant proportional difference among the level of responses. But although almost all questions created proportional differences among the level of responses, the differences were not significant for the majority of items.

A chi-square test was also applied to the interpreted level of responses of each question across the Gotts so as to examine the proportional difference of the two Gotts for each level of response. As it can be seen from Annex 4.50, the number of respondents in Kattal Gott who choose a certain level of response for the second, fourth, fifth and sixth questions was significantly different from the number of respondents in Seblan Gott who choose a certain level of response for the same question. Hence, it is possible to say that more than half of the questions have created a differential proportion for each level of response.

This analysis of attitudinal response of household heads is based on the individual items. On such analysis respondents may have a positive [favoring] attitude for a certain variable due to a given question while at the same time they may also develop a negative [disfavoring attitude] to

the same variable although it is due to a different question. Hence, arriving at a firm yardstick that measures the attitude in a generalized manner would seem impossible. In order to avoid this dilemma, the total attitudinal score of each respondent was computed from all the ten questions by using SPSS [see Annex 4.51].

In terms of the Total Attitudinal Scores of Household heads

As it can be seen from Annex 4.52, the total sample, Kattal Gott, and Seblan Gott have observed means of 26.24, 25.00 and 27.94 respectively. The total sample and Seblan Gott has a mean that is greater than the expected mean [(10+20+30+40)/4=25]. The numbers 10, 20, 30, and 40 are expected total scores if an individual prefers the same level of agreement for all items. In other words if a household head respondent replied to all the ten questions by saying strongly disfavor [1] he would score 10. In the same manner, if the respondent's response was disfavor [2], or favor [3], or strongly disfavor [4] for all items the expected total attitudinal score would be would be 20, 30, or 40 respectively.

Based on the observed and expected statistics, the attitude of the respondent household heads can be explained as follows. The mean of the total sample [26.24] is close to 30 [an expected total attitudinal score of a respondent who favors]. As it is seen on Annex 5.51, 23 is a total score which is smaller than the total sample observed mean and close to 20 [an expected total attitudinal score of a respondent who disfavors]. At this point the cumulative frequency shows that 52.1% of total sample respondents have a disfavoring [strongly disfavoring] attitude to the distributed common grazing land. The remaining 47.9% of total households have a favoring [strongly favoring] attitude to the land. By following the same analysis, 61.4% of Kattal Gott household heads have a disfavoring [strongly disfavoring] attitude to the land while the remaining 38.6% have a favoring [strongly favoring] attitude. On the case of Seblan Gott, 60.8%

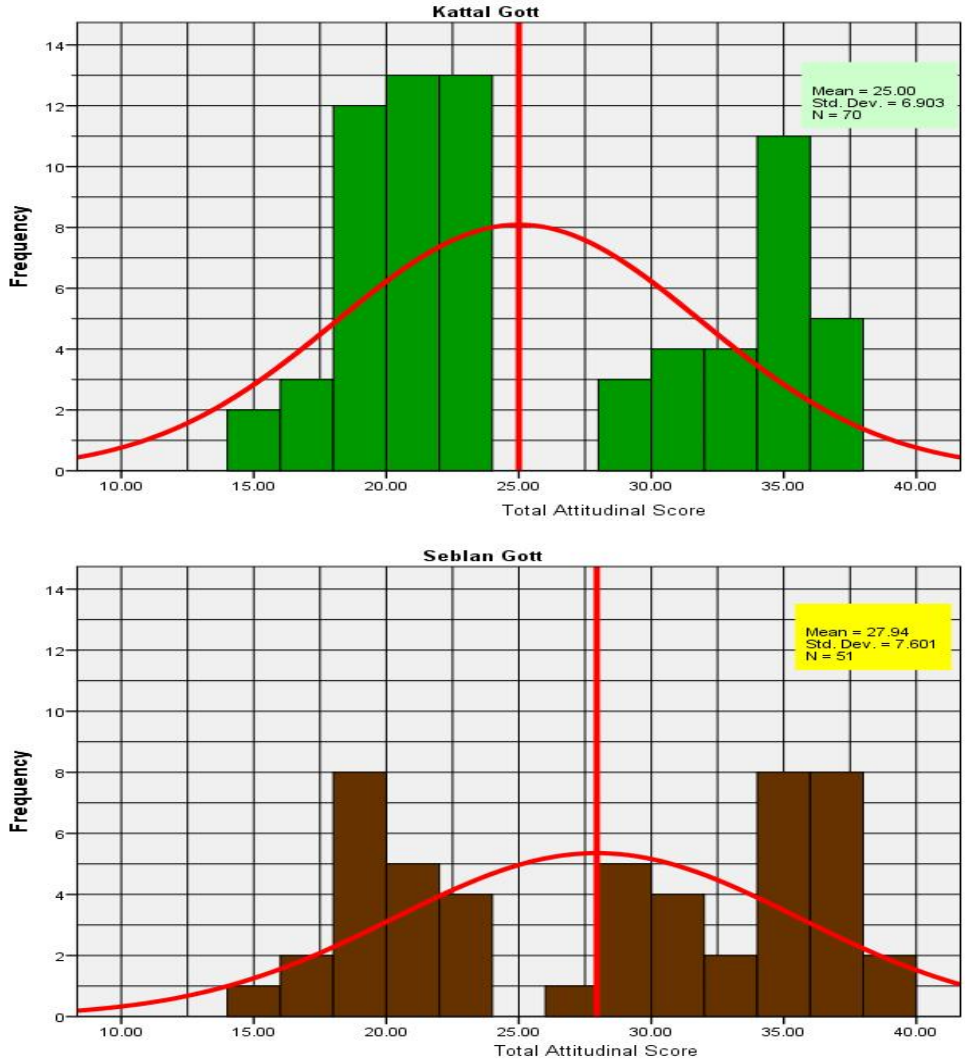
of household head respondents have a favoring [strongly favoring] attitude to the distributed common grazing land.

Annex 4.52 shows that the *p-values* (=0.065 for the total sample and =1.000 for Kattal Gott) are greater than the alpha value ($\alpha = 0.05$) with respective degrees of freedom of 120 and 69. Therefore, there was no significance difference between their observed mean and expected mean. This implies that the difference between those who have a negative [disfavoring or strongly dis favoring] attitude and a positive [favoring or strongly favoring] attitude to the distributed common grazing land was not significant for the total sample and Kattal Gott. On the other hand there was significance difference between the observed mean and expected mean of Seblan Gott as the *p-value* (=0.008) is less than the alpha value ($\alpha = 0.05$) with 50 degrees of freedom. This implies that there was a significant difference between those who have a negative [disfavoring or strongly disfavoring] attitude and a positive [favoring or strongly favoring] attitude to the land.

In order to compare the mean attitudinal scores and the equality of variances of the two Gotts, independent sample t-tests and Levene Tests were used [see Annex 4.53]. As it is observed from Annex 4.53, there was a significant difference between mean attitudinal total scores of the two Gotts as the *p-values* (=0.028 for equal variance and =0.031 for non-equal variance) are less than the alpha value ($\alpha = 0.05$). This implies that the mean attitudinal score of Seblan Gott is close to a positive attitude while that of Kattal Gott is neither positive nor negative. The Levene's test for equality of variances also shows that the difference between the variance of the two Gotts was not significant as the *p-value* (=0.447) is greater than the alpha value ($\alpha = 0.05$). This is to mean that each attitudinal score of the two Gotts was distributed around the mean with a similar distance [see also the standard deviation of the two Gotts on graph 4.10].

As it can be seen from graph 4.10, the distribution of attitudinal scores of Kattal Gott households is more peaked than that of Seblan Gott which is to mean that the score of each household in the former Gott is distributed nearer to the mean than that of the latter though the difference of variability was not significant. This implies that those respondent household heads who favor and disfavor the distribution of the grazing land is less extreme [as their response was in the lower level of response or category] in Kattal Gott as compared to that of Seblan Gott respondent household heads.

Graph 4.10. The Normal Distribution of Attitudinal Scores of the Two Gotts



The attitudinal scores of most of respondents in both Gotts are also distributed around the expected scores of 20 [disfavor] and 35 [between favor and strongly favor]. This can be interpreted to show that household heads who have a negative attitude to the distributed common grazing land oppose the plowing of the land with a medium level of disagreement while those who have a positive attitude tend to support the plowing of the distributed land with medium and strong levels of agreement.

4.4.3.2. Correlation between some variables and attitudinal score

This sub-section focuses on examining the correlation between the Attitudinal Score and some major variables like Household Size, Land Holding Size, Income from Agricultural Products, Income from Domestic Animals, Income from Distributed Land. As it can be seen from Annex 4.54, household size, land holding size, and total amount of income from animal possession have somewhat negative significant correlation with the total attitudinal score in Kattal Gott. This implies that households [household heads which have household] with large household size, landholding size, and total income from animal possession tend to have moderate significant negative attitude to the distributed common grazing land. In addition, households with a large farming income and income from the distributed common grazing land tend to have a negative but insignificant attitude to the distributed land. However, households which have large income from extra sources tend to have a weak positive but insignificant attitude to the distributed land. On the case of Seblan Gott, households with large household size were inclined to have weak negative but insignificant attitudes to the distributed land while households with large household size, land holding size, income from animal possession, farming income, income from extra sources and income from the distributed common grazing land were inclined to have weak positive but insignificant attitudes to the distributed land.

In addition, this sub-section describes the association between the Preferences [from grazing to farming] and categorized attitudinal scale [negative vs. positive attitude]. Accordingly, as it is indicated on Annex 4.55, the association between preferences and attitude was significant in both Gotts since the *p-values* (=0.000 for the two Gotts) are less than the alpha value ($\alpha = 0.05$). This implies that those households in both Gotts who preferred grazing also have a negative attitude towards using the distributed land for farming while those households who preferred farming also have a positive attitude to using the distributed land for farming.

What to obtain from the distributed grazing land?

From the focus group participants and interviewees, it is possible to observe that the distributed common grazing land has not given much benefit to those who preferred "grazing". Even those who preferred "farming" said that the land would give them a better benefit if additional land were added. As it is mentioned in sub-section 4.2.1, Arbawash Mariam Nius-Kebele has currently a total of 23.5 hectares of land. If this land is divided in to six Gotts each Gott would have 3.92 hectares of land, which in turn would be owned by more than 50 youth of each Gott. Arbawash Michael Nius-Kebele has currently 3.5 hectares of land. If this land is equally shared by the four Gotts each Gott would recieve around a hectare of land, which in turn has to be shared by more than 50 youth in each Gott. Hence the majority of participants and interviewees seem inclined to say that the land is not benefitting the livelihood of the rural household in its current size. As it is indicated on sub-section 4.4.1, the annual maximum, minimum, range, mean and median incomes from the distributed land for the two Gotts were less than 1000 birr. How could an annual income of less than 1000 birr be described as good? It is mentioned that the number of Kattal Gott household heads that rate the effect of the distributed land on livelihood "low" was greater than those who rate "high" though the opposite was true on the case of Seblan

Gott. However, the difference between the proportion of responses for low rating and high rating was not different at a significant level in either Gott. From the total sample, the numbers of "low" raters are greater than the numbers of "high" raters. In addition, there is a strong association between the rating of respondents and their preference, and their preference and the attitude to the distributed common grazing land. All these imply that the livelihood effect of the distributed common grazing land at its current state should not be described as "high".

The land distributed to the youth of the rural households was small and therefore it did not enable them, let alone the rural households as a whole, to benefit from the distributed land or live an independent livelihood. What the rural households of the two Nius-Kebeles did get was disagreement and conflict at the expense of a long-standing social bond. Had any other alternatives existed in the rural households, the two Nius-Kebeles would not have entered into conflict over such a small amount of land and income.

As it is indicated in Annex 4.33, there is difference in the average annual income obtained from the distributed land. This difference is mainly a result of amount of crop production obtained from the distributed land. From the interview made to the Kattal Gott household heads, it can be seen that there is a difference in the amount of crop production from a youth who has used "two oxen", "one oxen" or "his or her labor only" in the process of production. Since there is an agreement between the household heads, which states that one ox is equivalent to one man's [youth's] labor, a youth with one ox has to contribute his or her labor [any member of the household can contribute] to the point that it is equal to the youth with two oxen. Therefore, a youth who participates in the production process with only his or her labor has to make a contribution equal to the youth with two oxen. If the contribution is not equal, the division of the produce will also not be equal. So, it is due to this "rule of division of crop produce" that the

difference on the annual average income from the distributed grazing land occurs. Consequently, conflict also occurs within the youth who are members of the same Gott, between those youth who participate in the production process with two oxen, and between those who have one ox or none at all.

While reviewing the agricultural policy of Ethiopia, Dessalegn Rahmato (2003:131) said the rural development policy of FDRE has underlined that the country's overall development is to be agriculture and rural centered while the basis for the rural sector has to be agricultural-led development. For him the justification given by FDRE is that the country's chief and abundant resources are land and labor and that the great majority of the people live in the rural areas and are agriculturalists. Thus, the country has no alternative but to employ these resources soundly and efficiently in order to bring about rapid growth and sustainable development.

Although the plan for rural development of Ethiopia is stated the way it is, it seems a challenge for local governments at Kebele level to balance the livelihood effect of the small land possessed by rural households and the growth of rural youth population and its demand for means of livelihood. Main emphasis on the agricultural sector may mean that a fair landholding size is a prerequisite for making a good livelihood for the rural households and their youth as well. The absence of additional farmland may force rural households to change the common grazing land into farmland but with unexpected negative consequences and without major change in their livelihood.

4.5. The Measures Taken and Their Consequences in Mediating the Different Interest Groups

4.5.1. Before the First Phase of Distribution

As it is mentioned in sub-section 4.2.1, one of the key informant interviewees stated that when households of *Bedega*-Dingra Nius Kebele plowed the surrounding common grazing land (including the disputed common grazing land) in 1996, households of Arbawash Mariam and Arbawash Michael Nius-Kebeles were also plowing in an agressive and grabing manner. However, this violent reaction of the two Nius-Kebele*s*, which was taken as a solution, heightened the conflict between the two groups. As one household interviewee from Seblan Gott said, the conflict had reached the extent of beating and whipping each other when the two conflicting groups were plowing the same contested land on the same day. This event had drawn the attention of Jabitehinan Woreda government officials and a legal intervention was made accordingly. This resulted in only tentative silence as they were both told to stop plowing that land.

However, since the conflicting groups continued plowing the land regardless of the warning given by "Woreda level officials", the contention began again. At this time, as the former Kebele leader and household focus group discussants of the two Gotts said, the disagreement was solved by the intervention of the village elders in 1999. As a result the boundary between the two groups was demarcated and delimited by the village elders who were representatively chosen from the two Nius-Kebeles.

4.5.2. During the First Phase of Distribution

During the 1999/2000 year of production, household heads of Arbawash Mariam Nius Kebele began to plow the common distributed land in the name of their church development program which was given in favor of the two Nius Kebele*s* [Arbawash Mariam and Arbawash Michael] for the "purpose of defending the expansion of grazing land takers and individual land holders". This even soon raised a question of claim over the grazing land by the youth of Arbawash Mariam Nius Kebele. The resultant disagreement between the household heads and youth legally ended in the total favor of the youth by giving warning to those "expanding individual land holders" in the year 2000 by the intervention of the "Kebele administration".

Nevertheless, the households of Arbawash Michael Nius-Kebele began to present a question of claim for their youth to have access to the distributed land. Since this question of claim was rejected, the households of the two Nius-Kebeles entered into disagreement. This disagreement was ended by the mediation of the village elders of the two Nius-Kebeles, by allowing a small grazing land to be plowed as it was stated by the household and youth focus group discussants of Seblan Gott. As the two focus group discussants said, they were not satisfied though they accepted the agreement.

4.5.3. During the Second Phase of Distribution

The two Nius-Kebeles, Arbawash Mariam and Arbawash Michael, entered into conflict again in the year 2003. The cause was that the households of the first Nius-Kebele started to plow a fresh grazing land by reasoning that some individual land holders in the nearby grazing land in their Nius-Kebele were plowing and expanding more than before. The household of the second Nius-Kebele at the same time presented a new claim by justifying that they and their church also

deserved an advantage. As it is mentioned on sub-section 4.2.1, this called for the attention of "Woreda level officials" to urge the household of the two Niuse-Kebele*s* to solve their problem through agreement. If no agreement were reached, the land would be either become free or be given to an investor.

An agreement was reached between the two conflicting groups in 2004 once again by the intervention of village elders. Accordingly, all of the household heads in the two Nius-Kebeles left the land to the two Nius-Kebele youth [though disproportionally allocated] and the churches [equally allocated]. A large size of land which was taken by expanding individual land holders was turned back to the common by the Kebele administration. The two churches began to celebrate epiphany together after five years of detachment. Although the settlement of the dispute was reached between the claimant groups, later claims were made by Arbawash Michael household heads for their youth and there were still unresolved cases of some expanding individual land owners as indicated by household and youth focus group discussants of Seblan Gott and household head focus group discussants of Kattal Gott.

The role of traditional mechanisms of conflict management

From the legal and traditional interventions made during the various phases of the distribution of the common grazing land and the associated disagreements and conflicts, it is possible to see how powerful the village elders were in mediating the disputing parties or groups. Even the "Woreda level government officials" must have been aware of this power as they were giving warnings to the conflicting claimants of the land to solve their disagreement through their village elders. Hence, there is no doubt that traditional mechanism of conflict management play a huge role in the rural households.

5. SUMMARY OF MAJOR FINDINGS AND CONCLUSION

Based on the results and discussion made in chapter four, the following summary and conclusion were made.

In the early incidence of plowing the grazing land, Arbawash Mariam and Arbawash Michael households were successful in stopping *Bedega*-Dingira Nius-Kebele and Arbawash-Mariam Nius-Kebele individual land holders who started to plow the grazing land for the first time. However, the latter objective of generating a good means of livelihood for the youth of the rural households was not met to the extent it was expected. This is indicated by the livelihood rating of rural household heads and average annual incomes obtained from the distributed land. Even the parameters set for access, such as age limit and possession of taxable land by rural youth, are difficult criteria to assess in achieving the planned purpose. It is difficult to know the age of a youth as less attention is given to how old an individual is in the rural areas. In addition, since the youth live with the rest of the members of the household, it is difficult to identify whether a youth's land is taxable or not. It is a problematic task to identify taxpayers as the household pays land tax in the name of the household, not in the name of individual members. The magnitude of the landholding size of each rural youth's household is also not considered and rural youth with small and large areas of land have equal access to the distributed land as long as the listed criteria are met. Hence, the fairness of the distribution is in question. The requirement that a rural youth "is not attending education to have an access to the land" may also contribute to some rural households forcing their youth to quit their schooling.

The various bases of claim presented by each claimant group may be reasons for claimants to continue in a state of conflict. As it is discussed in the preceding chapter, there is a situation

where one group [Kattal Gott rural households in Arbawash Mariam Nius-Kebele] is justifying its sole right to access with the current land tenure rules in order to preserve its own interest. Contrary to this, the other group [Seblan Gott rural households in Arbawash Michael Nius-Kebele] is justifying its right to access with the past customary land tenure rules. From this it is possible to conclude that the current land tenure system seems to favor the youth of Arbawash Mariam Nius-Kebele rural households as there is a differential magnitude of access to the distributed land after the agreement and most of the resources and mechanisms of interest realization of Arbawash Michale Nius-Kebele are not completely legal. All these may result in the persistence of the disagreement between the claimant groups as well.

As it is indicated in the preceding chapter, the number of respondent household heads who showed a "grazing preference" was greater than the number of respondent household heads who showed a "farming preference". In addition, the grazing-farming preference of respondent household heads had a strong association with the attitudinal response [those respondent household heads who preferred "grazing" the distributed land have also a negative attitude to the distribution of the grazing land and vice versa] in the total sample. From this it is possible to conclude that most of the rural households of the two Nius-Kebeles seem to be unsatisfied with plowing the distributed common grazing land. From the livelihood ratings of the rural household head respondents and the income obtained from the distributed land, it is also possible to state that the livelihood effect of the land to the rural households and their youth seems insubstantial. It has, rather, resulted in unintended consequences like the strained relationship between the two Nius-Kebeles and losing the social ties that have existed for a long time. In addition to this, conflicts were being bred with in the Gott as a result of the contested rule of division of crop produce.

Finally, it is found that village elders are powerful in mediating the disagreements between the claimant groups of the distributed land. This power is even recognized by the Woreda government officials. Based on this it is possible to state that there are still strong norms which can control the dissent of different social groups in the area.

REFERENCES

Amare Bantider, 1996. *Land Use Dynaimics, Land Cover Changes and Land Use Concflicts in the Simen Mountain Natiional Park and Its Environs, North Gondar*.Addis Ababa University, School of Graduate Studies, College of Social Sciences.

Anseeuw, W. and Alden, C. eds. 2010. *The Struggle over Land in Africa: Conflicts, Politics and Change.* Cape Town, South Africa: HSRC Press.

Arbawash Dingira Kebele Information Center. 2004.A Summarized Report on the Households of Rual Nius-Kebeles and Gotts of Arbawash Dingira Kebele.

Ayalneh Bogale, *et al,* 2006. "Land ownership and conflicts over the use of resources." Pp.134-145 in *Implications for household vulnerability in eastern Ethiopia.* Ecological Economics.

Batson, D. E. 2006. *Registering the Human Terrain: A Valuation of Cadastre.* Center for Strategic Intelligence Research, USA: NDIC Press.

Benson, S.G. ed. 2001.*History Behind The Headlines: the Origins of Conflicts Worldwide.* Vol.1. Gale Group: 27500 Drake Rd. Farmington Hills.

Clay D.C., etal, 1994. *Population and Land Degradation: The Enivronment and Natural Resource Policy Project.* Department of Agricultural Economics, Sociology, Geography and Resource Development. Michigan University: USA

Cramer and Dennis Howitt. 2004.*The SAGE Dictionary of Statistics: A practical Resource for Students in the Social Sciences.* Thousand Oaks.London.New Delhi:Sage Publications.

Dessalegn Rahmato. 2008. "Ethiopia: Agriculture Policy Review."Pp.129-175 in *Digest of Ethiopia's National Policy, Strategies and Programs,* edited by Taye Asefa. Addis Ababa: FSS.

Ellis, Frank, 2000. *Rural Livelihoods and Diversity in Developing Countries*. New York: Oxford University Press.

FAO. 2002. *FAO Land Tenure Studies: Land Tenure and Rural Development.* Vol.3.Rome, Italy: Viale delle Terme di Caracalla, 00100.

Ghimire, K. B. 2001. *Land Reform and Peasant Livelihoods. The Social Dynamics of Rural Poverty and Agrarian Reform in Developing Countries.* United Nations Research Institute for Social Development: ITDG Publishing 103-105 Southampton Row, London WC1B4HL, UK.

Green, Gary Paul and Anna Haines.2002. *Asset Building and Community Development.* Thousand Oaks.London.New Delhi: Sage Publications.

Healey, Joseph F.2000. *Statistics: A Tool for Social Research.* 8th ed. U.S.A: Michele Sordi.

Hillman, J.C. 1990. "The Balle Mountain National Park Area, Southeast Ethiopia, and Its Management." Pp.277-286 in *African Mountains and Highlands: Problems and Perspectives* edited byMesserli, B. and Hurni, H. Marceline: AMA.

Hurni, H., and Bruno Messerli. 1981. "Mountain research for conservation and development in Simen, Ethiopia." *Mountain Research and Development* 1(1):49-54. Retrieved from http://www.cabdirect.org/abstracts/19811884082.html on October 25, 2012.

Jabitehinan Woreda Agricultural Office Bureau. 2004.A Summarized Report on the Households of Rual Kebeles of Jabitehinan Woreda.

Kumar, Ranjit. 2005. *Research Methodology: A Step-By-Step Guide for Beginners*. 2nd ed. London. Thousand Oaks. New Delhi:Sage Publications.

Le Meur, *et al*. (2006). *Conflict over Access to Land and Water Resources within* Nius-*Saharan Dry Lands: Underlying factors, conflict dynamics and settlement processes*. Retrieved December 15, 2012 (www.fao.org/fileadmin/templates/lead/pdf/tanzania/conflict).

LUPRD/FAO. 1984. *Ethiopian Highland Reclamation Study:* Working Paper(s). Addis Ababa University: Institute of Development Research. Addis Ababa: LUPRD/FAO.

Mashalla, S.K., 1990. *The Human Impact on the Natural Environment of the Mbeya Highlands, Tanzania.* Pp.327-335 in African Mountains and Highlands: Problems and Perspectives edited by Messerli, B. and Hurni, H. Marceline: AMA.

Mashalla, S.K.1988. "The Human Impact on the Natural Environment of the Mbeya Highlands, Tanzania." Pp.283-288 in *Mountain Research and Development* Vol.8, No.4.Retrieved October 25, 2012 (http://www.jstor.org/stable/10.2307/3673549).

National Population and Housing Census of Ethiopia. 2007. Retrieved December 11, 2012 (www.csa.gov.et).

Norton, Rogers.D, 2004. *Agricultural Development Policy: Concepts and Experiences.* England: John Wiley and Son's Ltd.

Peña, J. *et al*. 2007. "Driving forces of land-use change in a cultural landscape of

Spain."Pp.97-115 in *Modeling Land-Use Change: Progress and Applications*, edited by Koomen, Eric *et al*. The GeoJournal Library: Vol.90. Dordrecht, the Netherlands: Springer.

Pons-Vignon, N. and Henri-Bernard Solignac Lecomte.2004. "Land, Violent Conflict and Development."*OECD DEVELOPMENT CENTRE* 2(233).

Potti, J., c. 2005. Customary Land Tenure in Nius-Saharan Africa Today: Meanings and Contexts. Retrieved December 17, 2012 (http://www.iss.co.za/pubs/Books/GroundUp/2Customary.pdf).

Ramankutty, N. 2006. "Global Land-Cover Change: Recent Progress, Remaining Challenges." Pp. 9-39 in *Land-Use and Land-Cover Change: Local Processes and Global Impacts,* edited by Lambin, Eric F. and Geist, Helmut. Germany: Springer-Verlag Berlin Heidelberg.

Ramella, Francesco. 2007. "Political Economy." Pp 3433-3436 in *The Blackwell Encyclopedia of Sociology,* edited by George Ritzer. USA.UK. Australia: Blackwell Publishing Ltd.

Sanderson, Stephen K. 2007. "Conflict Theory." Pp 662-665 in *The Blackwell Encyclopedia of Sociology* edited by George Ritzer. Blackwell Publishing Ltd. USA.UK. Australia.

Simmons, Cynthia S. 2004. "The Political Economy of Land Conflict in the Eastern Brazilian Amazon."Pp. 183–206 in *Annals of the Association of American Geographers*, Vol.1, No.94. U.K.: Blackwell Publishing Company.

Solomon Abebe, 2005. *Land-Use and Land-Cover Change in Headstream of Abbay*

*Watershed, Blue Nile Basin, Ethiopia.*Addis Ababa University, School of Graduate Studies, Geography and Environmental Studies.Retrieved October 31, 2012 (http://www.cde.unibe.ch/CDE/pdf/Solomon%20).

Tsegaye Moreda, 2012. *Vulnerability, Land, Livelihoods and Migration Nexus in Rural Ethiopia:* A Case Study in South Gondar Zone of Amhara Regional State

UN-HABITAT. 2009. *Land and Conflict: A Hand Book for Humanitarians.* Retrieved on December 12, 2012 from postconflict.unep.ch/humanitarianaction/documents.

Yamano, T. and Klaus Deininger. 2005. *Land Conflicts in Kenya: Causes, Impacts, and Resolutions.* Foundation for Advanced Studies on International Development / National Graduate Institute for Policy Studies: The World Bank.

Yerasswork Admassie, 2000. *Twenty Years to Nowhere: Property Rights, Land Management and Conservation in Ethiopia.*Red Sea Press Inc., Lawrenceville.

Annexes

Annex I: Data Collection Instruments

Survey Instrument

Addis Ababa University
College of Social Sciences
Department of Sociology
Post Graduate Program of Social Sciences

~~~~~~

Dear Respondents! This is a survey questionnaire which meant to find information about issues related with the distribution of common grazing land for farming and emerging disagreements among diverse claimant groups for academic purpose. It specifically targets to describe the livelihood effect of the distributed common grazing land and to categorize the claimant groups' preference from farming to grazing the distributed land and their attitude to it. Hence, you are kindly requested to provide genuine information.

I. Background Information

Instruction: Write the numbers your choice in the boxes for the close ended questions and fill the blank spaces and tables for the open ended question.

1. Household head's specific Gott: Kattal=1, Seblan=2 ☐
2. Household head's Sex: Male=1 , Female=2 ☐
3. Household head's Age: __________
4. Marital Status: Unmarried=1, Married=2, Divorced=3, Widowed=4 ☐
5. Household head's Religion: Orthodox=1, Protestant=2, Catholic=3, Muslim=4 ☐
   If any other, Specify:_____________
6. Household head's Ethnicity: Amhara=1, Oromo=2, Agew=3 ☐
   If any other, specify:_________
7. Household head's Educational Status: Do not read and write=1, Read and write[without formal education]=2, Grade1-4=3, Grade5-8=4, Grade9-10=5, Grade11-12=6 ☐
   If any other, specify: _______________
8. Have you stopped on your current educational status?[This question is answered based on question 7 by excluding the first two choices] Yes=1, No=2 ☐
9. Number of Household Members: 7.1: Males_____ 7.2: Females_____ 7. 3: Total_______
10. Land holding size of each household [excluding the distributed common grazing land if there is](in hectare):________________
~~~~~~

11. Annual asset of the household obtained from the above land holding size [given on question-10] based on the type of produce, quantity and price for the year 2004 E.C

Type of Produce	Teff	Maize	Barley	Dagusa	Wheat	Oats	Pea	Bean	Chick-pea	Vetch	Potato	Pepper	Rapeseed	Niger seed	Abesh	Gibitto
Quantity [in *Kuntal*]																
Estimated Unit price [in Birr]																

12. Annual asset of the household obtained from the above land holding size [given on question-10] based on the type of produce, quantity and price for the year 2005 E.C

Type of Produce	Teff	Maize	Barley	Dagusa	Wheat	Oats	Pea	Bean	Chick-pea	Vetch	Potato	Pepper	Rapeseed	Niger seed	Abesh	Gibitto
Quantity [in *Kuntal*]																
Estimated Unit price [in Birr]																

13. The number of each type of domestic animals for the household [only concerned with domestic animals whose life depend on eating grass]

Type of Domestic Animals	Ox	Cow	Bull	heifer	calf	Donkey	Horse	Mule	Sheep	Goat
Quantity										
Estimated unit price [in birr]										

14. How much direct cash income does your household obtain from the above domestic animals[given on question-11] starting from the year 2004(in Birr)

Type of Domestic Animals		Ox	Cow	Bull	heifer	calf	Donkey	Horse	Mule	Sheep	Goat
Direct Income [in birr]	by selling the animal										
	by renting the animal:										
	by selling the animal's product										
	if any other, specify										

15. Mention the indirect services of the household obtained from the above domestic animals [given on question-11].

Type of Domestic Animals		Ox	Cow	Bull	heifer	calf	Donkey	Horse	Mule	Sheep	Goat
Indirect service [write the number of your choice for the respective cells]	For plowing : Yes=1, No=2										
	For transportation: Yes=1, No=2										
	For food[e.g. for milk and meat]: Yes=1, No=2										
	if any other, specify										

16. Other current source of household income, other than from the distributed common grazing land if there is.

Type of other income source	hen-breading	bee-keeping	renting house	retailing goods	retailing crops and grains	trading domestic animal	hen trade	egg trade	butter trade	honey trade	iron-smith	clay-making	Jewelry-Making	weave ring	tanning
Does your household engages in…….? Yes=1, No=2															
If you say "yes", how many has your household got from from……since 2004 E.C.? [in Birr]															

II. Livelihood Effect of the Distributed Common Grazing Land

Instruction: Write the numbers your choice in the boxes for the close ended questions and fill the blank spaces and tables for the open ended question.

17. Did your household get an access to the distributed common grazing land when it was distributed for farming for the first time? Yes=1, No=2: ☐
18. If you say **"yes"** for question 15, how your household got the access?
    - 18.1. Because of in the "name of the church".Yes=1, No=2: ☐
    - 18.2.Because there was only a youth member in the household. Yes=1, No=2 ☐
    - 18.3.Because there was an illiterate youth member in the household. Yes=1, No=2 ☐
    - 18.4.Because there was a dropout youth student in the household. Yes=1, No=2 ☐
    - 18.5.Because there was unemployed youth who finished his education in the household. Yes=1, No=2 ☐
    - 18.6.Because there was a youth member in the household with no taxable land. Yes=1, No=2 ☐
    - 18.7.Because the household is a member of the Nius-Kebele. Yes=1, No=2 ☐
    - 18.8.If any other, please list them_____
19. Does your household have an access to the distributed common grazing land currently? Yes=1, No=2 ☐
20. If you say **"yes"** for question 17, how your household gets the access?
    - 20.1. Because of in the "name of the church". Yes=1, No=2: ☐
    - 20.2.Because there is only a youth member in the household. Yes=1, No=2 ☐
    - 20.3.Because there is an illiterate youth member in the household. Yes=1, No=2 ☐
    - 20.4.Because there is a dropout youth student in the household. Yes=1, No=2 ☐
    - 20.5.Because there is unemployed youth who finished his education in the household. Yes=1, No=2 ☐
    - 20.6.Because there is a youth member in the household with no taxable land. Yes=1, No=2 ☐
    - 20.7.Because the household is a member of the Nius-Kebele. Yes=1, No=2 ☐
    - 20.8.If any other, please list them_____

21. If you say **"yes"** for question 17 or 19 or for both 17 and 19, please fill the following table in respect to your household's production from the distributed common grazing land.

	Maximum		minimum	
21.1. Year of production				
21.2. Produced item types				
21.3. Produced item quantity[in *Kuntal*]				
21.4. Produced item price [in *birrr*]				

Put the codes into the table
Chick-pea=1,Vetch=2, *Abesh*=3,*Teff*=4, Potato=5 If any other, Specify: _____

22. If you say **"yes"** for question 15 or 17 or for both 15 and 17, how do you describe the livelihood effect that the distributed common grazing land can made?
Very high=4, High=3, Low=2, Very low=1 ☐

23. If you say **"No"** for question 15, why your house hold was denied the access?
    21.1. Because it was impossible to have access in the "name of the church": Yes=1, No=2 ☐
    21.2.Because there was no youth member in the household. Yes=1, No=2: ☐
    21.3. Because there was no illiterate youth member in the household. Yes=1, No=2 ☐
    21.4. Because there was a no dropout youth student in the household. Yes=1, No=2 ☐
    21.5. Because there was no unemployed youth who finished his education in the household. Yes=1, No=2 ☐
    21.6. Because there was no youth member in the household without taxable land. Yes=1, No=2 ☐
    21.7. If any other, please list them_____
24. If you say **"No"** for question 17, why your house hold is denied the access?
    22.1. Because it is impossible to have access in the "name of the church": Yes=1, No=2 ☐
    22.2.Because there is no youth member in the household. Yes=1, No=2: ☐
    22.3. Because there is no illiterate youth member in the household. Yes=1, No=2 ☐
    22.4. Because there is no dropout youth student in the household. Yes=1, No=2 ☐
    22.5. Because there is no unemployed youth who finished his education in the household. Yes=1, No=2 ☐
    22.6. Because there is no youth member in the household without taxable land. Yes=1, No=2 ☐
    22.7. If any other, please list them_____
25. If you say **"No"** for both 15 and 17, how do you describe the livelihood effect that the distributed common grazing land can made? ☐
Very high=4, High=3, Low=2, Very low=1

III. Attitude and Preference

Instruction: Encircle the numbers which indicates your level of agreement for each item.

S.No.	Questions	Responses			
26.	**Item1**=I feel that the distributed common grazing land is becoming a good income sources for the households which have the access.	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
27.	**Item2**=It is better to use the distributed common grazing land for grazing as it was before than to use for farming.	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
28.	**Item3**=The benefit gained from the distributed common grazing land is better in the form of farming than grazing.	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
29.	**Item4**=I would be happy if the common grazing land was not distributed.	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
30.	**Item5**=I will vote a candidate who competes for a Kebele administrative position if he or she promises not to restore the distributed common grazing land to its former situation	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
31.	**Item6**=If I get power, I forbid a land use change "like this" which resulted in disagreement and conflict.	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
32.	**Item7**= A land use change has to be made according to the prevailing circumstances.	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
33.	**Item8**= The distributed common grazing land gives more benefit to the domestic animals of the household than to the households directly as source of farming income.	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
34.	**Item9**=It gives me a good feeling if the distributed common grazing land is given to an investor.	Strongly Agree 1	Agree 2	Disagree 3	Strongly Disagree 4
35.	**Item10**= I do not support and involve in any action which targets in restoring the distributed common grazing land to its previous form of use.	Strongly Agree 4	Agree 3	Disagree 2	Strongly Disagree 1
	Total Score				

Instruction: Write the numbers your choice in the boxes for the close ended questions and fill the blank spaces and tables for the open ended question.

36. What do you prefer from "grazing=1" to "farming=2" the distributed common grazing land? ☐

37. Provide a justification for your answer for question 38.
    - 37.1. It prevents the grazing land takers. Yes= 1, No=2: ☐
    - 37.2. It brings better income.Yes= 1, No=2: ☐
    - 37.3. It stops other members of "Yemalog" from getting benefit.Yes= 1, No=2: ☐
    - 37.4. It allows other members of "Yemalog" to get benefit.Yes= 1, No=2: ☐
    - 37.5. If any other, please list them_____.

38. What do you prefer from "being given to an investor=1" to "farming=2" the distributed common grazing land? ☐

39. Provide a justification for your answer for question 38.
    - 39.1. It prevents the grazing land takers. Yes= 1, No=2: ☐
    - 39.2. It brings better income. Yes= 1, No=2: ☐
    - 39.3.It stops other members of "Yemalog" from getting benefit. Yes= 1, No=2: ☐
    - 39.4. It does not stop other members of "Yemalog" from geting benefit. Yes= 1, No=2: ☐
    - 39.5. The investor does not give proper benefit. Yes=1, No=2: ☐
    - 39.6. If any other, please list them_____.

40. What do you prefer from "being given to an investor=2" to "grazing=1" the distributed common grazing land? ☐

41. Provide a justification for your answer for question 40.
    - 41.1. It prevents the grazing land takers. Yes= 1, No=2: ☐
    - 41.2. It brings better income. Yes= 1, No=2: ☐
    - 41.3. It stops other members of "Yemalog" from getting benefit. Yes= 1, No=2: ☐
    - 41.4. It does not stop other members of "Yemalog" from getting benefit. Yes= 1, No=2: ☐
    - 41.5. The investor does not give proper benefit. Yes=1, No=2: ☐
    - 41.6. If any other, please list them_____.

42. Identify the one which gives you the most benefit=1, more benefit=2, and less benefit=3.
    - 42.1. Using the land for grazing. ☐
    - 42.2. Using the land for farming. ☐
    - 42.3.Giving the land to an investor. ☐

Thank You for Providing Genuine Information

Interview Guiding Questions

Addis Ababa University
College of Social Sciences
Department of Sociology
Post Graduate Program of Social Sciences

~~~~~~

Dear Interviewees! This interview is going to be conducted with general purpose finding information about issues related with the distribution of common grazing land for farming and emerging disagreements among diverse claimant groups for academic purpose.

I. Background Information

1. Gott_____________________
2. Name_____________________
3. Sex: _____________________
4. Age: _____________________
5. Marital Status______________
6. Religion: __________________
7. Ethnicity: __________________
8. Educational Status: _______________________________
9. Position in the Kebele:_____________________________
10. Current Access to the distributed land________________________

II. Major contents of the Interview

1. What was the initial purpose of distributing the common grazing land for farming
2. Do you think that the intended purpose is achieved?
3. What were the criteria of distributing the common grazing land?
4. Which are the claimant groups?
5. What bases of claim do claimant groups present?
6. What resources and mechanisms do claimant groups use to realize their interest?
7. How do you describe the livelihood effect of the distributed common grazing land?
8. Which one do you think is preferable from "grazing" to "farming" the distributed land?
9. Do you think that giving the distributed common grazing land to an investor is good?
10. What measures have been taken to reduce and solve disagreements and conflicting issues among diverse interest groups?
11. What consequences resulted from the measures taken in mediating the different interest groups?
~~~~~~

Guiding Questions for Focus Group Discussions

Addis Ababa University

College of Social Sciences

Department of Sociology

Post Graduate Program of Social Sciences

~~~~~~

Dear Interviewees! This interview is going to be conducted with general purpose finding information about issues related with the distribution of common grazing land for farming and emerging disagreements among diverse claimant groups for academic purpose.

I. Background Information

Gott: _______________, Category: ___________

Name	Sex	Age	Marital status	Religion	Ethnicity	Education	Kebele-position	Current Access status

II. Major contents of the Discussion

1. What was the initial purpose of distributing the common grazing land for farming
2. Do you think that the intended purpose is achieved?
3. What were the criteria of distributing the common grazing land?
4. Which are the claimant groups?
5. What bases of claim do claimant groups present?
6. What resources and mechanisms do claimant groups use to realize their interest?
7. How do you describe the livelihood effect of the distributed common grazing land?
8. Which one do you think is preferable from “grazing” to “farming” the distributed land?
9. Do you think that giving the distributed common grazing land to an investor is good?
10. What measures have been taken to reduce and solve disagreements and conflicting issues among diverse interest groups?
11. What consequences resulted from the measures taken in mediating the different interest group?
~~~~~~

Validity and Reliability of the Attitudinal Question

Validity	
Items [Refer to the survey questionnaire, Part III]	Contents addressed
Item 1	Feeling[Emotion]/Belief[Cognition]
Item 2	Belief[Cognition]
Item 3	Belief[Cognition]
Item 4	Feeling[Emotion]
Item 5	Behavior[Response]
Item 6	Behavior[Response]
Item 7	Belief[Cognition]
Item 8	Belief[Cognition]
Item 9	Feeling[Emotion]
Item 10	Behavior[Response]

Reliability Statistics				
Cronbach's Alpha			Value	.854
			N of Items	10
Split-Half	Cronbach's Alpha	Part 1	Value	.893
			N of Items	5[a]
		Part 2	Value	.437
			N of Items	5[b]
		Total N of Items		10
	Correlation Between Forms			.738
	Spearman-Brown Coefficient	Equal Length		.849
		Unequal Length		.849
Guttman Split-Half Coefficient				.790
a. The items numbered 1-5,				
b. The items numbered 6-10				
Pilot sample=20				

Annex II: Additional Tables on the "Result and Discussion" Chapter

Annex 4.1. Background Information of Interviewees and Key Informants

S.N	Pseudo-Name	Sex	Age [Year]	Marital Status	Gott	Data Source Status	Educational Status	Current Access to the Distributed land
1	Mengesha	Male	61	married	Kattal	Interviewee	Read and Write	Yes
2	Bedilua	Female	50	married	Kattal	Interviewee	Grade 3 Complete	Yes
3	Tamiru	Male	55	married	Kattal	Interviewee	Read and Write	Yes
4	Mihretu	Male	40	married	Kattal	Interviewee	Do not read and Write	Yes
5	Emebet	Female	46	married	Kattal	Interviewee	Do not read and Write	No
6	Birhanu	Male	37	married	Kattal	Interviewee	Do not read and Write	No
7	Anteneh	Male	42	married	Kattal	Interviewee	Read and Write	Yes
8	Mamaru	Male	45	married	Kattal	Interviewee	Read and Write	Yes
9	Girma	Male	*38*	married	Seblan	Interviewee	Read and Write	Yes
10	Yesew Zer	Female	47	married	Seblan	Interviewee	Do not read and Write	Yes
11	Animawu	Male	45	married	Seblan	Interviewee	Read and Write	No
12	Emiru	Male	40	married	Seblan	Interviewee	Read and Write	Yes
13	Ejignesh	Female	38	married	Seblan	Interviewee	Read and write	Yes
14	Wasie	Male	50	married	Seblan	Interviewee	Read and write	No
15	Yitayal	Male	43	married	Seblan	Interviewee	Read and write	Yes
16	Yigzawu	Male	58	married	_____	Key Informant	Grade 6 Complete	No
17	Yeshi Geta	Male	25	unmarried	_____	Key Informant	10+3 Complete	No
18	Noah	Male	36	unmarried	_____	Key Informant	10+3 Complete	No

Annex 4.2. Background information of focus group discussants

Category	S.N	Focus Group Discussants	Sex	Age[Year]	Marital Status	Discussants' Focus	Educational Status	Current Access to the Distributed
Kattal Gott Household Head	1	Andualem	Male	39	married	I	Read and Write	No
	2	Tebikewu	Male	41	married	I	Grade 4 Complete	No
	3	Ayana	Male	55	married	I	Read and Write	Yes
	4	Asefa	Male	47	married	I	Grade 3 Complete	No
	5	Yebir Gual	Female	59	widowed	I	Read and Write	Yes
	6	Degie	Female	56	widowed	I	Do not read and write	Yes
	7	Emebet	Female	35	married	I	Do not read and write	No
	8	Bosena	Female	55	married	I	Do not read and write	No
	9	Cherie	Male	60	married	I	Grade 3 Complete	Yes
	10	Endalamawu	Male	54	married	I	Grade 6 Complete	Yes
Seblan Head	11	Workineh	Male	55	married	II	Read and Write	No
	12	Aytenewu	Male	53	married	II	Read and Write	No
	13	Kes Ayana	Male	42	married	II	Read and Write	Yes
	14	Yeshambel	Male	63	married	II	Read and Write	Yes
	15	Shitaye	Female	51	married	II	Do not read and write	No
	16	Sintayehu	Female	49	married	II	Do not read and write	No
	17	Tirngo	Female	41	married	II	Do not read and write	Yes
	18	Mitkua	Female	32	married	II	Read and Write	Yes
Kattal Gott Youth	19	Chale	Male	20	unmarried	III	Grade6 Complete	Yes
	20	Belette	Male	21	unmarried	III	Grade 7 Complete	Yes
	21	Yayeh	Male	19	unmarried	III	Read and write	Yes
	22	Yaregal	Male	28	married	III	Read and write	Yes
	23	Wubet	Male	24	unmarried	III	Do not read and write	Yes
	24	Belay	Female	30	unmarried	III	Grade 4 Complete	Yes
	25	Workinesh	Female	24	divorced	III	Read and write	Yes
	26	Bernesh	Female	22	unmarried	III	Grade 6 Complete	Yes
	27	Tamiralech	Female	23	unmarried	III	Grade 4 Complete	Yes
Seblan Gott Youth	28	Tesfaye	Male	24	unmarried	IV	Read and write	Yes
	29	Gashawu	Male	25	unmarried	IV	Do not read and write	Yes
	30	Amogne	Male	25	unmarried	IV	Read and write	Yes
	31	Abebe	Male	27	unmarried	IV	Grade 4 complete	Yes
	32	Minale	Male	28	unmarried	IV	Read and write	Yes
	33	Tiruneh	Male	30	married	IV	Read and write	Yes
	34	Yimegnushal	Female	22	unmarried	IV	Read and write	Yes
	35	Selam	Female	23	unmarried	IV	Do not read and write	Yes
	36	Nibret	Male	29	unmarried	IV	Grade 3 complete	Yes
	37	Enku Bahir	Female	23	unmarried	IV	Read and write	Yes
Priests, Elders and Mediators	38	Kes Desalewu	Male	65	married	V	Read and write	No
	39	Kes Alemu	Male	69	married	V	Read and write	No
	40	Aba Eneyewu	Male	70	married	V	Read and write	No
	41	Aba Bayih	Male	68	married	V	Read and write	No
	42	Demissie	Male	65	married	V	Read and write	No
	43	Mengistie	Male	63	married	V	Read and write	No

Annex 4.3. Age, sex, specific Gott, marital and educational status of household heads

		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the	Frequency	Percentage [with in a Gott]	Percentage [with in the
Sex	Male	50	71.4%	41.3%	35	68.6%	28.9%
	Female	20	28.6%	16.5%	16	31.4%	13.2%
Age [in Years]	27.995-35.995	5	7.1%	4.1%	1	2.0%	0.8%
	35.995-43.995	22	31.4%	18.2%	18	35.3%	14.9%
	43.995-51.995	21	30.0%	17.4%	20	39.2%	16.5%
	51.995-59.995	14	20.0%	11.6%	8	15.7%	6.6%
	59.995-67.995	7	10.0%	5.8%	4	7.8%	3.3%
	67.995-75.995	1	1.4%	0.8%	0	0.0%	0.0%
Marital Status	unmarried	0	0.0%	0.0%	0	0.0%	0.0%
	married	60	85.7%	49.6%	43	84.3%	35.5%
	divorced	4	5.7%	3.3%	4	7.8%	3.3%
	widowed	6	8.6%	5.0%	4	7.8%	3.3%
Educational Status	Do not read and write	28	40.0%	23.1%	21	41.2%	17.4%
	Read and write	30	42.9%	24.8%	23	45.1%	19.0%
	Grade 1-4	7	10.0%	5.8%	5	9.8%	4.1%
	Grade 5-8	5	7.1%	4.1%	2	3.9%	1.7%
	Grade 9 or 10	0	0.0%	0.0%	0	0.0%	0.0%
	Grade 11 or 12	0	0.0%	0.0%	0	0.0%	0.0%

Annex 4.4.The binomial test of proportion of sex of household heads

Binomial Test

Respondents' Specific Gott			Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Kattal [Mariam-NiusKebele]	Sex	Group 1	Male	50	.71	.50	.000
		Group 2	Female	20	.29		
		Total		70	1.00		
Seblan [Michael-NiusKebele]	Sex	Group 1	Male	35	.69	.50	.011
		Group 2	Female	16	.31		
		Total		51	1.00		
Total Sample	Sex	Group 1	Male	85	.70	.50	.000
		Group 2	Female	36	.30		
		Total		121	1.00		

Annex 4.5. Testing the Normal Distribution of Age

Statistics		Kattal Gott	Seblan Gott	Total Sample
N	Valid	70	51	121
	Missing	0	0	0
Mean		46.8714	46.3137	46.6364
Std. Error of Mean		1.07502	0.98558	0.74542
Median		47	47	47
Mode		48	39.00[a]	48
Std. Deviation		8.99424	7.03844	8.19959
Variance		80.896	49.54	67.233
A. Skewness		0.271	0.328	0.311
Std. Error of Skewness		0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44
C. The ratio of skewness to its Std. Error of Skewness		0.944250871	0.984984985	1.413636364
Kurtosis		-0.573	-0.598	-0.458
Std. Error of Kurtosis		0.566	0.656	0.437
D. The ratio of Kurtosis to its std. error of kurtosis		-1.012367491	-0.911585366	-1.04805492
Range		40	27	40
Minimum		28	34	28
Maximum		68	61	68
Percentiles	25	39.75	40	40
	50	47	47	47
	75	53	50	52
			a. Multiple modes exist. The smallest value is shown	
Test of Normality	Parameter1	A ≤ B	A ≤ B	A ≤ B
	Decision 1	Accept normality	Accept normality	Accept normality
	Parameter2	C ϵ[-2,2]	C ϵ[-2,2]	C ϵ[-2,2]
	Decition2	Accept normality	Accept normality	Accept normality
	Parameter3	D ϵ[-2,2]	D ϵ[-2,2]	D ϵ[-2,2]
	Decision3	Accept normality	Accept normality	Accept normality
	Decision Total	Accept normality	Accept normality	Accept normality
Appropriate Test		Parametric Test	Parametric Test	Parametric Test

Annex 4.6. Independent Samples Test for the equality of the mean age of the two Gott household heads

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Age of Respondents	Equal variances assumed	3.501	.064	.368	119	.713	.55770	1.51503	-2.44221	3.55761
	Equal variances not assumed			.382	118.352	.703	.55770	1.45843	-2.33030	3.44571

Annex 4.7. Testing the Normal Distribution of Household Size and Land Holding Size

		The Number of Total Household Members			Land Holding Size of Sampled Households		
		Kattal Gott	Seblan Gott	Total sample	Kattal Gott	Seblan Gott	Total sample
Mean		4.91	4.67	4.81	1.4321	1.2255	1.345
Std. Error of Mean		0.175	0.191	0.129	0.07282	0.07991	0.05452
Median		5	5	5	1.5	1.25	1.5
Mode		4	5	4	1.5	0.75	1.5
Std. Deviation		1.462	1.366	1.422	0.60929	0.57065	0.5997
Variance		2.137	1.867	2.022	0.371	0.326	0.36
A. Skewness		0.267	0.296	0.289	0.487	0.577	0.524
Std. Error of Skewness		0.287	0.333	0.22	0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44	0.574	0.666	0.44
C. The ratio of skewness to its Std. Error of Skewness		0.9303	0.8889	1.31364	1.69686	1.73273	2.38181
Kurtosis		-0.918	-0.545	-0.777	-0.187	-0.255	-0.22
Std. Error of Kurtosis		0.566	0.656	0.437	0.566	0.656	0.437
D. The ratio of Kurtosis to its std. error of kurtosis		-1.62190	-0.8307	-1.778032	-0.33039	-0.38872	-0.50343
Range		6	6	6	2.5	2.25	2.5
Minimum		2	2	2	0.5	0.5	0.5
Maximum		8	8	8	3	2.75	3
Percentile	25	4.00	4.00	4.00	.9375	.7500	.7500
	50	5.00	5.00	5.00	1.5000	1.2500	1.5000
	75	6.00	6.00	6.00	1.7500	1.5000	1.7500
Test of Normality	Parameter1	A ≤ B	A ≤ B	A ≤ B	A ≤ B	A ≤ B	A > B
	Decision 1	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality	Reject normality
	Parameter2	C ϵ[-2,2]	C ϵ[-2,2]	C ϵ[-2,2]	C ϵ[-2,2]	C ϵ[-2,2]	C ϵ[-2,2]
	Decition2	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality
	Parameter3	D ϵ[-2,2]	D ϵ[-2,2]	D ϵ[-2,2]	D ϵ[-2,2]	D ϵ[-2,2]	D ϵ[-2,2]
	Decision3	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality
	Decision Total	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality	Accept normality
Appropriate Test		Parametric Test	Parametric Test	Parametric Test	Parametric Test	Parametric Test	Parametric Test

Annex 4.8. Independent sample T-test on house hold size and land holding size of the two Gotts

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2tailed)	Mean Difference	Std. Error Difference	Lower	Upper
The Number of Total Household Members	Equal variances assumed	.475	.492	.945	119	.346	.248	.262	-.271	.766
	Equal variances not assumed			.956	111.827	.341	.248	.259	-.266	.761
Land Holding Size of Sampled Households	Equal variances assumed	.105	.746	1.892	119	.061	.20665	.10924	-.00965	.42296
	Equal variances not assumed			1.911	111.708	.059	.20665	.10811	-.00757	.42087

Annex 4.9. The Bivariate Correlation between Household size and land holding size

Pearson Correlations				
		Land Holding Size of Sampled Households		
		Kattal Gott	Seblan Gott	Total Sample
The Number of Total Household Members	Pearson Correlation	.746**	.785**	.762**
	Sig. (2-tailed)	.000	.000	.000
	N	70	51	121
**. Correlation is significant at the 0.01 level (2-tailed).				

Annex 4.10. Estimated total price of all produce in the years 2004 and 2005 for two Gotts

Years of production	Estimated total price of all production in each year [in Birr]	Households' Specific Gott					
		Kattal[Mariam-NiusKebele]			Seblan[Michael-NiusKebele]		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
2004 E.C	0	0	0.0%	0.0%	0	0.0%	0.0%
	0.01-5000.00	3	4.3%	2.5%	7	13.7%	5.8%
	5000.01-10000.00	22	31.4%	18.2%	18	35.3%	14.9%
	10000.01-15000.00	24	34.3%	19.8%	17	33.3%	14.0%
	15000.01-20000.00	11	15.7%	9.1%	5	9.8%	4.1%
	20000.01-25000.00	9	12.9%	7.4%	3	5.9%	2.5%
	25000.01-30000.00	1	1.4%	0.8%	1	2.0%	0.8%
2005 E.C	0	0	0.0%	0.0%	0	0.0%	0.0%
	0.01-5000.00	2	2.9%	1.7%	4	7.8%	3.3%
	5000.01-10000.00	23	32.9%	19.0%	25	49.0%	20.7%
	10000.01-15000.00	25	35.7%	20.7%	13	25.5%	10.7%
	15000.01-20000.00	12	17.1%	9.9%	8	15.7%	6.6%
	20000.01-25000.00	7	10.0%	5.8%	0	0.0%	0.0%
	25000.01-30000.00	1	1.4%	0.8%	1	2.0%	0.8%
Annual Average Production Calculated from the Two Years [2004 and 2005 E.C]	0	0	0.0%	0.0%	0	0.0%	0.0%
	0.01-5000.00	3	4.3%	2.5%	5	9.8%	4.1%
	5000.01-10000.00	22	31.4%	18.2%	22	43.1%	18.2%
	10000.01-15000.00	22	31.4%	18.2%	15	29.4%	12.4%
	15000.01-20000.00	14	20.0%	11.6%	6	11.8%	5.0%
	20000.01-25000.00	9	12.9%	7.4%	2	3.9%	1.7%
	25000.01-30000.00	0	0.0%	0.0%	1	2.0%	0.8%

Annex 4.11. Testing the Normal Distribution of Agricultural or farm income of rural households Calculated from the average of Two Years 2004 and 2005

		Kattal Gott	Seblan Gott	Total sample
N	Valid	70	51	121
	Missing	0	0	0
Mean		12642.7857	10607.9412	11785.124
Std. Error of Mean		629.96083	714.88126	479.76579
Median		11811.25	9662.5	11190
Mode		11475	7812.5	7812.50[a]
Std. Deviation		5270.63048	5105.27337	5277.42364
Variance		27779545.62	26063816.2	27851200.3
A. Skewness		0.459	1.006	0.647
Std. Error of Skewness		0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44
C. The ratio of Skewness to its Std.Error of Skewness		1.599303136	3.02102102	2.94090909
Kurtosis		-0.522	0.757	-0.241
Std. Error of Kurtosis		0.566	0.656	0.437
D. The ratio of Kurtosis to tis Std.Error of Kurtosis		-0.92226148	1.15396341	-0.55148741
Range		21240	22500	23240
Minimum		3125	3865	3125
Maximum		24365	26365	26365
Percentiles	25	8574.3750	6575.0000	7377.5000
	50	11811.2500	9662.5000	11190.0000
	75	15903.1250	12950.0000	15443.7500
				a. Multiple modes exist. The smallest value is shown
Test of Normality	Parameter1	**A ≤ B**	**A > B**	**A > B**
	Decision 1	Accept normality	Reject t normality	Reject normality
	Parameter2	**C ϵ[-2,2]**	**C** $\notin [-2,2]$	**C** $\notin [-2,2]$
	Decition2	Accept normality	Reject normality	Reject normality
	Parameter3	**D ϵ[-2,2]**	**D ϵ[-2,2]**	**D ϵ[-2,2]**
	Decision3	Accept normality	Accept normality	Accept normality
	Decision Total	**Accept normality**	**Reject normality**	**Reject normality**
Appropriate Test	Parametric Test	Parametric Test	Non Parametric Test	Non parametric test

Annex 4.12. A summary of non-parametric tests on the annual average farm income of rural households of the two Gotts

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of Anual Average Production Calculated from the Two Years [2004 and 2005 E.C][in Birr] are the same across categories of Respondents' Specific Gott.	Independent-Samples Median Test	.078	Retain the null hypothesis.
2	The range of Anual Average Production Calculated from the Two Years [2004 and 2005 E.C][in Birr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Moses Test of Extreme Reaction	0.1698[1]	Retain the null hypothesis.
3	The distribution of Anual Average Production Calculated from the Two Years [2004 and 2005 E.C][in Birr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Mann-Whitney U Test	.026	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1]Exact significance is displayed for this test.

Confidence Interval Summary

Confidence Interval Type	Parameter	Estimate	95% Confidence Interval	
			Lower	Upper
Independent-Samples Hodges-Lehman Median Difference	Difference between medians of Anual Average Production Calculated from the Two Years [2004 and 2005 E.C][in Birr] across categories of Respondents' Specific Gott.	2,148.750	295.000	3,912.500

Annex 4.13. Correlation between agricultural income and landholding size of rural households in the two Gotts

Pearson Correlations

		Anual Average Production Calculated from the Two Years [2004 and 2005 E.C][in Birr]		
		Kattal Gott	Seblan Gott	Total Sample
Land Holding Size of Sampled Households	Pearson Correlation	.864**	.952**	.902**
	Sig. (2-tailed)	.000	.000	.000
	N	70	51	121

**. Correlation is significant at the 0.01 level (2-tailed).

Annex 4.14. Respondent estimated total price of all domestic animals possessed by rural households

Total Price of All Animals [in Birr]	Kattal Gott			Seblan Gott		
	Frequency	Percentage [with in a Gott]	Percentage [with in the	Frequency	Percentage [with in a Gott]	Percentage [with in the
0	0	0.0%	0.0%	0	0.0%	0.0%
0.01-5000.00	1	1.4%	0.8%	0	0.0%	0.0%
5000.01-10000.00	4	5.7%	3.3%	5	9.8%	4.1%
10000.01-15000.00	12	17.1%	9.9%	15	29.4%	12.4%
15000.01-20000.00	23	32.9%	19.0%	18	35.3%	14.9%
20000.01-25000.00	9	12.9%	7.4%	7	13.7%	5.8%
25000.01-30000.00	10	14.3%	8.3%	2	3.9%	1.7%
30000.01-35000.00	2	2.9%	1.7%	1	2.0%	0.8%
35000.01-40000.00	6	8.6%	5.0%	2	3.9%	1.7%
40000.01-45000.00	2	2.9%	1.7%	1	2.0%	0.8%
45000.01-50000.00	0	0.0%	0.0%	0	0.0%	0.0%
50000.01-55000.00	1	1.4%	0.8%	0	0.0%	0.0%

Annex 4.15. Testing the Normal Distribution of Respondent Estimated Total Price of All Animals Possessed by Households during the Survey [in birr]

		Kattal Gott	Seblan Gott	Total Sample
N	Valid	70	51	121
	Missing	0	0	0
Mean		21393.5714	18107.8431	20008.6777
Std. Error of Mean		1161.27916	1062.64411	817.82856
Median		19000	16800	18300
Mode		18500	12800.00[a]	12800.00[a]
Std. Deviation		9715.95849	7588.79683	8996.11416
Variance		94399849.38	57589837.26	80930069.9
A. Skewness		0.847	1.471	1.088
B. Std. Error of Skewness		0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44
C. The ratio of Skewness to its Std.Error of Skewness		2.951219512	4.417417417	4.945454545
Kurtosis		0.478	2.879	1.098
Std. Error of Kurtosis		0.566	0.656	0.437
D. The ratio of Kurtosis to tis Std.Error of Kurtosis		0.844522968	4.388719512	2.512585812
Range		46500	38300	46500
Minimum		4000	6500	4000
Maximum		50500	44800	50500
Percentiles	25	15325.0000	13500.0000	13950.0000
	50	19000.0000	16800.0000	18300.0000
	75	27325.0000	20300.0000	23600.0000
Test of Normality	Parameter1	**A ≥ B**	**A ≥ B**	**A ≥ B**
	Decision 1	Reject normality	Reject normality	Reject normality
	Parameter2	**C** $\notin [-2,2]$	**C** $\notin [-2,2]$	**C** $\notin [-2,2]$
	Decition2	Reject normality	Reject normality	Reject normality
	Parameter3	**D** ϵ**[-2,2]**	**D** $\notin [-2,2]$	**D** $\notin [-2,2]$
	Decision3	Accept normality	Reject normality	Reject normality
	Decision Total	**Reject normality**	**Reject normality**	**Reject normality**
Appropriate Test	Parametric Test	Non Parametric Test	Non Parametric Test	Non Parametric Test

Annex 4.16. A summary of non-parametric tests on the respondent estimated total price of all animals possessed by rural households in the two Gotts

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of Total Price of All Animals Possessed by Households During the Survey [inBirr] are the same across categories of Respondents' Specific Gott.	Independent-Samples Median Test	.048	Reject the null hypothesis.
2	The range of Total Price of All Animals Possessed by Households During the Survey [inBirr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Moses Test of Extreme Reaction	0.7635[1]	Retain the null hypothesis.
3	The distribution of Total Price of All Animals Possessed by Households During the Survey [inBirr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Mann-Whitney U Test	.042	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1]Exact significance is displayed for this test.

Confidence Interval Summary

Confidence Interval Type	Parameter	Estimate	95% Confidence Interval	
			Lower	Upper
Independent-Samples Hodges-Lehman Median Difference	Difference between medians of Total Price of All Animals Possessed by Households During the Survey [inBirr] across categories of Respondents' Specific Gott.	2,600.000	100.000	5,400.000

Annex 4.17. Correlation between Landholding Size and total price of animals possessed by rural households

		Total Price of All Animals Possessed by Households During the Survey [in Birr]		
		Kattal Gott	Seblan Gott	Total Sample
Land Holding Size of Sampled Households	Pearson Correlation	.690**	.707**	.703**
	Sig. (2-tailed)	.000	.000	.000
	N	70	51	121

**. Correlation is significant at the 0.01 level (2-tailed).

Annex 4.18. Direct cash income obtained by rural households by renting and selling the animals and the animals' product, and total cash income obtained from renting and selling the animals and the animals' product animals since the year 2004.

Direct Cash Income Obtained by	Amount of cash income [in birr]	Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
Selling the Animals	0	13	18.6%	10.7%	16	31.4%	13.2%
	0.01-1000.00	9	12.9%	7.4%	6	11.8%	5.0%
	1000.01-2000.00	10	14.3%	8.3%	8	15.7%	6.6%
	2000.01-3000.00	14	20.0%	11.6%	4	7.8%	3.3%
	3000.01-4000.00	11	15.7%	9.1%	5	9.8%	4.1%
	4000.01-5000.00	5	7.1%	4.1%	5	9.8%	4.1%
	5000.01-6000.00	3	4.3%	2.5%	3	5.9%	2.5%
	6000.01-7000.00	2	2.9%	1.7%	1	2.0%	0.8%
	7000.01-8000.00	1	1.4%	0.8%	1	2.0%	0.8%
	8000.01-9000.00	1	1.4%	0.8%	2	3.9%	1.7%
	9000.01-10000.00	0	0.0%	0.0%	0	0.0%	0.0%
	10000.01-11000.00	0	0.0%	0.0%	0	0.0%	0.0%
	11000.01-12000.00	1	1.4%	0.8%	0	0.0%	0.0%
Renting the Animals	0	47	67.1%	38.8%	41	80.4%	33.9%
	0.01-1000.00	23	32.9%	19.0%	10	19.6%	8.3%
Selling the Animals' Product	0	38	54.3%	31.4%	34	66.7%	28.1%
	0.01-1000.00	32	45.7%	26.4%	17	33.3%	14.0%
Renting and Selling the Animals and the Animals' Product	0	8	11.4%	6.6%	13	25.5%	10.7%
	0.01-1000.00	8	11.4%	6.6%	8	15.7%	6.6%
	1000.01-2000.00	14	20.0%	11.6%	8	15.7%	6.6%
	2000.01-3000.00	10	14.3%	8.3%	4	7.8%	3.3%
	3000.01-4000.00	12	17.1%	9.9%	6	11.8%	5.0%
	4000.01-5000.00	5	7.1%	4.1%	2	3.9%	1.7%
	5000.01-6000.00	7	10.0%	5.8%	6	11.8%	5.0%
	6000.01-7000.00	1	1.4%	0.8%	1	2.0%	0.8%
	7000.01-8000.00	3	4.3%	2.5%	1	2.0%	0.8%
	8000.01-9000.00	0	0.0%	0.0%	2	3.9%	1.7%
	9000.01-10000.00	1	1.4%	0.8%	0	0.0%	0.0%
	10000.01-11000.00	0	0.0%	0.0%	0	0.0%	0.0%
	11000.01-12000.00	1	1.4%	0.8%	0	0.0%	0.0%

+Annex 4.19. Test of Normality on the Annual Total Direct Cash Income Obtained By Rural Households of the Two Gotts by Renting and Selling the Animals and the Animals' Product Animals

		Kattal Gott	Seblan Gott	Total Sample
N	Valid	70	51	121
	Missing	0	0	0
Mean		1469.3571	1204.7059	1357.8099
Std. Error of Mean		145.80319	171.10079	111.15405
Median		1400	900	1125
Mode		0	0	0
Std. Deviation		1219.87702	1221.90401	1222.69458
Variance		1488099.943	1493049.412	1494982.039
A. Skewness		1.167	0.919	1.031
Std. Error of Skewness		0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44
C. The ratio of Skewness to its Std. Error of Skewness		4.066202091	2.75975976	4.686363636
Kurtosis		1.911	-0.004	1.054
Std. Error of Kurtosis		0.566	0.656	0.437
D. The ratio of Kurtosis to tis Std.Error of Kurtosis		3.376325088	-0.006097561	2.411899314
Range		6000	4375	6000
Minimum		0	0	0
Maximum		6000	4375	6000
Percentiles	25	587.5	0	400
	50	1400	900	1125
	75	2100	2000	2050
Test of Normality	Parameter1	**A ≥ B**	**A ≥ B**	**A ≥ B**
	Decision 1	Reject normality	Reject normality	Reject normality
	Parameter2	**C** $\notin [-2,2]$	**C** $\notin [-2,2]$	**C** $\notin [-2,2]$
	Decition2	Reject normality	Reject normality	Reject normality
	Parameter3	**D** $\notin [-2,2]$	**D** $\in$ **[-2,2]**	**D** $\notin [-2,2]$
	Decision3	Reject normality	Accept normality	Reject normality
	Decision Total	**Reject normality**	**Reject normality**	**Reject normality**
Appropriate Test	Parametric Test	Non Parametric Test	Non Parametric Test	Non Parametric Test

Annex 4.20. A summary of Non Parametric tests on the annual total direct cash income obtained by rural households of the two Gotts

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The medians of Total Direct Cash Income Obtained by Each Household by Renting and Selling the Animals and the Animals' Product Since 2004 E.C to the Survey Period [in Birr] are the same across categories of Respondents' Specific Gott.	Independent-Samples Median Test	.215	Retain the null hypothesis.
2	The range of Total Direct Cash Income Obtained by Each Household by Renting and Selling the Animals and the Animals' Product Since 2004 E.C to the Survey Period [in Birr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Moses Test of Extreme Reaction	0.1698[1]	Retain the null hypothesis.
3	The distribution of Total Direct Cash Income Obtained by Each Household by Renting and Selling the Animals and the Animals' Product Since 2004 E.C to the Survey Period [in Birr] is the same across categories of Respondents' Specific Gott.	Independent-Samples Mann-Whitney U Test	.143	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

[1]Exact significance is displayed for this test.

Annex 4.21. Cross tabulation between animal possession and indirect service of rural households

		Does your household use the specified domestic animal for plowing?				Does your household use the specified domestic animal for transportation?				Does your household use the specified domestic animal for food?			
		Kattal		Seblan		Kattal		Seblan		Kattal		Seblan	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
Does your household have an ox?	Yes	66	0	48	0	0	66	0	48	0	66	0	48
	No	0	4	0	3	0	4	0	3	0	4	0	3
Does your household have a cow?	Yes	0	60	0	39	0	60	0	39	58	2	36	3
	No	0	10	0	12	0	10	0	12	0	10	0	12
Does your household have a bull?	Yes	3	23	5	15	0	26	0	20	0	26	0	20
	No	0	44	0	31	0	44	0	31	0	44	0	31
Does your household have a heifer?	Yes	0	25	0	16	0	25	0	16	0	25	0	16
	No	0	45	0	35	0	45	0	35	0	45	0	35
Does your household have a calf?	Yes	0	53	0	35	0	53	0	35	0	53	0	35
	No	0	17	0	16	0	17	0	16	0	17	0	16
Does your household have a donkey?	Yes	0	37	0	25	37	0	25	0	0	37	0	25
	No	0	33	0	26	0	33	0	26	0	33	0	26
Does your household have a horse?	Yes	0	8	0	3	8	0	3	0	0	8	0	3
	No	0	62	0	48	0	62	0	48	0	62	0	48
Does your household have a mule?	Yes	0	3	0	0	3	0	0	0	0	3	0	0
	No	0	67	0	51	0	67	0	51	0	67	0	51
Does your household have a sheep?	Yes	0	65	0	47	0	65	0	47	65	0	47	0
	No	0	5	0	4	0	5	0	4	0	5	0	4
Does your household have a goat?	Yes	0	31	0	40	0	31	0	40	31	0	40	0
	No	0	39	0	11	0	39	0	11	0	39	0	11

Annex 4.22. Respondent estimated average annual total Income obtained from other sources by rural households since the year 2004 E.C

The amount of total extra income [in birr]	Kattal Gott			Seblan Gott		
	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
0	2	2.9%	1.7%	9	17.6%	7.4%
0.01-500.00	12	17.1%	9.9%	13	25.5%	10.7%
500.01-1000.00	30	42.9%	24.8%	20	39.2%	16.5%
1000.01-1500.00	19	27.1%	15.7%	3	5.9%	2.5%
15000.01-2000.00	5	7.1%	4.1%	4	7.8%	3.3%
2000.01-2500.00	0	0.0%	0.0%	1	2.0%	0.8%
2500.01-3000.00	0	0.0%	0.0%	0	0.0%	0.0%
3000.01-3500.00	2	2.9%	1.7%	1	2.0%	0.8%

Annex 4.23. Chi-Square test on the access Status of Households to the distributed common grazing land

Does your household have an access to the distributed common grazing land currently?					Statistics		
		Observed N	Expected N	Residual	Chi-Square	df	Asymp. Sig.
Kattal Gott	Yes	51	23.3	27.7	49.207[a]	1	0.000
	No	19	46.7	-27.7			
	Total	70					
Seblan Gott	Yes	41	17.0	24.0	50.824[b]	1	0.000
	No	10	34.0	-24.0			
	Total	51					
Total Sample	Yes	92	40.3	51.7	99.277[c]	1	0.000
	No	29	80.7	-51.7			
	Total	121					
a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 23.3.							
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 17.0.							
c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 40.3.							

Respondents' Specific Gott	Does your household have an access to the distributed common grazing land currently?			Statistic			
	Yes	No	Total	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Kattal Gott	51	19	70	.919[a]	1	.338	.393
Seblan Gott	41	10	51				
Total	92	29	121				
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 12.22.							

Annex 4.24. The Percentage Distributions of household heads on reasons for access to the distributed common grazing land when it was distributed for the first time

Why did your household get access to the distributed common grazing land when it was distributed for the first time?		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
Because of in the "name of the church	Yes	70	100.0%	57.9%	51	100.0%	42.1%
	No	0	0.0%	0.0%	0	0.0%	0.0%
Because there was only a youth member in the household.	Yes	46	65.7%	38.0%	38	74.5%	31.4%
	No	24	34.3%	19.8%	13	25.5%	10.7%
Because there was youth member in the household who do not read and write.	Yes	19	27.1%	15.7%	36	70.6%	29.8%
	No	51	72.9%	42.1%	15	29.4%	12.4%
Because there was a dropout youth student in the household	Yes	6	8.6%	5.0%	4	7.8%	3.3%
	No	64	91.4%	52.9%	47	92.2%	38.8%
Because there was unemployed youth who finished his education in the household.	Yes	9	12.9%	7.4%	2	3.9%	1.7%
	No	61	87.1%	50.4%	49	96.1%	40.5%
Because there was a youth member in the household with no taxable land	Yes	18	25.7%	14.9%	3	5.9%	2.5%
	No	52	74.3%	43.0%	48	94.1%	39.7%
Because the household is a member of the Nius-Kebele.	Yes	69	98.6%	57.0%	51	100.0%	42.1%
	No	1	1.4%	0.8%	0	0.0%	0.0%

Annex 4.25. Chi-square test whether rural households are significantly different on reasons for first access to the distributed land

		Because there was only a youth member in the household.	Because there was a youth member in the household who do not read and write.	Because there was a dropout youth student in the household.	Because there was unemployed youth who finished his education in the household.	Because there was a youth member in the household with no taxable land.	Because the household is a member of the Nius-Kebele.
Kattal Gott	Yes	46	19	6	9	18	69
	No	24	51	64	61	52	1
	Chi-Square	6.914[a]	14.629[a]	48.057[a]	38.629[a]	16.514[a]	66.057[a]
	df	1	1	1	1	1	1
	Asymp. Sig.	.009	.000	.000	.000	.000	.000
	Remark	a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 35.0.					
Seblan Gott	Yes	38	36	4	2	3	51
	No	13	15	47	49	48	0
	Chi-Square	12.255[b]	8.647[b]	36.255[b]	43.314[b]	39.706[b]	
	df	1	1	1	1	1	
	Asymp. Sig.	.000	.003	.000	.000	.000	
	Remark	b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 25.5.					
Total sample	Yes	84	55	10	11	21	120
	No	37	66	111	110	100	1
	Chi-Square	18.256[c]	1.000[c]	84.306[c]	81.000[c]	51.579[c]	117.033[c]
	df	1	1	1	1	1	1
	Asymp. Sig.	.000	.317	.000	.000	.000	.000
	Remark	c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 60.5.					

		Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan
Cross tabulation	Yes	46	38	19	36	6	4	9	2	18	3	69	51
	No	24	13	51	15	64	47	61	49	52	48	1	0
	Chi-Square	1.075[d]		22.461[e]		0.021[f]		2.850[g]		8.090[h]		0.735[i]	
	df	1		1		1		1		1		1	
	Asymp. Sig.	0.300		0.000		0.886		0.091		0.04		0.391	
	Remark	d.0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.60											
		e.0 cells (0.0%) have expected count less than 5. The minimum expected count is 23.18.											
		f.1 cell (25.0%) has expected count less than 5. The minimum expected count is 4.21.											
		g.1 cell (25.0%) has expected count less than 5. The minimum expected count is 4.64.											
		h.0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.85.											
		i.2 cells (50.0%) have expected count less than 5. The minimum expected count is .42.											

Note: chi-square test was not computed on the first variable for the four cases and on the last variable for Seblan Gott as they were constant. In addition, variables with one or more cells with an expected frequency less than five were not taken into consideration.

Annex 4.26. The Percentage Distributions of household heads on reasons for access to the distributed common grazing land when it was distributed for the second time [currently]

Why did your household get access to the distributed common grazing land when it was distributed for the second time?		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
Because of in the "name of the church".	Yes	0	0.0%	0.0%	0	0.0%	0.0%
	No	51	100.0%	55.4%	41	100.0%	44.6%
Because there is only a youth member in the household.	Yes	1	2.0%	1.1%	2	4.9%	2.2%
	No	50	98.0%	54.3%	39	95.1%	42.4%
Because there is a youth member in the household who do not read and write.	Yes	9	17.6%	9.8%	24	58.5%	26.1%
	No	42	82.4%	45.7%	17	41.5%	18.5%
Because there is a dropout youth student in the household.	Yes	29	56.9%	31.5%	15	36.6%	16.3%
	No	22	43.1%	23.9%	26	63.4%	28.3%
Because there is unemployed youth who finished his education in the household.	Yes	10	19.6%	10.9%	7	17.1%	7.6%
	No	41	80.4%	44.6%	34	82.9%	37.0%
Because there is a youth member in the household with no taxable land.	Yes	50	98.0%	54.3%	41	100.0%	44.6%
	No	1	2.0%	1.1%	0	0.0%	0.0%
Because the household is a member of the Nius-Kebele.	Yes	1	2.0%	1.1%	0	0.0%	0.0%
	No	50	98.0%	54.3%	41	100.0%	44.6%

Annex 4.27. Chi-square test whether rural households are significantly different on reasons the second [current] access to the distributed land

		Because there is only a youth member in the household.	Because there is a youth member in the household who do not read and write.	Because there is a dropout youth student in the household.	Because there is unemployed youth who finished his education in the household.	Because there is a youth member in the household with no taxable land.	Because the household is a member of the Nius-Kebele.
Kattal Gott	Yes	1	9	29	10	50	1
	No	50	42	22	41	1	50
	Chi-Square	48.077[a]	22.231[a]	.692[a]	19.692[a]	44.308[a]	48.077[a]
	df	1	1	1	1	1	1
	Asymp. Sig.	.000	.000	.405	.000	.000	.000
	Remark	a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 26.0.					
Seblan Gott	Yes	2	24	15	7	41	0
	No	39	17	26	34	0	41
	Chi-Square	33.390[b]	1.195[b]	2.951[b]	17.780[b]		
	df	1	1	1	1		
	Asymp. Sig.	.000	.274	.086	.000		
	Remark	b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 20.5.					
Total sample	Yes	3	33	44	17	91	1
	No	89	59	48	75	1	91
	Chi-Square	81.387[c]	7.839[c]	.269[c]	37.430[c]	85.172[c]	89.043[c]
	df	1	1	1	1	1	1
	Asymp. Sig.	.000	.005	.604	.000	.000	.000
	Remark	c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 46.5.					

		Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan	Kattal	Seblan
Cross tabulation	Yes	1	2	9	24	29	15	10	7	50	41	1	0
	No	50	39	42	17	22	26	41	34	1	0	50	41
	Chi-Square	.641[d]		17.022[e]		3.384[f]		.071[g]		1.612[h]		.797[i]	
	df	1		1		1		1		1		1	
	Asymp. Sig.	.423		.000		.066		.789		.204		.372	
	Remark	d.2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.32.											
		e.0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.55											
		f.0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.40.											
		g.0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.49.											
		h.2 cells (50.0%) have expected count less than 5. The minimum expected count is .88.											
		i.2 cells (50.0%) have expected count less than 5. The minimum expected count is .44.											

Annex 4.28. The consistency of parameters for accessing the distributed common grazing land during the first and the second [current] phase access

Reason for households Access to the distributed common grazing land	Number of respondents who chose the variables as a reason for first time access		Number of respondents who chose the variables as a reason for second time access	
	Count	Table N %	Count	Table N %
The household is under the umbrella of the churches	121	100.0%	0	0.0%
The presence of only a youth member in the household.	84	69.4%	3	3.3%
The presence of youth member in the household who don't read and write.	55	45.5%	33	35.9%
The presence of a dropout youth student in the household	10	8.3%	44	47.8%
The presence of unemployed youth in the household.	11	9.1%	17	18.5%
The presence of youth member in the household with no taxable land	21	17.4%	91	98.9%
The household is a member of the Nius-Kebele.	120	99.2%	1	1.1%

Annex 4.29. Cross tabulations between reasons for first time and second time access

		Reasons for access during the second time						
		A	B	C	D	E	F	G
		Table N %	Table N %	Table N %	Table N %	Table N %	Table N %	Table N %
Reasons for access during the first time	A		3	33	44	17	91	1
			2.5%	27.3%	36.4%	14.0%	75.2%	0.8%
	B		2	27	34	7	63	1
			1.7%	22.3%	28.1%	5.8%	52.1%	0.8%
	C		3	26	27	2	50	1
			2.5%	21.5%	22.3%	1.7%	41.3%	0.8%
	D			1	8		9	
				0.8%	6.6%		7.4%	
	E			2	2	8	9	
				1.7%	1.7%	6.6%	7.4%	
	F		1	6	7	9	19	
			0.8%	5.0%	5.8%	7.4%	15.7%	
	G		3	33	44	17	91	1
			2.5%	27.3%	36.4%	14.0%	75.2%	0.8%

Key	
	A. The household is a member of the church
	B. The presence of only a youth member in the household.
	C. The presence of youth member in the household who don't read and write.
	D. The presence of a dropout youth student in the household
	E. The presence of unemployed youth in the household.
	F. The presence of youth member in the household with no taxable land
	G. The household is a member of the Nius-Kebele.

Annex 4.30. Cross tabulation of reasons for access during the second time

		Reasons for access during the second time						
		A	B	C	D	E	F	G
		Table N %	Table N %	Table N %	Table N %	Table N %	Table N %	Table N %
Reasons for access during the second time	A							
	B		3.3%	1.1%			3.3%	
	C		1.1%	35.9%	6.5%	3.3%	35.9%	
	D			6.5%	47.8%	2.2%	46.7%	1.1%
	E			3.3%	2.2%	18.5%	18.5%	
	F		3.3%	35.9%	46.7%	18.5%	98.9%	
	G				1.1%			1.1%

Key	A. The household is under the umbrella of the churches
	B. The presence of only a youth member in the household.
	C. The presence of youth member in the household who don't read and write.
	D. The presence of a dropout youth student in the household
	E. The presence of unemployed youth in the household.
	F. The presence of youth member in the household with no taxable land
	G. The household is a member of the Nius-Kebele.

Annex 4.31. A Cross Tabulation between Rural Households' Land holding Size and Second Time Access with Eta Directional Measure

Respondents' Specific Gott			Does your household have an access to the distributed common grazing land currently?		Directional Measures		Interpretation
			Yes[1]	No[2]	Dependent Variable	Value	
Kattal[Mariam-NiusKebele]	Land Holding Size	.50	4	0	Land Holding Size of Sampled Households	.024	Extremely very weak positive relation
		.75	9	4			
		1.00	5	5			
		1.25	0	1	Does your household have an access to the distributed common grazing land currently?	.468	Moderate positive relation
		1.50	17	1			
		1.75	5	4			
		2.00	5	3			
		2.50	5	0			
		3.00	1	1			
	Total		51	19			
Seblan[Michael-NiusKebele]	Land Holding Size	.50	5	3	Land Holding Size of Sampled Households	.021	Extremely very weak positive relation
		.75	11	0			
		1.00	3	1			
		1.25	8	0	Does your household have an access to the distributed common grazing land currently?	.445	Moderate positive relation
		1.50	5	3			
		1.75	3	2			
		2.00	3	1			
		2.25	1	0			
		2.50	1	0			
		2.75	1	0			
	Total		41	10			

Annex 4.32. Reason for having no second [current] time access as provided by household head respondents who did not have access

Why your household was denied access when the common grazing land was distributed for the second time?		Kattal Gott			Seblan Gott		
		Frequency	Percentage in a [with Gott]	Percentage in the [with Total]	Frequency	Percentage in a [with Gott]	Percentage in the [with Total]
Because it is impossible to have access in the "name of the church"	Yes	18	94.7%	62.1%	9	90.0%	31.0%
	No	1	5.3%	3.4%	1	10.0%	3.4%
Because there is no youth member in the household.	Yes	2	10.5%	6.9%	1	10.0%	3.4%
	No	17	89.5%	58.6%	9	90.0%	31.0%
Because there is a youth member in the household who does not read and write	Yes	3	15.8%	10.3%	4	40.0%	13.8%
	No	16	84.2%	55.2%	6	60.0%	20.7%
Because there is a no dropout youth student in the household	Yes	15	78.9%	51.7%	8	80.0%	27.6%
	No	4	21.1%	13.8%	2	20.0%	6.9%
Because there is no unemployed youth who finished his education in the household	Yes	16	84.2%	55.2%	6	60.0%	20.7%
	No	3	15.8%	10.3%	4	40.0%	13.8%
Because there is no youth member in the household without taxable land.	Yes	18	94.7%	62.1%	10	100.0%	34.5%
	No	1	5.3%	3.4%	0	0.0%	0.0%

Annex 4.33. The Average Annual Income Obtained from the Distributed Common Grazing Land by the Rural Households

Kattal Gott				Seblan Gott			
Average Income obtained Annually [in birr]	Frequency	Valid Percent	Cumulative Percent	Average Income obtained Annually [in birr]	Frequency	Valid Percent	Cumulative Percent
326.00	1	1.4	1.4	272.50	1	2.0	2.0
357.50	1	1.4	2.9	285.50	1	2.0	3.9
412.50	1	1.4	4.3	331.25	1	2.0	5.9
424.25	1	1.4	5.7	337.50	2	3.9	9.8
438.00	1	1.4	7.1	343.75	3	5.9	15.7
446.00	1	1.4	8.6	350.00	2	3.9	19.6
458.50	1	1.4	10.0	356.25	1	2.0	21.6
461.50	1	1.4	11.4	368.75	3	5.9	27.5
480.25	1	1.4	12.9	375.00	1	2.0	29.4
482.25	1	1.4	14.3	381.25	1	2.0	31.4
483.50	1	1.4	15.7	400.00	1	2.0	33.3
489.75	1	1.4	17.1	406.25	1	2.0	35.3
490.00	1	1.4	18.6	412.50	4	7.8	43.1
494.50	1	1.4	20.0	425.00	6	11.8	54.9
501.00	1	1.4	21.4	431.25	5	9.8	64.7
502.25	1	1.4	22.9	437.50	5	9.8	74.5
513.75	1	1.4	24.3	443.75	3	5.9	80.4
518.75	1	1.4	25.7	450.00	7	13.7	94.1
543.75	1	1.4	27.1	456.25	1	2.0	96.1
555.50	1	1.4	28.6	457.50	1	2.0	98.0
556.00	1	1.4	30.0	462.50	1	2.0	100.0
556.25	1	1.4	31.4	Total	51	100.0	
556.50	1	1.4	32.9				
562.50	1	1.4	34.3				
575.00	1	1.4	35.7				
587.50	1	1.4	37.1				
610.25	1	1.4	38.6				
612.50	5	7.1	45.7				
616.50	1	1.4	47.1				
618.75	1	1.4	48.6				
625.00	2	2.9	51.4				
625.25	1	1.4	52.9				
635.75	1	1.4	54.3				
643.50	1	1.4	55.7				
643.75	4	5.7	61.4				
644.50	1	1.4	62.9				
650.00	2	2.9	65.7				
656.25	1	1.4	67.1				
662.50	2	2.9	70.0				
663.25	1	1.4	71.4				
668.75	3	4.3	75.7				
675.00	4	5.7	81.4				
675.25	1	1.4	82.9				
675.75	1	1.4	84.3				
681.00	1	1.4	85.7				
681.25	3	4.3	90.0				
681.50	3	4.3	94.3				
687.50	3	4.3	98.6				
787.25	1	1.4	100.0				
Total	70	100.0					

Annex 4.34. A summarized Statistics on the Average Annual Income [in birr] Obtained from the Distributed Common Grazing Land by the rural household of the two Gotts

		Kattal Gott	Seblan Gott	Total Sample
N	Valid	70	51	121
	Missing	0	0	0
Mean		595.3714	406.3088	515.6839
Median		625	425	482.25
Mode		612.5	450	450
Std. Deviation		93.23576	46.93295	121.26284
Variance		8692.907	2202.701	14704.676
A. Skewness		-0.86	-1.049	0.114
Std. Error of Skewness		0.287	0.333	0.22
B. 2*[Std. Error of Skewness]		0.574	0.666	0.44
C. The ratio of Skewness to its Std. Error of Skewness		-2.996515679	-3.15015015	0.518181818
Kurtosis		0.158	0.305	-1.263
Std. Error of Kurtosis		0.566	0.656	0.437
D. The ratio of Kurtosis to tis Std.Error of Kurtosis		0.279151943	0.464939024	-2.890160183
Minimum		326.00	272.50	272.50
Maximum		787.25	462.5	787.25
Range		461.25	190	514.75
Percentiles	25	517.5	368.75	425
	50	625	425	482.25
	75	670.3125	443.75	643.75
Test of Normality	Parameter1	**A ≥ B**	**A ≥ B**	**A ≥ B**
	Decision 1	Reject normality	Reject normality	Reject normality
	Parameter2	C $\notin [-2,2]$	C $\notin [-2,2]$	C $\epsilon [-2,2]$
	Decition2	Reject normality	Reject normality	Accept normality
	Parameter3	D $\notin [-2,2]$	D ϵ [-2,2]	D $\notin [-2,2]$
	Decision3	Reject normality	Accept normality	Reject normality
	Decision Total	**Reject normality**	**Reject normality**	**Reject normality**
Appropriate Test	**Parametric Test**	**Non Parametric Test**	**Non Parametric Test**	**Non Parametric Test**

Annex 4.35. A summary of Non-parametric Tests on the annual average income obtained from the distributed land by the two Gotts.

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
1	The medians of annual average income obtained from the distributed land are the same across categories of Respondents' Specific Gott.	Independent-Samples Median Test	.000	Reject the null hypothesis.
2	The range of annual average income obtained from the distributed land is the same across categories of Respondents' Specific Gott.	Independent-Samples Moses Test of Extreme Reaction	6.98E-5[1]	Reject the null hypothesis.
3	The distribution of annual average income obtained from the distributed land is the same across categories of Respondents' Specific Gott.	Independent-Samples Mann-Whitney U Test	.000	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				
[1]Exact significance is displayed for this test.				

Annex 4.36. Cross Tabulation between Respondents own rating of the livelihood effect that the distributed common grazing land can made and each time of access

		Did your household get an access to the distributed common grazing land when it was distributed for the first time?				Does your household have an access to the distributed common grazing land currently?				Does your household have accessed to the distributed common grazing land both when it was distributed for the first time and currently?			
		Kattal Gott		Seblan Gott		Kattal Gott		Seblan Gott		Kattal Gott		Seblan Gott	
		Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
How do you rate the livelihood effect that the distributed common grazing land	Very Low	10		3		7	3	2	1	7	3	2	1
	Low	32		20		22	10	15	5	22	10	15	5
	High	21		25		16	5	21	4	16	5	21	4
	Very High	7		3		6	1	3		6	1	3	0

Annex 4.37. Respondents' [whose household have accessed the distributed land at least once] own rating the livelihood effect that the distributed common grazing land can made

		Household heads' Specific Gott					
		Kattal[Mariam-NiusKebele]			Seblan[Michael-NiusKebele]		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made?	Very Low	**10**	14.3%	8.3%	**3**	5.9%	2.5%
	Low	**32**	45.7%	26.4%	**20**	39.2%	16.5%
	High	**21**	30.0%	17.4%	**25**	49.0%	20.7%
	Very High	**7**	10.0%	5.8%	**3**	5.9%	2.5%
Pearson Chi-Square Tests	Chi-square	5.642					
	df	3					
	Sig.	.130					
	Results are based on nonempty rows and columns in each innermost Nius table.						

Annex 4.38. One sample chi-square test on the proportion of each level of response with in a Gott

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
Kattal Gott	The categories of If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made? Occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.
Seblan Gott	The categories of If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made? Occur with equal probabilities	One-Sample Chi-Square Test	.000	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Annex 4.39. The polarized Rating of Respondents on the Livelihood Effect of the Distributed Land

		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made?	Low Effect on Livelihood	**42**	60.0%	34.7%	**23**	45.1%	19.0%
	High Effect on Livelihood	**28**	40.0%	23.1%	**28**	54.9%	23.1%
Pearson Chi-Square Tests	Chi-square	2.635					
	df	1					
	Sig.	.105					
	Results are based on nonempty rows and columns in each innermost Nius table.						

Annex 4.40. One sample chi-square test on the proportion of respondents each polarized level of response with in a Gott

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
Kattal Gott	The categories of If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made? Occur with equal probabilities	One-Sample Chi-Square Test	.094	Retain the null hypothesis.
Seblan Gott	The categories of If your household had first time or second time access or both, how do you describe the livelihood effect that the distributed common grazing land can made? Occur with equal probabilities	One-Sample Chi-Square Test	.484	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

Annex 4.41. The preference of Household head respondents among farming, grazing and giving the land to an investor.

		Kattal Gott			Seblan Gott		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
What do you prefer from "grazing=1" to "farming=2" the distributed common grazing land?	Grazing	**43**	61.4%	35.5%	**20**	39.2%	16.5%
	Farming	**27**	38.6%	22.3%	**31**	60.8%	25.6%
What do you prefer from "being given to an investor=1" to "farming=2" the distributed common grazing land?	Giving to an Investor	**3**	4.3%	2.5%	**0**	0.0%	0.0%
	Farming	**67**	95.7%	55.4%	**51**	100.0%	42.1%
What do you prefer from "being given to an investor=2" to "grazing=1" the distributed common grazing land?	Grazing	**69**	98.6%	57.0%	**51**	100.0%	42.1%
	Giving to an Investor	**1**	1.4%	0.8%	**0**	0.0%	0.0%

Annex 4.42. A chi-square test on the preference of household head respondents from grazing to farming

		Household heads' Specific Gott					
		Kattal[Mariam-NiusKebele]			Seblan[Michael-NiusKebele]		
		Frequency	Percentage [with in a Gott]	Percentage [with in the Total]	Frequency	Percentage [with in a Gott]	Percentage [with in the Total]
What do you prefer from "grazing=1" to "farming=2" the distributed common grazing land?	Grazing [1]	43	61.4%	35.5%	20	39.2%	16.5%
	Farming[2]	27	38.6%	22.3%	31	60.8%	25.6%
Pearson Chi-Square Tests	Chi-square	5.833					
	df	1					
	Sig.	.016*					
	Results are based on nonempty rows and columns in each innermost Nius table.						

Annex 4.43. One sample chi-square test on the proportion of respondents in each dichotomized level of response with in a Gott

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.	Decision
Kattal Gott	The categories of What do you prefer from "grazing=1" to "farming=2" the distributed common grazing land? Occur with equal probabilities.	One-Sample Chi-Square Test	.056	Retain the null hypothesis.
Seblan Gott	The categories of What do you prefer from "grazing=1" to "farming=2" the distributed common grazing land? Occur with equal probabilities.	One-Sample Chi-Square Test	.123	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

Annex 4.44. Household Heads' Reason for Preferring Grazing and Farming the Distributed Land

Preference	Reason		Kattal Gott			Seblan Gott		
			Count	Column N %	Table N %	Count	Column N %	Table N %
Grazing	It prevents the grazing land takers.	Yes						
		No	43	100.0%	35.5%	20	100.0%	16.5%
	It brings better income.	Yes	43	100.0%	35.5%	17	85.0%	14.0%
		No				3	15.0%	2.5%
	It stops other members of "Yemalog" from getting benefit.	Yes						
		No	43	100.0%	35.5%	20	100.0%	16.5%
	It allows other members of "Yemalog" to get benefit.	Yes	31	72.1%	25.6%	17	85.0%	14.0%
		No	12	27.9%	9.9%	3	15.0%	2.5%
	It stops conflict	Yes	29	67.4%	24.0%	19	95.0%	15.7%
		No	14	32.6%	11.6%	1	5.0%	0.8%
Farming	It prevents the grazing land takers.	Yes	27	100.0%	22.3%	25	80.6%	20.7%
		No				6	19.4%	5.0%
	It brings better income.	Yes	27	100.0%	22.3%	31	100.0%	25.6%
		No						
	It stops other members of "Yemalog" from getting benefit.	Yes	17	63.0%	14.0%			
		No	10	37.0%	8.3%	31	100.0%	25.6%
	It allows other members of "Yemalog" to get benefit.	Yes						
		No	27	100.0%	22.3%	31	100.0%	25.6%
	It stops conflict	Yes						
		No	27	100.0%	22.3%	31	100.0%	25.6%

Annex 4.45. A chi-square test on household heads' reason for preferring grazing and farming the distributed land

Preference	Reasons	Respondents' Specific Gott		Pearson Chi-square test	
		Kattal	Seblan		
		Count	Count		
Grazing	It prevents the grazing land takers.			Chi-square	13.741
	It brings better income.	43	17		
	It stops other members of "Yemalog" from getting benefit.			df	3
	It allows other members of "Yemalog" to get benefit.	31	17	Sig.	.003*,b
	It stops conflict	29	19		
Farming	It prevents the grazing land takers.	27	25	Chi-square	33.440
	It brings better income.	27	31		
	It stops other members of "Yemalog" from getting benefit.	17		df	3
	It allows other members of "Yemalog" to get benefit.			Sig.	.000*,b
	It stops conflict				

Results are based on nonempty rows and columns in each innermost Nius table.

*. The Chi-square statistic is significant at the .05 level.

b. More than 20% of cells in this Nius table have expected cell counts less than 5. Chi-square results may be invalid.

Annex 4.46. Association between the preference and livelihood rating of household head respondents

Respondents' Specific Gott			Using the distributed common grazing land for farming has		Total	Chi-square test	
			Low Effect on Livelihood[1]	High Effect on Livelihood[2]			
Kattal Gott	Preference	Grazing[1]	42	1	43	Value	65.930[a]
		Farming[2]		27	27	df	1
	Total		42	28	70	Exact Sig. (2-sided)	0.000
Seblan Gott	Preference	Grazing	20		20	Value	40.056[a]
		Farming	3	28	31	df	1
	Total		23	28	51	Exact Sig. (2-sided)	0.000

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.02.

Annex 4.47. Household Heads' Choice of Level of Response to Each Individual Item

Items	Levels of Response	Kattal Gott			Seblan Gott			**Total Sample**		
		Frequency	Valid percent	Cumulative percent	Frequency	Valid percent	Cumulative percent	Frequency	Valid percent	Cumulative percent
item1. I feel that the distributed common grazing land is becoming a good income sources for the households which have the access.	Strongly Disagree [Strongly Disfavor]=1	20	28.6	28.6	5	9.8	9.8	25	20.7	20.7
	Disagree [Disfavor]=2	23	32.9	61.4	16	31.4	41.2	39	32.2	52.9
	Agree [Favor]=3	15	21.4	82.9	17	33.3	74.5	32	26.4	79.3
	Strongly Agree [Strongly Favor]=4	12	17.1	100.0	13	25.5	100.0	25	20.7	100.0
item2. It is better to use the distributed common grazing land for grazing as it was before than to use for farming.	Strongly Agree [Strongly Disfavor]=1	13	18.6	18.6	11	21.6	21.6	24	19.8	19.8
	Agree [Disfavor]=2	30	42.9	61.4	9	17.6	39.2	39	32.2	52.1
	Disagree [Favor]=3	14	20.0	81.4	15	29.4	68.6	29	24.0	76.0
	Strongly Disagree [Strongly Favor]=4	13	18.6	100.0	16	31.4	100.0	29	24.0	100.0
item3. The benefit gained from the distributed common grazing land is better in the form of farming than grazing.	Strongly Disagree [Strongly Disfavor]=1	17	24.3	24.3	12	23.5	23.5	29	24.0	24.0
	Disagree [Disfavor]=2	26	37.1	61.4	9	17.6	41.2	35	28.9	52.9
	Agree [Favor]=3	14	20.0	81.4	20	39.2	80.4	34	28.1	81.0
	Strongly Agree [Strongly Favor]=4	13	18.6	100.0	10	19.6	100.0	23	19.0	100.0
item4. I would be happy if the common grazing land was not distributed.	Strongly Agree [Strongly Disfavor]=1	14	20.0	20.0	12	23.5	23.5	26	21.5	21.5
	Agree [Disfavor]=2	29	41.4	61.4	8	15.7	39.2	37	30.6	52.1
	Disagree [Favor]=3	14	20.0	81.4	16	31.4	70.6	30	24.8	76.9
	Strongly Disagree [Strongly Favor]=4	13	18.6	100.0	15	29.4	100.0	28	23.1	100.0
item5. I will vote a candidate who competes for a Kebele administrative position if he or she promises not to restore the distributed common grazing land to its former situation	Strongly Disagree [Strongly Disfavor]=1	14	20.0	20.0	12	23.5	23.5	26	21.5	21.5
	Disagree [Disfavor]=2	29	41.4	61.4	8	15.7	39.2	37	30.6	52.1
	Agree [Favor]=3	9	12.9	74.3	21	41.2	80.4	30	24.8	76.9
	Strongly Agree [Strongly Favor]=4	18	25.7	100.0	10	19.6	100.0	28	23.1	100.0

item6. If I get power, I forbid a land use change "like this" which resulted in disagreement and conflict.	Strongly Agree [Strongly Disfavor]=1	19	27.1	27.1	8	15.7	15.7	27	22.3	22.3
	Agree [Disfavor]=2	48	68.6	95.7	16	31.4	47.1	64	52.9	75.2
	Disagree [Favor]=3	2	2.9	98.6	14	27.5	74.5	16	13.2	88.4
	Strongly Disagree [Strongly Favor]=4	1	1.4	100.0	13	25.5	100.0	14	11.6	100.0
item7. A land use change has to be made according to the prevailing circumstances.	Strongly Disagree [Strongly Disfavor]=1	1	1.4	1.4				1	.8	.8
	Disagree [Disfavor]=2									
	Agree [Favor]=3	38	54.3	55.7	29	56.9	56.9	67	55.4	56.2
	Strongly Agree [Strongly Favor]=4	31	44.3	100.0	22	43.1	100.0	53	43.8	100.0
item8. The distributed common grazing land gives more benefit to the domestic animals of the household than to the households directly as source of farming income.	Strongly Agree [Strongly Disfavor]=1	15	21.4	21.4	5	9.8	9.8	20	16.5	16.5
	Agree [Disfavor]=2	27	38.6	60.0	21	41.2	51.0	48	39.7	56.2
	Disagree [Favor]=3	14	20.0	80.0	14	27.5	78.4	28	23.1	79.3
	Strongly Disagree [Strongly Favor]=4	14	20.0	100.0	11	21.6	100.0	25	20.7	100.0
item9. It gives me a good feeling if the distributed common grazing land is given to an investor.	Strongly Agree [Strongly Disfavor]=1									
	Agree [Disfavor]=2	3	4.3	4.3				3	2.5	2.5
	Disagree [Favor]=3	40	57.1	61.4	35	68.6	68.6	75	62.0	64.5
	Strongly Disagree [Strongly Favor]=4	27	38.6	100.0	16	31.4	100.0	43	35.5	100.0
item10. I do not support and involve in any action which targets in restoring the distributed common grazing land to its previous form of use	Strongly Disagree [Strongly Disfavor]=1	20	28.6	28.6	6	11.8	11.8	26	21.5	21.5
	Disagree [Disfavor]=2	23	32.9	61.4	14	27.5	39.2	37	30.6	52.1
	Agree [Favor]=3	15	21.4	82.9	19	37.3	76.5	34	28.1	80.2
	Strongly Agree[Strongly Favor]=4	12	17.1	100.0	12	23.5	100.0	24	19.8	100.0

Annex 4.48. Summary of the interpreted level of response of household heads towards individual items

Items		Item1			Item2			Item3			Item4			Item5			Item6			Item7			Item8			Item9			Item10		
		Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total	Kattal	Seblan	Total
Frequency	Strongly Disfavor[1]	20	5	25	13	11	24	17	12	29	14	12	26	14	12	26	19	8	27	1		1	15	5	20				20	6	26
	Disfavor[2]	23	16	39	30	9	39	26	9	35	29	8	37	29	8	37	48	16	64				27	21	48	3		3	23	14	37
	Favor[3]	15	17	32	14	15	29	14	20	34	14	16	30	9	21	30	2	14	16	38	29	67	14	14	28	40	35	75	15	19	34
	Strongly Favor[4]	12	13	25	13	16	29	13	10	23	13	15	28	18	10	28	1	13	14	31	22	53	14	11	25	27	16	43	12	12	24
Total		70	51	121	70	51	121	70	51	121	70	51	121	70	51	121	70	51	121	70	51	121	70	51	121	70	51	121	70	51	121
Statistics	Mean	2.27	2.75	2.47	2.39	2.71	2.52	2.33	2.55	2.42	2.37	2.67	2.50	2.44	2.57	2.50	1.79	2.63	2.14	3.41	3.43	3.42	2.39	2.61	2.48	3.34	3.31	3.33	2.27	2.73	2.46
	Std. Error of Mean	.127	.134	.095	.119	.159	.097	.125	.149	.096	.121	.160	.098	.130	.149	.098	.067	.145	.082	.069	.070	.049	.124	.132	.091	.067	.066	.048	.127	.135	.095
	Std. Deviation	1.062	.956	1.041	.997	1.137	1.065	1.046	1.064	1.055	1.010	1.143	1.073	1.085	1.063	1.073	.562	1.038	.897	.577	.500	.544	1.040	.940	1.001	.562	.469	.523	1.062	.961	1.041
	Variance	1.128	.914	1.085	.994	1.292	1.135	1.093	1.133	1.113	1.019	1.307	1.152	1.178	1.130	1.152	.316	1.078	.805	.333	.250	.296	1.081	.883	1.002	.316	.220	.273	1.128	.923	1.084

Annex 4.49. A summary of chi-square test on the level of responses for each item with in the Gott

Hypothesis Test Summary						
			Kattal Gott		Seblan Gott	
	Null Hypothesis	**Test**	**Sig.**	**Decision**	**Sig.**	**Decision**
1	The categories of item1 occur with equal probabilities.	One-Sample Chi-Square Test	.244	Retain the null hypothesis.	.073	Retain the null hypothesis.
2	The categories of item2 occur with equal probabilities.	One-Sample Chi-Square Test	.008	Reject the null hypothesis.	.463	Retain the null hypothesis.
3	The categories of item3 occur with equal probabilities.	One-Sample Chi-Square Test	.112	Retain the null hypothesis.	.118	Retain the null hypothesis.
4	The categories of item4 occur with equal probabilities.	One-Sample Chi-Square Test	.018	Reject the null hypothesis.	.386	Retain the null hypothesis.
5	The categories of item5 occur with equal probabilities.	One-Sample Chi-Square Test	.006	Reject the null hypothesis.	.052	Retain the null hypothesis.
6	The categories of item6 occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.	.436	Retain the null hypothesis.
7	The categories of item7 occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.	.327	Retain the null hypothesis.
8	The categories of item8 occur with equal probabilities.	One-Sample Chi-Square Test	.075	Retain the null hypothesis.	.015	Reject the null hypothesis.
9	The categories of item9 occur with equal probabilities.	One-Sample Chi-Square Test	.000	Reject the null hypothesis.	.008	Reject the null hypothesis.
10	The categories of item10 occur with equal probabilities.	One-Sample Chi-Square Test	.244	Retain the null hypothesis.	.078	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.						

Annex 4.50. A chi-square test on the interpreted level of responses of each item across the Gotts

		Item 1		Item2		Item3		Item4		Item5	
		Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott
Strongly Disfavor[1]		20	5	13	11	17	12	14	12	14	12
Disfavor[2]		23	16	30	9	26	9	29	8	29	8
Favor[3]		15	17	14	15	14	20	14	16	9	21
Strongly Favor[4]		12	13	13	16	13	10	13	15	18	10
Pearson Chi-Square Tests	Chi-square	7.626		9.059		7.778		9.602		16.584	
	df	3		3		3		3		3	
	Sig.	.054		.029*		.051		.022*		.001*	

		Item6		Item7		Item8		Item9		Item10	
		Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott	Kattal Gott	Seblan Gott
Strongly Disfavor[1]		19	8	1		15	5			20	6
Disfavor[2]		48	16			27	21	3		23	14
Favor[3]		2	14	38	29	14	14	40	35	15	19
Strongly Favor[4]		1	13	31	22	14	11	27	16	12	12
Pearson Chi-Square Tests	Chi-square	37.714		.773		3.206		3.244		7.397	
	df	3		2		3		2		3	
	Sig.	.000*		.679[b,c]		.361		.198[b]		.060	

Results are based on nonempty rows and columns in each innermost Niustable.

*. The Chi-square statistic is significant at the .05 level.

b. More than 20% of cells in this Nius table have expected cell counts less than 5. Chi-square results may be invalid.

c. The minimum expected cell count in this Nius table is less than one. Chi-square results may be invalid.

Annex 4.51. Total Attitudinal Score of Household Head Respondents

	Kattal Gott			Seblan Gott			Total Sample		
Raw Score	Frequency	Valid percent	Cumulative percent	Frequency	Valid percent	Cumulative percent	Frequency	Valid percent	Cumulative percent
15.00	2	2.9	2.9	1	2.0	2.0	3	2.5	2.5
16.00	2	2.9	5.7	1	2.0	3.9	3	2.5	5.0
17.00	1	1.4	7.1	1	2.0	5.9	2	1.7	6.6
18.00	5	7.1	14.3	5	9.8	15.7	10	8.3	14.9
19.00	7	10.0	24.3	3	5.9	21.6	10	8.3	23.1
20.00	11	15.7	40.0	1	2.0	23.5	12	9.9	33.1
21.00	2	2.9	42.9	4	7.8	31.4	6	5.0	38.0
22.00	9	12.9	55.7	3	5.9	37.3	12	9.9	47.9
23.00	4	5.7	61.4	1	2.0	39.2	5	4.1	52.1
27.00				1	2.0	41.2	1	.8	52.9
28.00	1	1.4	62.9	4	7.8	49.0	5	4.1	57.0
29.00	2	2.9	65.7	1	2.0	51.0	3	2.5	59.5
30.00	1	1.4	67.1	3	5.9	56.9	4	3.3	62.8
31.00	3	4.3	71.4	1	2.0	58.8	4	3.3	66.1
32.00	3	4.3	75.7	2	3.9	62.7	5	4.1	70.2
33.00	1	1.4	77.1				1	.8	71.1
34.00	8	11.4	88.6	3	5.9	68.6	11	9.1	80.2
35.00	3	4.3	92.9	5	9.8	78.4	8	6.6	86.8
36.00	4	5.7	98.6	6	11.8	90.2	10	8.3	95.0
37.00	1	1.4	100.0	2	3.9	94.1	3	2.5	97.5
38.00				1	2.0	96.1	1	.8	98.3
39.00				1	2.0	98.0	1	.8	99.2
40.00				1	2.0	100.0	1	.8	100.0
Total	70	100.0	100.0	51	100.0	100.0	121	100.0	100.0

Statistics *[the 1st columns are raw score, and the 2nd columns are z-scores]*					
Mean		*25.00*	*27.94*	*26.24*	
Std. Error of Mean		*.83*	*1.06*	*.67*	
Std. Deviation		*6.90*	*7.60*	*7.32*	
Variance		*47.65*	*57.78*	*53.60*	
Percentiles	*25*	*19.75*	*21.00*	*20.00*	
	50	*22.00*	*29.00*	*23.00*	
	75	*32.25*	*35.00*	*34.00*	

Annex 4.52. A One Sample T-Test on the Observed Means of the Total Sample and Each Gotts

One-Sample Statistics					One-Sample Test					
					Test Value = 25				95% Confidence Interval of the Difference	
	N	Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Total Sample	121	26.2397	7.32123	.66557	1.863	120	.065	1.23967	-.0781	2.5574
Kattal Gott	70	25.0000	6.90306	.82507	.000	69	1.000	.00000	-1.6460	1.6460
Seblan Gott	51	27.9412	7.60108	1.06436	2.763	50	.008	2.94118	.8033	5.0790

Annex 4.53. Independent samples t-test and Levene Test for the Equality of Means and Variances

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.582	.447	-2.217	119	.028	-2.94118	1.32638	-5.56754	-.31481
Equal variances not assumed			-2.184	101.569	.031	-2.94118	1.34671	-5.61250	-.26986

Annex 4.54. Pearson Correlation between Some Major variables and Total Attitudinal Score

		Total Attitudinal Score	
		Kattal Gott	Seblan Gott
Household Size	Pearson Correlation	-.243*	-.112
	Sig. (2-tailed)	.043	.435
	N	70	51
Land hold Size [in hectare]	Pearson Correlation	-.305*	.013
	Sig. (2-tailed)	.010	.925
	N	70	51
Farming Income [in birr]	Pearson Correlation	-.199	.025
	Sig. (2-tailed)	.098	.860
	N	70	51
Animal Possession [estimated total price]	Pearson Correlation	-.266*	.228
	Sig. (2-tailed)	.026	.107
	N	70	51
Income from other source [in birr]	Pearson Correlation	.073	.120
	Sig. (2-tailed)	.549	.402
	N	70	51
Income from the distributed land[in birr]	Pearson Correlation	-.004	.098
	Sig. (2-tailed)	.976	.492
	N	70	51
*. Correlation is significant at the 0.05 level (2-tailed).			

Annex 4.55. Pearson Chi-Square Test on the Association between Preferences [Farming vs, Grazing] and Dichotomized attitude [Negative vs. Positive]

			Dichotomized Attitudinal scale		Total	Pearson Chi-Square test		
			Negative Attitude [1]	Positive attitude [2]		Value	df	Asymp. Sig. (2-sided)
Kattal Gott	Preference	Grazing [1]	43		43	70.000[b]	1	.000
		Farming [2]		27	27			
	Total		43	27	70			
Seblan Gott	Preference	Grazing [1]	20		20	51.000[c]	1	.000
		Farming [2]		31	31			
	Total		20	31	51			
Total Sample	Preference	Grazing [1]	63		63	121.000[a]	1	.000
		Farming [2]		58	58			
	Total		63	58	121			

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 27.80.

b. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 10.41.

c. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.84.

Declaration

I, the undersigned, declare that this thesis is a presentation of my original research work that has not been presented anywhere for any degree. Whenever contributions of others are involved, every effort is made to indicate this clearly and all sources of material used for the thesis have been acknowledged.

Name: _____

Signature: _____

Date: _____