

**Assessment of the Performance of the Goat Marketing System in Afar
Region, Ethiopia**

A Thesis

**Submitted in Partial Fulfilment of the Requirement for Master of Business
Administration (MBA) Degree (International Business Specialization)**

By:

Zewdie Kifle

Principal Adviser: Kahsu Mebrahtu (Ass.Prof.)

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**MBA PROGRAM
DEPARTMENT OF MANAGEMENT
COLLEGE OF BUSINESS AND ECONOMICS
MEKELLE UNIVERSITY**

June 2014

Mekelle, Ethiopia

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DECLARATION

I, zewdie kifle, hereby declare that the thesis entitled “**Assessment of the Performance of Goats Marketing System**”, in Afar Region, Ethiopia, submitted by me for the award of the degree of **Master of Business Administration (MBA)** with specialization in **International Business**, Mekelle University at Mekelle, is original work and it hasn't been presented for the award of any other Degree, Diploma, Fellowship or other similar titles of any other university or institution and that all sources of materials used for this thesis have been duly acknowledged.

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CERTIFICATION

This is to certify that this thesis entitled “**Assessment of The Performance of the Goat’s Marketing System in Afar Region, Ethiopia**” submitted in partial fulfillment of the requirements for the award of the degree of **Masters of Business Administration (MBA)** with specialization in **International Business** to the College of Business and Economics, Mekelle University, through the Department of Management, done by Mr. **ZEWDIE KIFLE** is an authentic work carried out by him under my guidance.

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ACRONYMS AND ABBREVIATIONS

ADLI	Agricultural Development Led Industrialization
BOFED	Bureau of Finance and Economic Development of Afar region
CSA	Central Statistical Authority
ECSP	Ethiopian Country Strategic plan
FDRE	Federal Democratic Republic Of Ethiopia
FYGTP	Five Year Growth and Transformation Plan
GDP	Gross Domestic Product
ILRI	International Livestock Research Institute
LDMPS	Livestock Development Master Plan Study
MOFED	Ministry of Finance and Economic Development
NABC	Netherland as-African Business Council
PASDEP	Plan of Accelerated and Sustained Development to End Poverty
PIF	Policy and Investment Framework
S-C-P (SCP)	Structure Conduct and Performance
USAID	United State America Agency International Development

Abstract

This study attempted to assess the performance of the goat's marketing system in the Afar region, Ethiopia. The specific objectives of the study are: examining the nature and types of market tiers, market participants and market channels; evaluating the availability of goat's marketplace facilities and services; evaluating access to market, market information, credit services and transportation; analyzing the market structure and conduct in relation to marketing performance; and examining the pricing practices in goat's marketing system of the region.

For the purpose of this study the primary data was collected from sample traders with the help of semi-structured questionnaire, group discussion with market participants and interview with officials and physical observation of market outlets by researcher. Also the secondary data that used for this study, collected through inspection of reports of some identified federal and regional government institutions and websites. From the region six well-known goat's markets were considered on the bases of the volume of animal transacted. For data collection purpose 120 traders were selected through convenience sampling on the bases of their experience in goats trading business. The collected data analyzed through descriptive statistics with the help of SPSS v-16 and discussed using mean, frequency, percentage, and market concentration ratio.

Finding of the study indicates that, the performance of the goat's marketing system in Afar region is poor characterized by poor market place services, inadequate market information, poor access to markets and transportation, poor credit services. Moreover, most of the markets in the region have a weakly oligopolistic market structure by large traders. As a result, the largest market shares go away with these groups plus they also have the power to influence price of goats in the sample market place. In the region most goats' transactions done based on 'eyeball' estimation, therefore, traders estimate the price of goats by looking physical condition of goats visually and by touching different body parts of goats by hand. Determination of price on the basis of live weight is not common in the sample markets. Therefore, to improve goats marketing system in Afar region, market place facilities with their respective services, market information should be provided. And also, access to credit, formal market centres and transportation should be created.

Key words: Goats, Marketing, and Traders

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Markets are important for economic growth and sustainable development of a given country, but, emphases in development policies in agrarian countries have usually been placed on increasing agricultural production to serve as a base for rural development. In the absence of well-functioning markets, agricultural production can experience several drawbacks (Chris, 2001; Belay, 2009).

Moreover, agricultural production and improved marketing system play vital role as sources of income and consumption to farmers and urban dwellers, though, in developing countries, opposite to their significant roles both at farm household and national levels, efforts to improve their marketing system have long been underway (Andargachew, K., Brokken, R.F, 1993).

Like most of the countries in Sub Saharan Africa, Ethiopia is heavily dependent on agriculture. After the eras of stagnation, Ethiopia's agricultural sector is starting to show signs of realizing its full potential to offer sustenance and income for its 80 million people (PIF, 2010). The Government has demonstrated a strong commitment to the development of the sector by allocation of a considerable amount of its budget to agricultural and rural growth, matched by funding commitments from the international community. Agricultural development led industrialization (ADLI) is a central pillar of economic policy in the recent completed plan of accelerated and sustained development to end poverty (PASDEP) and five year growth and transformation plan (FYGTP) (PIF, 2010; Woldemichel, 2008). So, in the agricultural sectors, the country has comprehensive and consistent set of policies and strategies which reflects the importance of the sector in the nation's development aspirations.

Currently, the agricultural sector plays an important role in the overall development of the country's economy. The sector accounts for nearly 42% GDP, 85% of exports, and 80% employment. Industry contributes to 12% and services 46% of GDP (ECSP, 2011).

The livestock population of Ethiopia is believed to be one of the largest in the world and the first in Africa having 49.3 million cattle, 25.02 million sheep, 21.88 million goats and 38.13 million other animals (NABC, 2010). Livestock and their products are estimated to make up about a third of the total worth of agricultural gross output in the developing countries, and this share is increasing from time to time. Livestock production accounts for about 32% of agricultural GDP and 61% agricultural total export (NABC 2010; PIF, 2010). Livestock production in Ethiopia is increasing quickly in response to the rapid growing demand for livestock products resulting from increasing population particularly that of urban areas, an increasing consumer income (Woldemichel, 2008).

Pastoral regions contribution for agricultural GDP is not significant compared to the volume of livestock they have (Tesfaye, 2008). Farmers in Afar region had total 1,853,798 cattle, 2,804,222 sheep, 4,467,901 goats and 570,581 camels (Roy, 2010; BOFED, 2009; CSA, 2009; LDMPS, 2006). However, the region is one of the poorest and least developed regions of Ethiopia (MOFED, 2005). That is only the recent years that efforts have been undertaken to provide basic infrastructure such as road and administrative building as well as basic health services and education.

In the pastoral areas, including Afar Region, the development plan of Ethiopian government focus on livestock development, irrigation, improving the livestock market system and strengthening implementation capacity (PIF, 2010).

Improved marketing system has critical importance in stimulating farmers to increase production, generating attractive income for traders and meeting consumers need more accurately (Hailemariam Teklewold, Getachew Legese, Dawit Alemu and Asfaw Negasa, 2009). Similarly, an efficient and responsive market mechanism has a significant effect on the income of exporters and other market participants in particular and the national economy in general (Endeshaw, 2007). Therefore, without having favourable marketing

conditions, the possible increment in output, rural incomes and foreign exchange could not be effective.

In Afar region, up to date complete information on the overall structure of livestock marketing system and its performance is assumed to be negligible. Thus, information on market routes through the level of the market is missing. Therefore, studies on the performance of marketing system are very important to prove information on how the marketplaces work. Moreover, current information about the livestock marketing system performance would have its own contribution in improving the livestock market system in the region. In fact, the existence of this kind of information may help a government to decide the extent to which it should help market development.

Since goats encompass a large portion of livestock in the Afar region, the livelihood of the pastoralists as well as the traders of goats in the region is mainly dependent on the goats and the cash income from these animals. Identifying all the potentials and constraints in the goat's marketing system and providing information about its performance helps to use alternative markets that reducing costs and increase the benefit they deserve.

In general, marketing study on goats and current information about the system can play crucial role to improve goats marketing performance in the region and contributes more to agricultural and rural development efforts.

1.2. Statement of the problem

An improved and integrated market mechanism that is market with efficient and good performance have critical importance in stimulating farmers to increase production, generating suitable incentives for traders and meeting consumers need more accurately in terms of type, quality and quantity of supply (Hailemariam *et al*, 2009). Similarly, such kinds of market mechanism have a positive impact on the income of the producers, traders, exporters and other market participants in particular and the national economy in general. Therefore, without having favorable marketing conditions, the possible increment in output, rural incomes and foreign exchange could not be effective (Endeshaw, 2007).

As a result of poor production system and poor marketing performance, the existing income generating capacity of livestock as compared to there enormous potential in the country is not sufficient. Livestock production in Ethiopia accounts for about 32% of agricultural GDP and 61% agricultural total export of the country (NABC 2010; PIF, 2010).

Afar region had a large number of livestock population from which goats encompass a large portion (more than half of livestock population in the region). Since many of the pastoralists in Afar Region hold most of their wealth from goats, markets for this animal exert a great influence on their livelihoods, both in establishing their assets and by affecting herd management decisions (MOFED, 2005). In addition to this the traders also faced many challenges which hinder them to run their business in full confidence like other business, which in turn highly damage the while market performance of this animal (Woldemichael, 2008). For instance, the price of grain remains stable for some periods even in different marketplaces, while the price of goats can show variation in the same marketplace and in the same market day. Even, when the underlying price of goat's product (like meat and hides) remains stable, the price of animal can vary sharply (Chris, 2001; Hailemariam *et al* 2009). This subjective and unstable practice typical exposes goat producers and traders to greater risk than crop producer and traders face.

The goat's marketing performance become poor mainly due to poor market facilities and services, poor access to market centre and transportation, inadequate market information, shortage of credit service, oligopolistic market structure, and subjective/biased pricing practices (Ayele Solomon, Assegid Workalemahu, Jabbar M.A, Ahmed M.M and Belachew Hurissa, 2003)

However, limited studies were undertaken on the factors that affect the market performance of goats in Ethiopia. Most of them were undertaken in SNNP, Oromia, Amahara regions and in Ethiopia level in general (Ayen, 2009; Belete, 2009; Desta, 2009; Endeshaw, 2007; Tsedeke, 2007; Gezahegn *et al*, 2003).

To put it clearly, the current information on the factors that affect of goat's marketing performance is very limited in the Afar region. Thus, the information, specifically on the performance of goat's marketing system is inadequate for designing pricing procedures, policies and institutions expected to improve the goat marketing system operation. In order to address these issues and narrow the current information gap, research on the performance of the goat's marketing system is important. This study, therefore, attempted to contribute its part in filling the information gap by assessing the performance of the goat marketing system in the Afar region, Ethiopia.

To fulfil the above information gap, this study attempted to answer the following research questions:

1. What is the nature and types of market tiers, market participants and market channels in goat marketing system of the region?
2. What type of facilities and services are available in the goat marketing system?
3. Is there an easy access to market Centres, market information, credit services and transportation in the goat's marketing system of the region?
4. What is the effect of the existing market structure and conduct in goat marketing performance of the region?
5. How price determined in goat marketing system of the region?

1.3. Objective of the Study

1.3.1. The General Objective

The general objective of the study was to assess the performance of the goat marketing system in the Afar region, Ethiopia

1.3.2. Specific Objective

1. To identify levels of market, market channel and types market participant in goat marketing system of the region
2. To evaluate the availability of goat marketing place facilities and services in the region
3. To evaluate access to market, market information, credit services and transportation in the goat marketing system of the region
4. To analyse the existing market structure and conduct, and its effect on the performance of the goat marketing system of the region
5. To examine pricing practices in goat market of the region

1.4. Scope and Limitation of the Study

1.4.1. Scope of the Study

This study has geographical, methodological and theoretical scopes. The study focused on the market performance of the goat marketing system in the Afar Region, which is located in north east Ethiopia stretched from the north Danakil depression to south lowland of Awash Valley.

This study is cross-sectional type as the data used for the study were collected in a single period of time (within three months, February-March, 2012). Most of the data for the study were collected from trader's survey through interviewing sample traders with the help of interview schedule in the sample market locations. The data are analyzed with the help of descriptive statistical tools and through analysis of market concentration ratio. The researcher doesn't conclude that, these are the only tools to measure the performance of goat's marketing system.

Theoretically, in this study, the factors like market facilities and services, access to market and transportation, availability of market information and credit services, market structure and conduct, and pricing practices that frequently affect the marketing performance were analyzed. Other factors like the public festivals and ethnic groups which may influence performance of goat marketing system were not included because of the time scope of the study.

1.4.2. Limitation of the Study

All limitations of the study come from the scope of the study. Since the study focused on the performance of the goat marketing system in the Afar region, its findings may not hold true for other livestock markets in the region, and other regions of the country.

As the data collected from trader's survey through interviews, the study is not free from the enumerator's bias during the data collection period. This may comprise its own limitation on the findings of the study.

In addition, in this study, only those factors like market facilities and services, access to market and transportation, availability of market information and credit services, market structure and conduct, and pricing practices that commonly affect the market performance of goats were analyzed. While, the researcher does not conclude that these are the only factors that affect the performance of goat's marketing system.

1.5. Significance of the Study

The information generated from this study will assist policy makers and other NGOs to make relevant decisions to intervene in the development of live animal marketing by providing necessary market facilities with their respective services, providing marketing information, construction of transportation infrastructure, and in designing appropriate policies like setting official grading and pricing mechanisms. The finding of this study also is useful to goats' herders and traders to make their respective decisions about where and how to sell or to buy. Academically, the work also serves as a reference document for researchers and students to embark on studies of the same or related kind of topics in the same region as well as other parts of the country. Therefore, the study will serve as a reference for those who wish to carry out further studies in the area.

CHAPTER TWO

LITERATURE REVIEW

2.1. Basic Concepts and Definitions

2.1.1. Marketing

Traditionally, markets are the places where buying and selling take place. And, marketing is simple the process of selling and buying. But, concept of market and marketing is more extensive than these simple definitions; and, the usefulness of the definition associated with its area of study and application. Specifically for this study, marketing can be defined as ‘the performance of business activities involved in the flow of products from the point of initial agricultural production until they are in the hands of the ultimate consumer (Bansh R., 1993; Cohls and Uha, 1985). It involves the movement of agricultural products from the point of exchange to their final destination. Marketing is an important aspect in any agricultural production system. Livestock marketing comprises the sale, purchase or exchange of products such as livestock, milk, hides and meat for cash or in kind (Tsedeke, 2007)

(Solomon Gizaw, AzageTegegne, Berhanu Gebremedhin, 2006) states that, marketing is an important aspect in facilitating easy exchange of products to cash and it can promote specialization and increased productivity and growth through accessing regional and global markets.

2.1.2. Marketing System

A marketing system is a collection of channels of distribution, intermediaries and business activities which facilitate the physical distribution and economic exchange of products (Ayele *et al*, 2003). Bansh R., (1993) describes that, a marketing system is composed of a number of components: the particular products (e.g. Goats) and their characteristics being transferred from producer to consumer; the characteristics of market participants (e.g., producer, trader, and consumer); the different functions within the system; and the sites and channels, timetable and physical infrastructures involved

2.1.3. Marketing performance

Performance refers the proficiency of individual, group, organization or system toward the purpose it stands. Performance assessment is the process of collecting analyzing and reporting the information regarding to the performance of an individual, group, organization or system. It is a class of appraisal that is based on judgment. Performance assessment also has long been used to judge proficiency in individual, group, organization or system (Chris B., 2001). According to Business dictionary (2013), performance of marketing system refers to the behaviour of a marketing system and market center. The aspects of the performance of marketing system concern how accurately, effectively, rapidly and freely the marketing system make price; how much goods and services are provided at a minimum average cost to the market; in what extent the infrastructures and other marketing services and facilities were provided. The performance of marketing system is, therefore, better or efficient when the system occupied with improved market facilities, provided with necessary supporting services and well constricted infrastructures, and the system make price accurately and freely; otherwise the performance of the system considered to be poor (inefficient) (Belay, 2009; Thomas, 2007).

Marketing Efficiency

Marketing efficiency is an important commonly used measure of marketing performance. The question of whether a market is efficient, or not, where the inefficiencies lay, is crucial to market performance evaluation. If markets are, in fact, efficient, the market price is the best evaluator of value, and the process of assessment becomes one of justifying the market price. Unless the market price may be different from the true value, and the process of evaluation is focused towards finding a sensible estimate of this value (Belete, 2009; Yacob, 2004).

Market efficiency is a crucial issue for individual producer as well as public; because, the degree of efficiency attained affect producer price and profit, cost to the consumer, and there by their real income and the general resource utilization. Market efficiency is a

crucial issue for individual producer as well as public; because, the degree of efficiency attained affect producer price and profit, cost to the consumer, and there by their real income and the general resource utilization (Yacob, 2004).

2.2. Elements/Components of Livestock Marketing System

According to Asfaw *et al* (2011), Ayele *et al* (2003) and Bansh R., (1993) livestock marketing system is compassed of a number of elements:

- distribution (marketing) channels;
- stages/levels market;
- marketing functions;
- forms/structures of market;
- the characteristics of participants (purpose, bargaining ability, and marketing experience of producer, trader, and consumer) and the role of each participant in each stage/level of market;
- the particular products (goats)

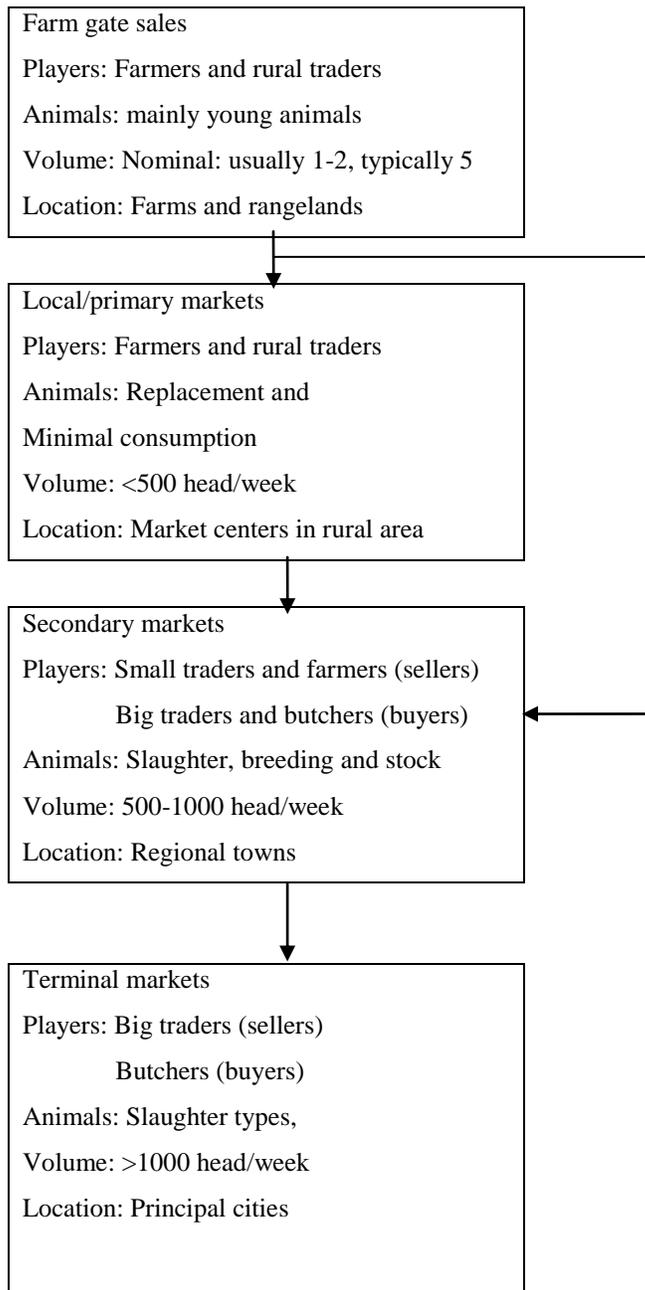
2.2.1. Marketing Channels

Market channels are the alternative routes of product flow from producer to consumer. They are a series of operation, which physically bring goods (goats) into the hands of the final consumer, but in some cases an intermediate market institutions may take ownership without physical handling of them (Endeshaw,2007). There are several marketing channels through which products (like goats) flow to final consumers in both the domestic and export markets.It may involve transportation, handling and storage, title transfers, processing, and distribution (Belete, 2009). The livestock marketing channel begin with the pastoralists that supply for both local and export market (Asfaw Negassa, Shahidur Rashid, and Berhanu Gebremedhin, 2011; Berkowitz, 2000).

2.2.2. Level/Stages of Market in livestock Marketing system

In general, the stages/levels of market in livestock marketing system classified in to three stages: primary, secondary and terminal. But, according to the finding of Ayele *et al* (2003) and Belete (2009) the live animals marketing system in Ethiopia follows a four-tier system. The main actors of the 1st tier are farmers and pastoral traders who perform their trading activities at farm level with very minimal volume, 1–2 animals per transaction regardless of species involved. Some traders may focus on either small or large animals. Those small traders from different viewpoints bring their live animals to the primary or local market (2nd tier). Traders purchase a few large animals or a fairly large number of small animals for selling to the secondary markets. In the secondary market (3rd tier), both smaller and larger traders work and traders and slaughters from terminal markets come to purchase animals. In the terminal market (4th tier), large traders and slaughters handle larger number of mostly slaughter type animals.

Figure 2.1: Stages/Levels of Market Typical in Ethiopian Livestock Marketing System.



Source: Belete (2009) and Ayele et al (2003)

2.2.3. Functions of Market in Livestock Marketing System

Livestock marketing system involves different market functions along the movement of animals from the point of exchange to their final destination. For a marketing system to be effective and efficient, there are three common types of functions which must be offered. These are: **physical, facilitating, and exchange** functions (Solomon *et al*, 2010; Kohs and uhi, 1995; Bansh R., 1993)

2.2.3.1. Physical Functions:

This function helps to maintain the smooth flow of product from producer to consumer and their alteration to a form attractive to the consumer. The elements of physical functions are transportation, market place facilities and services, market centres and holding grounds (storage), grading and standardization, and processing Tesfaye, 2008; Kohs and uhi, 1995; Bansh R., 1993)

1. Transportation and Transportation Infrastructure

Road is one of a very significant infrastructure in the livestock marketing system to improve transportation system. The type of road connecting a region determines the type of buyers that can get access to its market. It also has an impact on the profitability of most of the participants in the market by increasing or decreasing cost of transportation (Asfaw *et al*, 2011).

2. Marketing Facilities and services

According to Ayele *et al* (2003) Livestock marketing system differ from agricultural marketing system in terms of product procurement, processing, grading and transaction. Market for livestock is less organized than crop market. Most of the livestock marketing facilities are constructed under livestock development program which provides operationally sustainable facilities in boosting the livestock marketing activities by conducting optimal livestock transaction. Livestock market facilities include loading ramps, weighting scale, holding area, fence, veterinary inspection posts, feed and water traps. Alan and Mukasa (2002) suggested in their study that, the availability of these

integrated facilities with their respective services will commonly improve marketing transaction, help to maintain the condition of the animal until they reach secondary or terminal market, and also helps to make transaction on live weight basis and to minimize loading and weighting cost of traders.

3. Market Centres and Holding Grounds (Storage)

Market centers and their associated infrastructures are significant elements that have to be considered in the move to raise the supply of livestock for both local and export markets. Due to the broader geographical site of pastoralists, some important sources of livestock are very far away from market centers. Pastoralists from the border areas want to travel for a week or more to reach these market regions (Tesfaye, 2008). This influences the marketing behaviour of pastoralist that they either have to keep their animals unsold or they have to go to immediate informal markets in the neighboring countries. To attract such resources to the central markets, there is a need to carefully evaluate these remote regions and open up primary markets with at least dry weather roads linking them to secondary markets (Teressa, 2006).

The Ethiopian pastoralist farming system stretches from mid altitude areas (2200 masl) to very lowland areas (600 masl) with mean yearly temperature of 19 to 34°C, respectively. Not all animals taken from these areas adapt to other climatic conditions. This indicates the importance of having holding grounds (storage areas) in extreme lowland areas to keep back-up stock for highest demand periods. Periodic supply shortages and other conditions (such as clan conflict) that drive shortages may accord with the very high request period from the importing countries. Thus, holding reserve stock in low and mid altitude areas will safeguard in such situations (Chris B, 2011; Teressa, 2006). Having holding grounds in different locations can also serve to alleviate problems created as a consequence of communication gap between consumers, traders and producers from remote markets. (Bansh R., 1993) states that:

Storage allows the commodity to be held until peak season demand, thereby stabilizing supply. **Processing** transforms the commodity into the products desired by the consumers. **Grading and standardization**

allow the consumer to be more confident of the characteristics of the good being purchased

2.2.3.2. Facilitating Functions:

Most important facilitating functions are provision of reliable market information and credit service (sources of working capital) (Bansh R., 1993; Tesfaye, 2008)

1. Market Information Service

This is a system required to distribute up-to-date market information to keep all livestock market participants for access of market information (price, time specific demands, quality information etc.). Thus, information is essential on prices, traded or existing quantities, forecasts of future supplies and demand, and overall market conditions. It must be important, accurate and timely and reflect all segments of the market; mainly consumer demand (Asfaw *et al*, 2011). This allows all market participants to make well-informed judgments in making transactions.

Access to market information permits the producers to track out and compare the data available for various market shops to appreciate the full potential profit by obtaining the most effective costs. A livestock Market information system (LMIS) may be a continued and interacting structure of individuals, instrumentality and procedures to collect, sort, analyze, evaluate, and distribute pertinent, timely and accurate livestock market information to be used by varied market participants to enhance their selling decisions (Chris, 2011). As such, live stock selling information is required to enhance decision making in the least levels within the livestock trade and to boost the competitive position of the Ethiopian livestock trade in international markets. Relevant livestock Market information affords policy manufacturers and traders with information regarding costs of livestock, offer and different relevant information they have to form rational production and selling selections to facilitate and to contribute to Ethiopia's transition to a completely functioning market economy (Solomon *et al*, 2010;).

On the other hand, information about live animal production and related cultural practices is not clearly understood at the upper ends of the chain. There is no important investment in the relationship; rather the relationship in the market is based on uncertainty (Tsedeke,

2007); in this type of relation producers are considered as input suppliers rather than strategic partners in the value chains. The goal of the production system is only to satisfy producer's own shortage, without giving much accent to meet the market demand and ensure sustainable supply of livestock to the market. These marks in unpredictable quantity and quality of products intended for different domestic and abroad markets and minimum prices for producers (Jabbar and Benin 2004). It also limits the growth of value addition by several participants such as producers, traders and processors.

In most live animals marketing system, however, information is held as a private property and not equally shared among the different participants in the value chain and usually lacks trickle down consequence. In this case, those that have the power to command the terms, mainly those in the higher end of the chain, act only in their own benefits. This forces farmers do not have countervailing economic influence and not to also act in their own interests. The quality and quantity requisite demanded by the end-user does not appropriately go down to the lower ends of the chain (Robert, 1997). Market participants in the lower ends of the chain (producers and collectors) are typically far from up-to-date market information.

2. Credit Services

One of the most important requirements of competitive marketing system is the availability of financial support, mainly, to increase marketing activities and the number of market participants. According to Ayen (2004) one of the constraints to marketing of livestock is access to capital which can limit the number of traders to be participated in trading activities. According to him, limited access to credit is one of the major constraints to have better marketing performance by distorting the competitiveness of the system. Easy access to credit service not only allow large number of new traders to enter in the trading activity, but also increase the financial capacity of small scale traders to expand their business which boost competitiveness in the market. According to (Bansh R., 1993):

Financing and risk-bearing are two important facilitating functions. The owner of goods at any marketing stage must sacrifice the opportunity to use the working

capital needed to buy those goods elsewhere. Or the owner must borrow that capital. In either case, capital must be provided by the trader or by some lending source. Regardless, cost is involved. Further, there is an implicit cost in the risk of losing all or part of that capital through theft, spoilage, mortality or changing market conditions. Without the willingness to provide the capital and to bear these costs, no stage of the market chain could function. Other facilitating functions enable producers to respond to consumer needs and thus provide goods in the locations, quantity and form desired.

According to him, facilitating functions can also include demand and supply creation and market research function.

2.2.3.3. Exchange Function

This function involves finding a buyer or a seller, negotiating price and transferring ownership. The most important element in this function is pricing practices (price determination mechanism) (Kohs and uhi, 1995; Bansh R., 1993)).

Pricing Practices

A focus on pricing is important as price is a central measure of the livestock market efficiency, an indicator of producer incentives and a base for government revenues from the livestock market related services. Understanding price formation and also providing information in these matters is critical for predicting coming trends (Hailemariam *et al*, 2009; Teressa, 2006).

The price of the goat's frequently determined by their characteristics/attributes (like weight, age, sex and body condition); market characteristics; behaviour of market participants (buyer and seller type) and time of transaction (Hailemariam *et al*, 2009; Endeshaw, 2007; Tsedeke, 2007).

In general, there are two ways of assessing the price of goats purchased in the market: visual assessment of body condition (which is very subjective and biased) and using the weighting scale. After all those who buy using eye ball guess are small traders that would hand over to the slaughterhouse or export agents on weighing scale. Form such system producers are the first losers since each trader work to avoid its own risk (Ayele *et al*, 2003). Thus, it would be vital to establish weighting scale of transaction in the livestock

markets. Different technique could be used to standardize units of transaction in the goat market. One of the choices is having a weighting scale of measurement in the market place (Chris, 2011).

Up to date information in these factors are useful in designing appropriate goat pricing as well as their marketing procedures and delivery of services like weighting scales and consistent marketing information to avoid unfair pricing practices. These actions could improve the efficiency of the goat pricing system and subsequently improve the livelihoods of goat keepers. When the people trained in the practice of measuring the live weight of animals they intend to sell and given market information on price per kilogram live weight, they could pre-estimate what they could gain from the sales of their respective animals (Mohammad, 2006; Teressa, 2006).

2.2.4. Structure (Forms) of Market

Market structure refers to the competition state of markets. Market structure, in economics, is the combination of various variables like seller, buyers, product, price, and state of competition. Buzzle.com, (2013) based on the combination and interrelationship of the above variables, classify market structure into four, monopoly, oligopoly, monopolistic competition and perfect competition

1. **Monopoly:** when a single seller provides a single product that lacks any close substitute. In this case, the price determined by seller and the buyer purchase in such price as they have no other options.
2. **Oligopoly:** characterized by the presence of a few sellers for large number of buyers for a unique product. The part, which is a few in numbers, can influence the price.
3. **Monopolistic competition:** is a form of imperfect competition in which there are many sellers and buyers of differentiated product.
4. **Perfect competition:** characterized by large number of buyers for large number of sellers of homogeneous product. The price of such product is determined by demand-supply mechanism.

Table 2.1: Market Structure Comparison Table

Market Structure	No of Supplier	Price Influencing Power	Product Type	Market Entry Barriers	Basis of Competition
Perfect Competition	Infinite	None	Homogeneous	None	Price
Monopoly	One	Absolute	Unique Product	Extremely High	No Competition
Monopolistic Competition	Many	Somewhat	Differentiated	Somewhat Low	Product Attributes
Oligopoly	Few	Limited	Homogeneous/ Differentiated	Somewhat High	Price, Promotion, etc.

Source: <http://www.buzzle.com/articles/market-structure.html> 06/05/2014 (1:30pm)

The approaches which we have to measure the performance of the marketing system through market structure is **structured, conduct and performance (SCP) model approach** which can complement the market margin analysis. It is one of the most common methods of examining marketing performance. It analyzes the relationship between functionally similar firms and their market behavior as a group, and their performance. This method basically based on the theory that market structure and market conducts can determine the performance of the marketing system (Andrew, 2008; Thomas, 2007).

In this concept, market structure is the characteristics of the market participant which technically influence the market behavior in determining competition and pricing system. It is the degree of buyer and seller concentration, defined by the number of buyer and seller in the market that initial the degree of market concentration. Degree of market concentration (concentration ratio) refers to the total number of buyer/sellers and their size sharing to have a share in the market.

Market conduct refers to market behaviour that the market participants adopting in buying and selling of the product in the market. In acceptable conduct, there are enough firms in the market to create some uncertainty about whether the price change ups and down; there is no collusion among different firms; there is no pricing or other matter (Andrew, 2008; Belay, 2009; Wolde, 1994).

The competition state and pricing are the element of market structure and conduct that considerably affect market performance conditioned with the overall marketing environment including police setting and economic conditions. Ultimate relation of market structure and conduct can affect the performance of market through determining competition state and pricing behaviour. (Andrew, 2008; Thomas, 2007; Wolde, 1994).

2.3. Findings of Related Studies

According to Ayale *et al*, (2003), marketing system for the majority of African countries does not provide sufficient services to stimulate live animal marketing. This result the comparative advantage they get from the market by improving the livestock marketing system is not significant.

Livestock markets in Ethiopia are usually in the control of local authorities. In many parts of the country, market locations in primary and secondary markets are not fenced properly; there are no permanent animal routes; and no feed and watering infrastructures. Until now buyers and sellers are subjected to different service charges (like loading, weighting, feed and water costs are high because of unavailability of the respective facilities). In many parts of country also animal transactions done in informal markets which mainly as a result of unavailability of well constricted road network to connect potential animal routs to formal market centre and lack of formal local market centres near to pastoralists (Hailemariam *et al*, 2009; Endeshaw, 2007; Teressa, 2006).

Market information is important to farmers, traders and consumers to help them make choices on what and where to buy and sell. However, in nearly all parts of the country, there is no constant market information on prices and supplies, nor formalized grades and standards of goats and other livestock (Ayele *et al*, 2003). There is excess supply of animals beyond demands which effectively destroys producer prices since the more mobile trader is better informed on market prices, while better information combined with extra supply places the trader in a better position during price negotiation. On the other hand, information about live animal production and related cultural practices is not clearly understood at the upper ends of the chain. There is no important investment in the relationship; rather the relationship in the market is based on uncertainty (Tsedeke, 2007). In this type of relation producers are considered as input suppliers rather than strategic partners in the value chains. Thus, market participants in the lower ends of the chain (producers and collectors) are typically far from up-to-date market information. This hinders all market participants to make well-informed judgments in making transactions.

There are two ways of assessing the price of goats purchased in the market: 'eyeball' estimation (visual assessment of body condition) which is very subjective and biased, and using the weighting scale. In different parts of the country price of goats determined by 'eyeball' estimation (visual assessment of body condition), and weighting is uncommon. In most primer and secondary goat's marketing, price agreement reached by a long one-to-one bargaining between a seller and a buyer. Under such circumstances, price paid frequently reflected by buyers preference for various animal characteristics (like age, sex, weight and body condition) (Endeshaw, 2007; Tsedeke, 2007; Ayele *et al*, 2003).

In a system where animals are collected from the market using visual estimation and sold to the abattoirs by weight scale, traders who collect the animal and supply to the exporters are not certain about their profit margin. In this non-uniform system of transaction traders may have to negotiate and cut down price in the source market in order to ensure their profits. Collectors working in such ambiguous system every time try to keep their risk to the minimum level by operating at smaller scale which is ultimately shown as a supply shortage and price instability at the end market. From such system producers are the first losers since each trader work to avoid its own risk. Thus, it would be vital to establish the weighting scale of transaction in the livestock markets to stabilize the price of animals within the system (Asfaw *et al*, 2011; Hailemariam *et al*, 2009; Ayele *et al*, 2003).

2.4. Conceptual Frame-work

The studies conducted on the area of the issue indicate that, the performance of live animals marketing system was frequently affected by existence and reliability of market information, access to transportation and market centers, availability of market place facilities and services, access to credit service, the nature of market structure, pricing practice (Tsedeke, 2007; Teressa, 2006).

Market information is important to market participants to make decision on how, what and where to buy and sell. Poor market information can affect the performance of marketing system by hindering market participants to make well-informed judgment in full confidence when they buy or sell. When reliable market information about price and demand on destination market is not available, traders increase their profit margins to protect themselves from risk of low price (Belaay, 2009; Bansh R., 1993).

Well-constructed **transportation infrastructure** in all potential animal routs is very important to provide modern form of transportation services in list cost. But, poor transportation system can highly affect marketing performance by increasing unnecessary transaction cost (Asfaw *et al*, 2011).

Due to the broader geographical site of pastoralists, some important sources of livestock are very far away from formal market centers. The absence of formal **market centres** near to pastoralists influences the marketing behaviour of them either they have to keep their animals unsold or they have to go to immediate informal markets in the neighbouring countries. This in turn, can affect the performance of marketing system by creating supply shortage in the formal markets of the country (Chris. B, 2011; Teressa, 2006).

Livestock **market facilities** include loading ramps, weighting scale, holding area, fence, veterinary inspection posts, feed and water traps. The availability of these integrated facilities with their respective services will commonly improve marketing performance through helping to maintain the condition and health of the animals until they reach

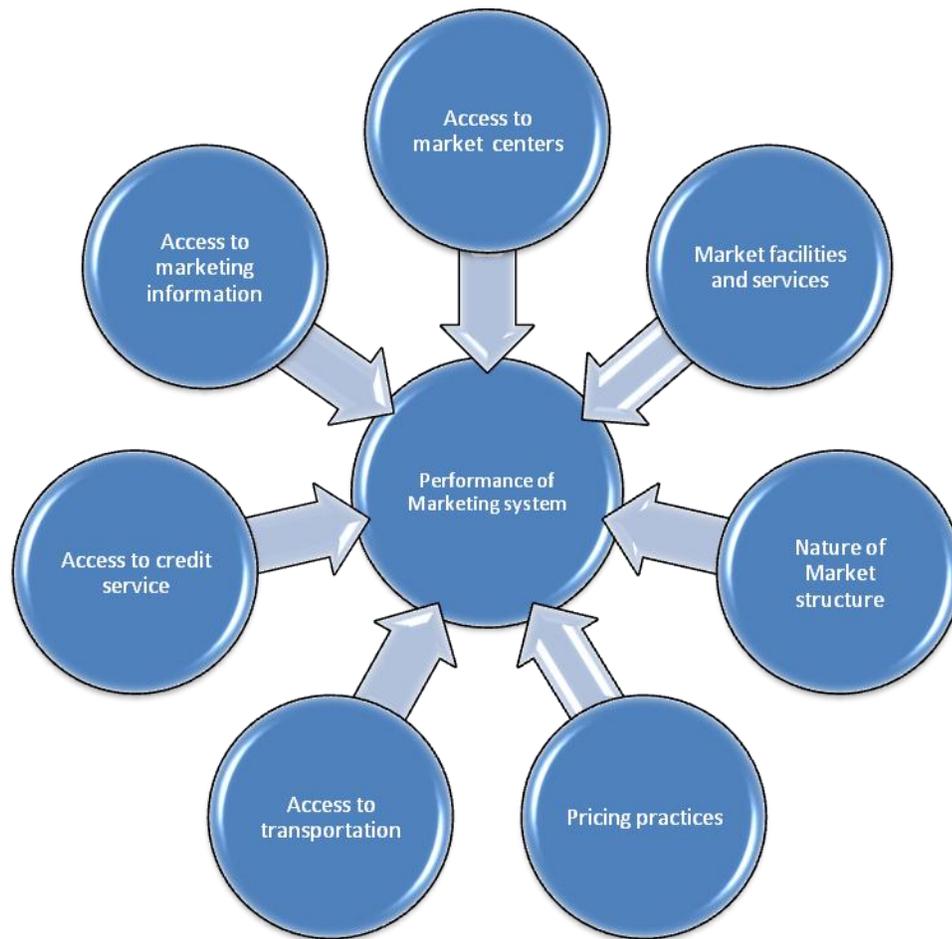
secondary or terminal markets, to make transaction on live weight basis and to minimize loading and waiting cost of traders (Tsedeke, 2007; Teresa, 2006).

One of the most important requirement to create competitive market environment is the availability of financial sources, mainly, to increase marketing activities by attracting new traders to the system and to support small scale traders to be strong financially. **Poor access to credit** is one of the major constraints to have better marketing performance by distorting the competitiveness within the system (Ayen, 2004).

The competition state which is an element of market **structure** that considerably affects market performance conditioned with the overall marketing environment including police setting and economic conditions. The nature market structure can affect the performance of market through determining competition state and pricing behaviour or power (Tesfaye, 2008; Bansh R., 1993).

In most primary and secondary markets in Ethiopia animals traded through 'eyeball' estimation and one-to-one negotiation between seller and buyer. In such **subjective and biased pricing practices**, price can vary frequently and no one can be sure about the exact price of product on hand. This can affect the performance of market by creating high price instability or price distortion throughout the channels (Hailemariam *et al*, 2009)

Figure 2.2: Conceptual Frame-Work



Source: Partially Adopted from Tesfaye, (2010).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Site Selection

Afar Region has five administrative zones. For the purpose of this study, from each zone one livestock market is selected (except from zone-1, which is largest and most livestock markets are concentrated, two markets were selected) purposively on the bases of the volume of animals marketed. According to the information obtained from agricultural product marketing promotion office about volume of animal traded in each market and type of market participants, there is no terminal market tier in the Region. Thus, for data collection only two market tiers (primary and secondary) were covered. But, to minimize the information gap, some important information's about the terminal markets were gathered from traders through group discussion and inspecting other researchers' findings.

Accordingly, Assayita and Chifra markets are secondary markets which are found in Administrative zone-1. Yello and Sabure (Awash Feantale) markets are also secondary markets found in Administrative zone-4 and Administrative zone-3 respectively. Delfage and Aba'ala markets are primary markets which are found in Administrative zone-5 and Administrative zone-2 respectively. So in general, four secondary (Assayita, Chifra, Yello and Sabure) and two primary (Delfage, and Abaala) markets, which are well-known by offering large volume of live animal to terminal as well as cross border trade, were selected purposively.

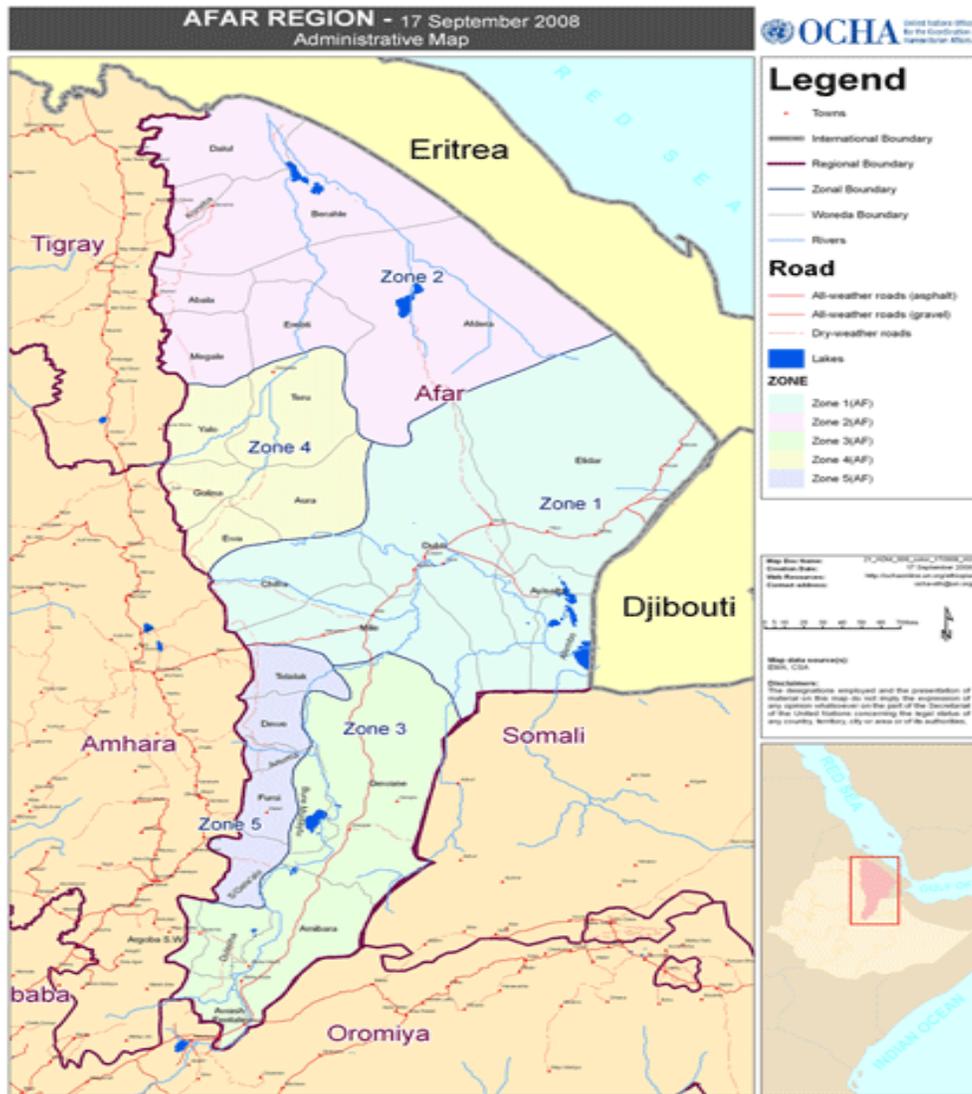
3.2. Description of the Study Area

Afar region is one of the nine regions of Ethiopia and contains the homeland of the afar people located in north east Ethiopia stretched from the north Danakil depression to south lowland Awash valley sharing international boundaries with Eritrea and Djibouti. The regional temperature is usually high and range from 12⁰c to 48⁰c. May, June and July are the hottest months and January and February the coldest months (BoFED, 2009).

Today the country as well as the region on the way of free market economies which incite investment in the region. According to the investment data of the region, most of the region investments are in the agricultural sector which mainly concentrated in 6 woredas, namely Amibara, Go wane, Assayita, Dufti, Mille and Awash, which account 58.10 % of the regional agricultural investment. A huge sugar factory project called Tendaho sugar factory also established woreda as called Assayita and Dufti. But as a result of low fertility, rocky and sandy nature of the lands, only 3.20% of the lands used for cultivation (BoFED, 2009). That is only the recent years that efforts have been undertaken to provide basic infrastructure such as road and administrative building as well as basic health services and education. But, still it is in lower level compared to other regions.

Farmers in Afar region had total 1,853,798 cattle, 2,804,222 sheep, 4,467,901 goats and 570,581 camels (Roy B, 2010; BoFED, 2009; CSA, 2009). However, the region is one of the poorest and least developed regions of Ethiopia. The reason to conduct this study in this site is to provide important information regarding to performances of marketing system which can helps to improve goat's transaction in a more efficient way. This in turn helps to improve the livelihood of pastoralists by increasing the income they deserve.

Map 3.1: Administration Regions and Woreda Map of Afar Region



Source: Regional and Geographical InformationMap (www.ethiopianreview.com)

3.3. Data Type and Sources.

The survey for this study mainly focused on collecting data about the traders feeling, experience, attitudes, knowledge, and opinion towards marketing facilities, transportation and market information, access to market centers and credit service, nature of market structure, and practices of pricing through interviewing sample traders with the help of semi-structured questionnaire. Additionally, the data on the above variables collected through focus group discussion with market participants, personal interview with the agricultural product marketing promotion officials of the region and by observation of market places by researcher. Thus, for the purpose of this study goat trader of the sample markets, agricultural product marketing promotion officials of the region, different market participants in the sample market and physical structure of market outlets were used as primary sources in which primary data obtained through interview, discussion and physical observation. The secondary data were collected from the identified secondary sources through inspection of the reports of some governmental institutions (CSA, Afar region finance and economic development bureau, Afar region agricultural product marketing promotion bureau) from 2008-2011 which talks about livestock population and livestock marketing, and websites. Lastly, the accomplished survey forms were collated, encoded, statistically analyzed and interpreted and websites.

3.4. Research Strategy and Research Design

This study adopted both qualitative and quantitative research approaches as the data obtained from the respondents analyzed qualitatively and quantitatively (using descriptive statistical approach). The quantitative approach has several advantages. As it is highly structured, it can allow for cost efficient and less boring data. It also allows for the computation of statistics from which the interpretation easily drowned. The qualitative methods are also increasingly accepted in social science and business research. It helps to obtain qualitative data about the people feeling, behavior and opinion. Using the mixed quantitative and qualitative method can be useful to triangulate results from different dimensions and to develop richer pictures of the phenomenon under

investigation (Greener, 2008). The study is cross-sectional type as it used primary data which is collected in a single period of time mainly through interview schedule, discussion and observation in order to apprise the performances of goat's marketing system rapidly. And also, the study is mostly descriptive type as the data collected, from trader's survey to describing the traders feeling, experience, attitudes and knowledge about the variables of the study, analyzed and presented with the help of descriptive statistical tools.

3.5. Target Population and Selection of Respondents

The traders who are employing themselves in goat trading in the selected markets of the region were used as a sample frame. To determine the sample size the trends of past studies on the issue were used as a benchmark. Most of the studies on the issue, which were conducted in the regional as well as zonal level of the country, were used 120 to 160 sample size. Belay(2009) in his study of 'performance of cattle marketing in Jijiga zone, Somali Region' used 150 sample size from 540 sample frame; Belete(2009) in his study of 'production and marketing systems of small ruminants in the Goma district of Jimma zone, western Ethiopia' use 160 sample size from 7594 sample frame; Tesfaye (2008) in his study of 'performance efficiency analysis of livestock marketing in Afar region Ethiopia used' 120 sample size from 343 sample frame; Endeshaw (2007) in his study of 'Assessment of production and marketing System of Goats in Dale district, Sidama Zone' used 120 sample size; Tsedeke (2007) in his study of 'production and marketing systems of sheep and goats in Alba special zone, southern Ethiopia' used 150 sample size from 2446 sample frame.

All this studies were mostly undertaken with in the country especially at the regional and zonal level in lowland areas of the country and most of them used five up to eight market outlets. Therefore, depending on these trends, from six selected market outlets 120 goat traders were selected through convenience sampling for interview purpose based on the experience they have in goats trading business. Accordingly, those who have more than six month goats trading business experience were selected in order to get more detailed information.

As it is difficult to obtain actual figures of the traders in each market, the researcher faced difficulties to allocate exact proportional size for each market. As a result, before the data collection, the researcher conducts a survey to get information about the number of traders in each sample markets. During this survey the researcher with the help of tax collector and goat market agents has generate list of goat traders for each markets. From generated list of goat traders 120 trader respondents were taken and allocated to each market based on proportion to size.

Table 3.1: The Number of Traders and Sample Size in Selected Markets

No	Trader location	No. of traders	No. of Sample traders (40%)
1	Aba'ala	44	18
2	Assayita	65	26
3	Delfage	36	14
4	Chifra	57	23
5	Sabure	48	19
6	Yello	50	20
	Total	300	120

Source: Survey Result of the Researcher before Data Collection

3.4. Data Collection and Instrument

Primary data were gathered from the goat traders, the livestock marketing promotion officials of the region, market participants and goat's market outlets through interviewing sample traders with the help of interview schedule, group discussion with market participants and physical observation of market outlets by researcher. In each market one group discussion was conducted. The group in each market contains four-seven members which composed of large scale traders (assemblers), small scale traders (pastoralist traders) and pastoralists with the aim of to obtain general information about the goats marketing system on the basis of the variables of the study.

The data were collected from sample traders with the help of semi-structured questionnaire which is partially adopted from Tesfaye (2008) and Tesfaye (2010). The interview schedule first prepared in English and translated into both Amharic and Afaringa in order to make communication easy with both Amharic and Afaringa speakers in the market.

Two data enumerators, who have college diploma in animal science and working in the districts as development agents were selected for data collection based on their language fluency in both Amharic and Afaringa. Two days training was given to enumerators by researcher in the area of research objective, methodology and interview schedule (especially how to record data). After they can be made aware of the objective of the study and content of the interview schedule, a pre-test was conducted by interviewing traders in Assayita market under the supervision of the researcher and some modifications were made to the questionnaire some confusing questions were edited. The final data used in the research were collected by enumerators and the researcher closely assists them during data collection to ensure an appropriate data collection.

In addition, group discussions with market participants, observations of market outlets and interview with regional livestock promotion bureau experts conducted by researcher himself with the assistance of enumerators in translating language.

Secondary data were collected through inspections of different secondary sources, such as, the reports of the selected governmental institutions (CSA, Afar region finance and economic development bureau, Afar region agricultural product marketing promotion bureau) from 2008-2011 which talks about livestock population and livestock marketing, and websites. Lastly, the accomplished survey forms were collated, encoded, statistically analyzed and interpreted.

3.5. Data Analysis and Presentation

Descriptive methods of data analysis were employed to meet the objective of the study. For the analysis of data, the pre-coded data of the research that obtained through traders

interview were entered to gather into computer and analyzed using the statistical package for social science (SPSSv. 16.0).

To examine and describe the performances of different elements of goat's marketing system such as: market channels, market levels and market participants in each level; marketing facilities and services; sources of capital; access to transportation and market information; barriers of market entry; and pricing practices through the data obtained from sample traders with the help of semi-structured questionnaire, descriptive statistical tools like: frequency, percentage and mean were employed. The analyzed data presented using tables, charts and figures. It also interpreted and discussed accordingly and triangulated with the information obtained through group discussion with market participants, interview with the issue concerned officials of the region and by observation of market places by researcher.

Others analysis tool like concentration ratio employed to evaluate the market share of traders and market conduct in relation to marketing performance of the goat's marketing system in the study area.

Concentration ratio Measures the concentration of firm in the market. It is the commonly used measure of market structure, which refers to the number and relative size of buyers in the market.

$$C = \sum_{i=1}^r s_i, \quad i=1,2,3,4 \text{ ----- } \mathbf{1}$$

Where: s_i is the percentage market share of the i^{th} farm, r is the number of relatively large farms for which the ratio is going to be calculated

Kohl's and Uhi (1985) for four largest traders concentration ratio of 50% or more is an indication of strong oligopolistic market, 33%-50% implies weak oligopolistic market, and below 33% indicates competitive market structure.

CHAPTER FOUR

RESULT AND DISCUSSION

This chapter deals with the analysis of the survey data and interpretation of the analytical findings. The data obtained from the respondents has been analyzed through descriptive statistical techniques with the help of Statistical Package for Social Science (SPSS v. 16.0).

Accordingly Mean, Frequency, and Percentage were employed in the study for interpretation purpose. The researcher used tables, charts and figures to present data. Firstly, socio-demographic characteristics of the respondents presented with an objective of indicating their demographic and social characteristics and their activities in the goat marketing system. Next to this, the first specific objective which is about the levels of market, market participants and their role in each stages of market and market channels discussed with the objective of to provide a systematic knowledge about the characteristics of market participants and their role in each tier/level of market, and flow direction of goats from the producer to the consumer.

The remaining sections are organized based on the sequence of the remaining specific objectives for which the study was conducted. Accordingly evaluating the availability of goats market place facilities and services; evaluating access to market and transportation; examining the market structure, conduct and performance of the goat marketing system; and examining pricing practices in goat marketing system of the region discussed one after the other.

In general, results of the finding are mainly discussed based on the data collected through trader's interview and triangulated by the information derived from interview with officials, focused group discussion with market participants and physical observation of market outlets by researcher.

4.1. Socio Demographic Characteristics of the Respondents

4.1.1. Age, Sex and Educational States of the Respondent

Age of the Respondent

The researchers in the area classify the age of the respondents into three groups (Young, Middle and Old) (Tesfaye, 2008). So that ages of the respondents for this study, also categorized into three groups. The first group is young whose age is less than 25 and it covers 13(11.8%) of the respondents. The second groups are middle aged who are between 25 and 45 years old and covers the majority of the goat traders 80(66.6%). The others are elders greater than 45 years old which represent 27(22.6%) (Table 4.1). Moreover, the mean score of the respondent's age is 39 showing that the majority of the respondents are productive group (active group of the society).

Sex of the Respondent

The majority of goat traders 180 (90.8%) in sample market are male being profit makers in goat trading business. Only 12(9.2 %) respondents are females (Table 4.1). This indicates that goat trading business in the region mainly dominated by male traders through with the fever of community culture. Therefore, it needs further study to see the effect of these variables on the performance of goats marketing system. The researcher used these two variables only to show the demographic characteristics of the respondents to readers. Further researches should be conducted in the area by including age and sex factors.

Educational States of the Traders

The survey result shows that the majorities of the respondents 97(80.8%) are primary school and below (Table 4.1). From the group dissection, among the reasons why the respondents don't attend the secondary school and above was the absence of school within a close distance of their vicinity during the period of their school age. Specially, pastoralists and pastoralist traders were not allowed by their parents to attend school.

Rather than, they help their parents in domestic works. But, this finding indicates that education is not prerequisite criterion (necessary condition) to participate a goat trading business. That is, an elementary school is being sufficient to perform goat trading which represents the majority of goat's traders in the region.

4.1. Table 4.1: Age, Sex and Educational Status of the Respondents

Age and Sex of the Respondents	Items	Frequen cy	Percentage	Mean
Age of respondent	Young	13	11.8	39
	Middle age	80	66.6	
	Old	27	22.6	
Sex of the respondent	Male	108	90.8	
	Female	12	9.2	
Educational status	Illiterate	19	15.8	
	Read and write	38	31.7	
	Primary school	40	33.3	
	Secondary school	20	16.7	
	Above school	3	2.5	
	Total	120	100.0	

Source: Survey Result, 2012

4.1.1. Traders Characteristics and their Activities

According to the survey result, the majorities of the traders 83(69.2%) have above three year experience in goats trading activities. And, 20(16.7%) and 17(14.2%) of trader have less than one year and one up to three year experience respectively. The main activities of the sample traders were selling and buying goats having 89(74.2%) and 20(16.6%) respectively in the sample market. In assessing the nature of their trading business, 95(79.5%) of the traders perform their trading activities as a sole ownership and the rest 25(20.5%) traders are partnership (most of them are agents of exporters) (Table 4.2).

Goat trading activities have different characteristics in different level of the marketing channels. The majorities of the sample traders interviewed were found to be small traders working in all primary, secondary and terminal markets (Table 4.2). Those small scale traders (having less than 15 goats) use farm gate and primary markets mainly as a source of purchase and secondary market as sales market. And, the remaining once, use both secondary and primary markets as a source of purchase and secondary and terminal market as a sales market as well. Thus, their response concerning their trade activity does not make any difference among market at different levels rather indicating their purchase and sales market at all levels. In agreement with this report the trader's activity also described by other reports (Endeshaw, 2007; Tsedeke, 2007). Also from the above discussion, most of the traders (74.2%) are sellers and also the majority of them (59.2%) hold <15 goats. When we triangulate this two result the most of the sellers are small scale traders.

Table 4.3: Trading Activities of the Sample Respondents

Variable	Item	Frequency	percent
Trade experience	<1 year	20	16.7
	1-3 years	17	14.2
	>3 years	83	69.2
The main activities of traders in the sample markets	Buying goats	20	16.6
	Selling goats	89	74.2
	Both selling and buying	11	9.2
How trading activities undertaken	Alone	95	79.5
	Partnership	25	20.5
No of goats traders hold in the market day	<15,	71	59.2
	15-30	24	20.0
	35-45	15	22.5
	>45	10	12.3

Source: Survey Result, 2012

4.2. Levels of Market, Market Participants and Channels of Distribution in Goat's Marketing System of the Region

4.2.1. Level (Tiers) of Markets

Different scholars classified livestock marketing into three main categories called primary, secondary and terminal based on the type of major market participant, the volume of supply per unit of time and purpose of buying. According to Ayele *et al* (2003) and Belete (2009) the domestic livestock marketing structure of Ethiopia follows a four tier system. Similar to this finding, from the researcher observation and interview with regional livestock marketing expert and discussion with market participants, marketing system in Afar region has followed four tier systems by having various market participants, volume of animal traded and different purpose of buying. The first tier is a farm gate market that is widely spread in the entire pastoral area, having characteristics of trading one or two animals by pastorals and local traders. The second tier is a primary or local market which characterized by the volume of animal less than 500, mainly dominated by producers as main sellers and traders, local butchers and consumers as main buyers. Hence, animals in this market transacted for resale in other large (secondary) market and slaughter purpose. In Afar region this type of market mostly located in Woreda level. The third tier is a secondary market, which characterized by having the volume of animals more than 500 and mostly large traders purchase animals to sell in terminal market and export purpose. Secondary markets mostly located on zonal level. Assayita, Chifra, Sabure and Yello are some examples of secondary markets in the region. As reported by Tesfaye (2008) terminal markets (fourth tier) characterized by their consumption as the main purpose of buying and this market are located in large urban areas like Addis Ababa, Nazareth, and Mekelle. In these markets, medium to large-scale traders and butchers dominate the market and on average over 1000 heads of animals are brought to this market per week.

4.2.2. The Main Market Channels and Routes in Afar Region

The interview result with the regional livestock marketing expert and group discussion with market participants in the market place (Figure 4.1) shows that, goat trading routes in the region are categorized into four main channels based on their destination and purpose of sales comparative with the finding of Tesfaye (2008).

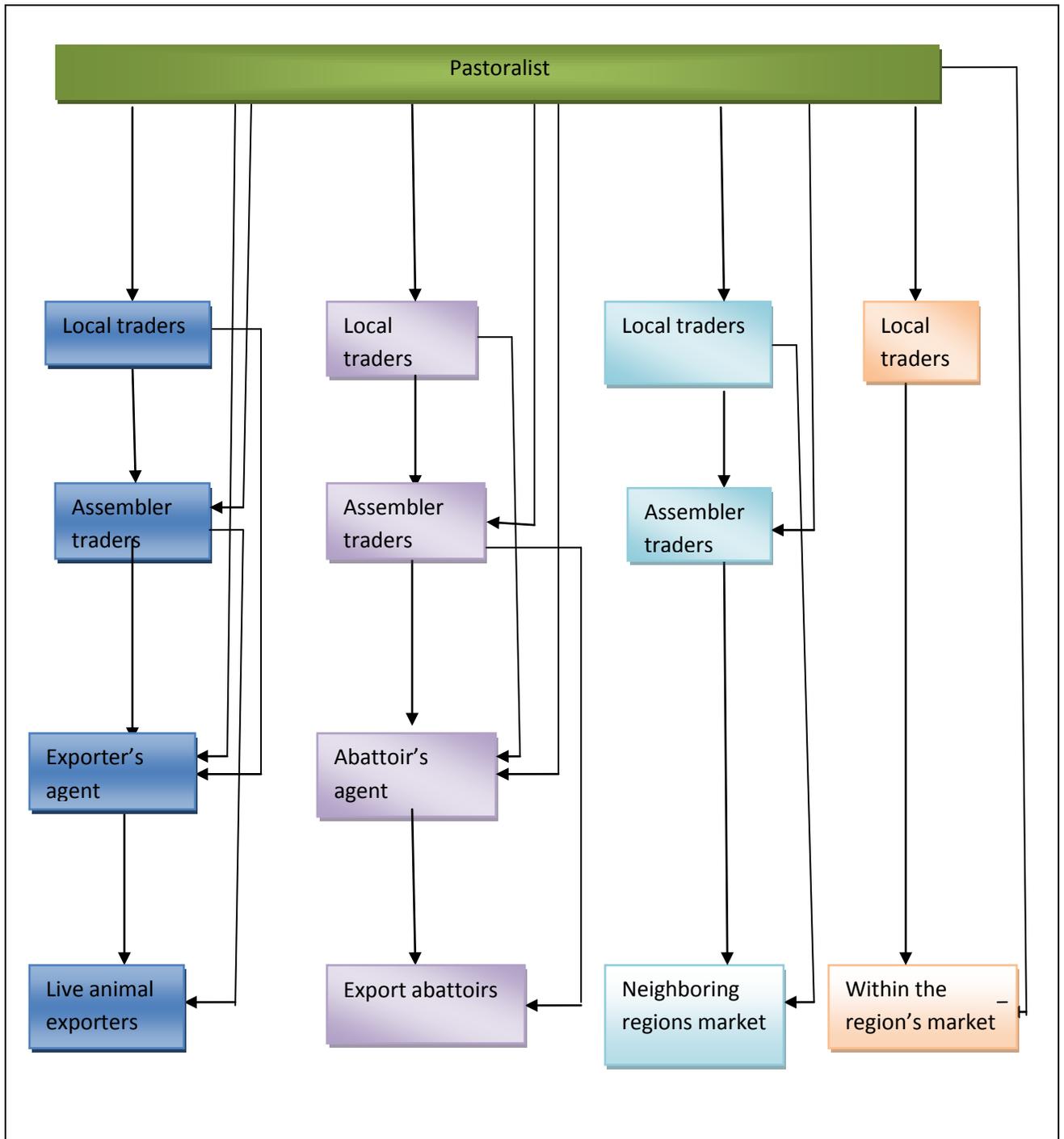
The first is the live animal export channel. In the first route of this channel, goats assembled from primary and secondary markets of the region transported through Mathara and Nazareth markets to live animal exporters. In the second rout, goats assembled from central part of the region channeled through Assayita market and crossed the border to Djibouti.

The second channel is meat export through export abattoirs. In the first route of this channel, goats from surrounding markets of southern and south eastern part of the region frequently assembled through Sabure and Awash markets transported to Modjo and Debrezeyt export abattoirs. There are also flows of goats from central part of the region to those export abattoirs through Chifra markets crossing Bati market. Another route of this channel is, goats from Yello and Aba'ala markets directly assembled to Abargale (Mekelle)

The third channel is goat trade by retailers to neighboring regions (Mathara and Nazareth in the south; Bati, Combolicha, Desse and Alamata markets in the west; and Mekelle, Adegrat and Atsibi in the north) for consumption, reproduction, and butchery.

The last channel is local consumption in the region manly distributed by pastoralists (producers) and local traders.

Figure 4.1: Goats Marketing Channels in Afar Region



Source: Survey Result, 2012

4.2.3. Types of Market Participants and their Role

In any of marketing systems all the market participants have their own role in determining the market behavior. Every marketing actor has his own role and exists similarly throughout the region. From the researcher observation in the marketplace, the large numbers of market participants in the goat marketing system are goats' sellers and buyers. There are different type of sellers and buyers. The first types are pastoralists or producers who come to sell their animals in small scale. The second types are local traders that mainly used to collect goats from pastorals at the farm get and sell in primary and secondary markets and operate at medium scale.

The third ones are assemblers (which include export agents, abattoir or abattoir agents and retailers of the terminal markets) who are small in number and operate at large scale at all levels of goat's market. They mainly collect goats from the primary and secondary market and sell at terminal markets. In using economy of scale especial in transportation cost they take the largest market share and profit from retail price at the expense of pastoralists and small scale traders. Thus, by having the dominance power to set prices (Table 4.10) at all levels of the market, they can contribute more for poor performance of the market in order to keep their margin high. Because, economy of scale from transportation cost gives them the opportunity to buy at a lower price from primary and secondary markets compare to other participants and sell at higher price in terminal markets.

The fourth groups are brokers locally called “*Delalas*” are also other participants in marketing of goats in sample markets. From the group discussion with traders, the role of brokers in marketing of goats in the area has two views; some group describes them favorably as they facilitate transaction between buyers and sellers while others see them as problems in marketing as they are the ones who mainly decide on the price. The fee they collect is also described by some as unnecessary as one can negotiate the price his/her animal with the buyers/sellers. In agreement with this report, the role of brokers is also described by other reports (Lawrence *et al*, 2008; Endeshaw, 2007; Tsadeke, 2007)

Figure 4.2: Informal Group Discussion with Traders at Market Place



Source: Own Picture during Survey

4.3. Marketing Place Facilities and Services

Livestock market facilities include loading ramps, weighting scale, holding area, fence, veterinary inspection posts, feed and water traps. Alan and E. Mukasa (2002) suggested in their study that, the availability of these integrated facilities with their respective services will commonly improve marketing transaction and help to maintain the condition of the animal until they reach secondary or terminal market.

From the researcher observation, interview with regional livestock marketing expert officer and discussion with market participants in the market place, almost all livestock facilities in the region were not provided with their respective services. According to the regional livestock marketing expert, many of livestock markets in the region like Assayita, Dubit, Adaar, Chifra, Edidiar, Aba'ala, Berahale, Konaba, Gowanne, Amber, Awash, Dulas, Sabure, Yello, Delifage, Talalak, and Logia, are constricted with necessary facilities like loading ramps, veterinary inspection posts, feed and water troughs, and holding areas. But, as it observed by researcher, these facilities are not

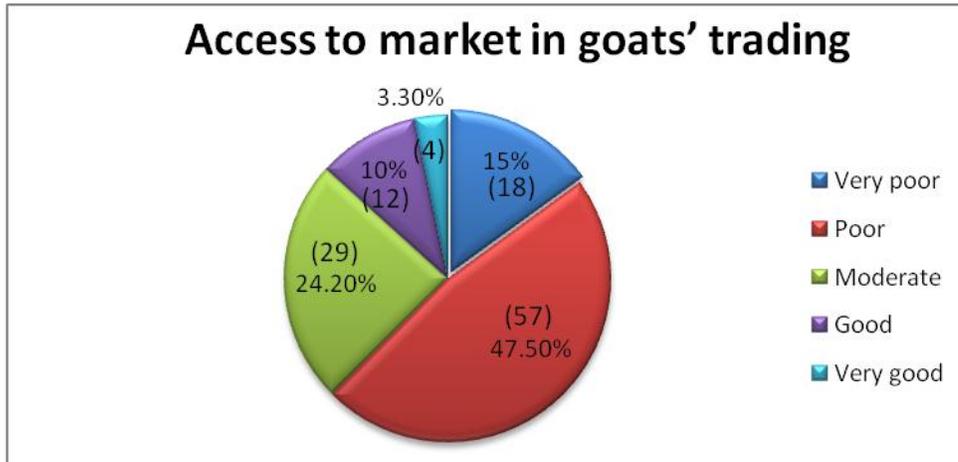
provided with necessary services like veterinary services, food, water and weighting scale in the sample markets. Except there is weighting scales in Assayita and Chifra markets, but currently they are not functional.

4.4. Access to Market, Market Information, Credit Services and Transportation

4.4.1. Access to Market

Due to the broader geographical site of pastoralists, some important sources of livestock are very far away from market centers. From the survey 57(47.5%) of the respondents replied that, access to market in the region is poor and 29(24.2%) of them assured that it is moderate (Figure4.3 :). In addition to this, from the group discussion with market participants in the marketplace about the distance of formal markets for pastoralists, pastoralists from the border areas expected to travel for three or four days to reach those formal markets. Especially from the group discussion in the Assayita and Chifra markets, it is founded that, most pastoralists near to Djibouti boarder sell their animal at informal boarder markets in a given price rather than providing their animals to formal markets. This is mainly due to the absence of formal market centres in the east and southeast part of the region. This is also may be because of absence of well constructed roads and absence of transportation services providers. The finding of Chris B, 2011 and Teresa, 2006 states that, the absence of formal market centres near to pastoralists influences the marketing behavior of them either they have to keep their animals unsold or they have to go to immediate informal markets in the neighbouring countries. This in turn, can affect the performance of marketing system by creating supply shortage in the formal markets.

Figure 4.3: Access to Market



Source: Survey Result, 2012

4.4.2. Market information

The existing livestock markets are loosely integrated due to lack of necessary market information. Thus, a market information system is mandatory that allows stakeholders to get information on quantity and price, both on the domestic and foreign markets.

From the survey result, 79(65.7%) of the respondents have no reliable and adequate goat's price information before they sell or buy. In this situation it is impossible to make decisions in full confidence. But, 41(34.3%) of the respondents have information about the current price of goats in the market (Table 4.3). From this it is clear that, there is no reliable and adequate information as to the extents of competitive market in the study area. When reliable market information about price and demand on destination market is not available, traders increase their profit margins to protect themselves from risk of low price in the expense of producers in agreement with (Belaay, 2009). This reveals that, the performance of goat's marketing in the region is poor and inefficient.

Table 4.3: Availability of Market Information

Access to market information		
	Frequency	Percent
Yes	41	34.3
No	79	65.7
Total	120	100

Source: Survey Result, 2012

4.4.3. Access to Credit Services

One of the most important requirements of efficient marketing system is the availability of financial support, mainly, to increase marketing participation. According to Ayen M, (2004), one of the constraints to marketing of livestock is access to capital. The trader's survey shows that, the majority 71(59.2%) of traders can hold on average less than 15 goats and a few 10(8.3%) traders hold above 45 goats in the market day (Table: 4.4). This reveals that traders have different working capital. From total respondents 68(56.2%) of them responded that their main source of capital was their own, while 13(11.3%), 6(5.1%), and 4(3%) of respondents indicated that their source of capital were borrowed/credit, friends and relatives without any interest, Ekub and other traders respectively (Table 4.4). The trader's survey result indicates that from total respondents 69(56.9%) of respondents did not want to borrow money from any source. This is mainly because of their Religion. Especial those Muslim traders have no interest to borrow money from any source. Only 51(43.1%) of the respondents have the interest to have credit. But, from those who have an interest to have credit (43.1%), 23(43.2%) of them have no access to credit from any source. While from the rest 28(56.8%), who have access to credit, 16(54.7%) of them get credit manly from private money lenders (Table 4.4). In this case, they may expose to pay 100% interest per year. From this, it is clear that, formal credit service in the region is poor. Thus, goat's marketing in the region dominated by few who are financial strong and it resulted in increasing uncompetitive marketing environment.

Table 4.4: Credit Service and Source of Working Capital

Variable	Items	Frequency	Valid Percent
Source of working capital	Own	68	56.2
	Friends and relatives	13	11.3
	Ekub	6	5.1
	Other traders	4	3.4
	Borrowed/credit	29	24
No of goats traders can trek/truck in the market day	<15,	71	59.2
	15-30	24	20.0
	35-45	15	12.5
	>45	10	8.3
Interested to have credit	Yes	51	43.1
	No	69	56.9
Get credit service	Yes	28	56.8
	No	23	43.2
Sources of credit	Banks	4	14.3
	Private money lenders	16	54.7
	Microfinance	8	31.0
	Others	0	0

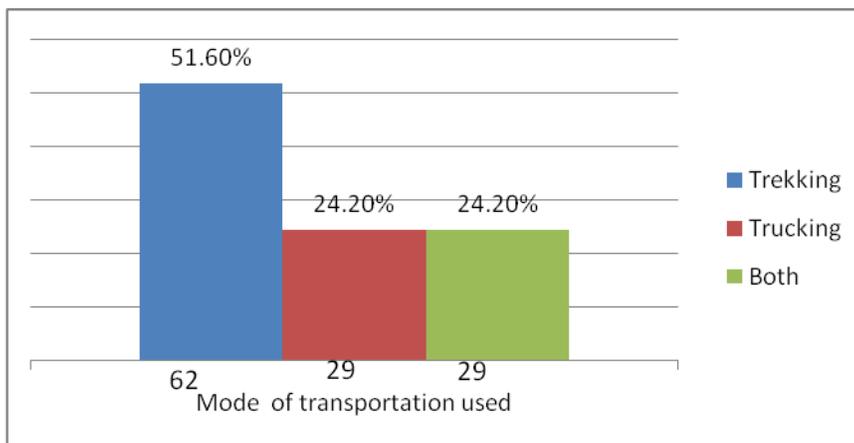
Source: Survey Result, 2012

4.4.4. Transportation System

From the trader's survey 62(51.6%) of the respondents replied that, they used trekking to transport goats to selling markets and 29(24.2%) used trucks and remain 29(24.2%) used both trekking and trucking (Figure 4.3). From the researcher observation, in all sample market, goats transported to primary and secondary market from all directions by trekking. But, from those markets assemblers used trucks to transport terminal and other secondary markets. Thus, in the region trekking is the main means of transportation to transport goats to primary and secondary markets. The main reason of the respondents to use trekking than trucking is that, trekking is cheaper than trucking. They revealed that, even weight loss from trekking can be expected to be much higher but the total cost is not

necessarily higher than when other modes of transportation are used which confirm the finding of (Alan and E.Mukasa, 2002). Lack of trucking service providers mainly due to unavailability of well-constructed roads in the market channels is also another reason to use trekking. Sometimes, because of lack of formal trucking services the traders use public transport vehicles to truck their goats which is highly expensive (Figure 4.4). Because, formal trucking will be valuable if it used in large scale frequently in order to make use of economy of scale.

Figure 4.4: Mode of Transportation



Source: Survey Result, 2012

Figure 4.5: Trader Loading their Goats in Minibus to Transport from Aba'ala to Berahale



Source: Own Picture during survey (Aba'ala market)

4.5. Market Structure, Conduct and Performance

Market performance refers the result of the ultimate relation of market structure and conduct. The competition conditions is component of market structure and conduct that considerable affect market performance condition with the overall market environment including police setting and economic conditions (Andrew, 2008).

4.5.1. Market Structure

Market structure refers to the degree of sellers and buyer concentration, the degree of market transparence (market information), and the condition of entry to and exit from goat trade. The first instrument to measure the market structure is the market concentration ratio (Andrew, 2008). The second one explains the condition of entry into and the exit from the goats' trade and it includes managerial know-how, lack of working capital and legal constraints. The other instrument is market price information flow within a market (Belay, 2009). Thus, for an efficient (competitive market), there should be sufficient number of firms (buyers and sellers). The firms of the appropriate size are

needed to fully capture economy of size; there should be no barrier to entry into and exit from markets and should have full market information.

4.5.1.1. The Degree of Market Concentration

Market concentration refers to the number and relative size distribution of buyers and sellers in a market. The degree of market concentration was carried about all sample markets. It was measured by the percentage of goats handled by the largest four traders (Kohi and Uhis, 1985). The survey result shows the existence of strongly oligopolistic market structure in Assayita market having CR4 57%. Sabure, Yello, Chifra and Delfagemarkets are characterized by weak form of an oligopolistic market structure having CR4 48%, 46%, 43% and 38% respectively. Aba'ala market is the only competitive market having a low (22%) concentration index value (Table 4.5). This market is mainly influenced by many medium scale traders from Tigray region.

Table 4.5: Concentration Ratio

Markets	Trade-A		Trade-B		Trade-C		Trade-D		Others		Total Volu me	CR4 (%)
	Volu me	%										
Assayita	80	18	60	13	60	13	60	13	180	43	440	57
Sabure	60	16	60	16	40	10	40	10	200	48	400	48
Yallo	70	18	50	13	40	10	20	5	240	54	420	46
Chifra	70	17	50	12	30	7	30	7	220	57	400	43
Delfage	30	13	20	8	20	8	20	8	150	62	240	38
Abaala	30	10	20	6	10	3	10	3	270	78	310	22

Source: Survey Result, 2012

4.5.1.2. Barriers to Enter into Goats Trade

Managerial know-how

Managerial know-how for this study refers to the ability knowledge of goat traders and it was examined levels of traders' formal education and their business experiences. The result of the trader's survey indicates that 19(15.8%) of the traders did not have education, 38(31.7%) of the sample respondents can read and write, 40(33.3%) had an elementary school. So the majorities of the respondents 97(80.6%) were with primary level of education and blows this level. This reveals that the level of formal education did not seem to be a barrier to entry into the goat market (Table 4.1).

Business Experience

Business or trade experience of traders refers to the number of years that the goat's traders stayed in goats trading activity. It guides a trader to do what, where, how and when decisions on goats trading based on accumulated practical trade experience. From the survey, it was found out that most of the respondents had been in goats trading activity for more than three years. Out of the survey traders 83(69.2%) of the respondents had business experience of more than three years (Table 4.2). From this it is clear that business experience is not a barrier to entry into the goat trading business.

4.5.1.2.1. Working Capital

Working capital refers to the amount of money required by goat's traders to enter the goat trading business. One of the most important requirements of efficient marketing system is the availability of financial support, mainly, to increase marketing activities. According to Ayen M, (2004), one of the constraints to marketing of livestock is access to capital. The trader's survey shows that, the majority 71(59.2%) of traders can hold on average less than 15 goats and a few 10(12.3%) traders hold above 45 goats in the market day. This reveals that traders have different working capital. Fifty seven percent of traders involved in the survey has responded that their main source of capital was their own, while 24%, 11%, 5%, and 3% of respondents indicated that their source of capital

were borrowed/credit, friends and relatives without any interest, Ekub and other traders respectively (Table 4.4). The trader's survey result indicates that from total respondents 69(56.9%) of respondents did not want to borrow money from any source. This is mainly because of their religion. Especial those Muslim traders have no interest to borrow money from any source. Only 51(43.1%) of the respondents have the interest to have credit. But from those who have an interest to have credit (56.9%), 23(43.2%) of them have no access to credit from any source. While from the rest 28(56.8%), who have access to credit, 16(54.7%) of them get credit manly from private money lenders (Table 4.4). It is the common truth that, most of those who get credit from private money lenders exposed to pay 100% interest per year. This indict that, formal credit service in the region is poor. Thus lack of working capital is one of the barriers to enter the goat trading business.

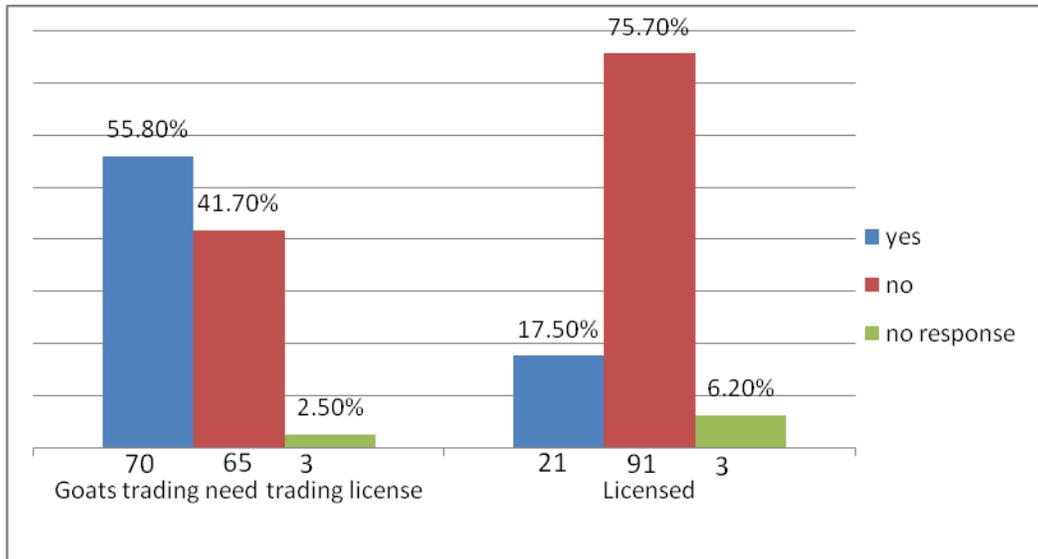
Legal and Policy Framework

Licensing of Goats Trade

Licensing is a major barrier in many business activities. According to the regional trade and transport bureau, goat's trade like any other business, need trade license and traders involved in this business needed to be licensed. As a rule, a trader who has a license in one business is not allowed to perform any other activities other than the activity in which he/she licensed. Majority of sample traders 70(55.8%) agreed that goat trade needs trade license (Figure 4.6). In practice, however, this is not a case, as most of the traders operating in the study area had no trade license. Thus, the enforcement of the law was weak.

According to a sample trade survey 91(75.3%) of the traders did not have a goat trading license and only 21(17.5%) of the traders had had trade license. The remaining 3(6.2%) did not respond to this question (Figure 4.5). It seems that in the goat's trade license is not a barrier to enter goats trading business in the study area agreed with the finding of Tesfaye (2010). However, further investigation is needed to determine whether licensing requirements will improve goats marketing and to find means of better enforcement of license requirements.

Figure 4.6: Trade License



Source: Survey Result, 2012

4.5.1.3. Degree of Market Transparency

The degree of market transparency refers to the timeliness and reliability of the market information that the traders have for their marketing decision. In a transparent market, participants have adequate information about their competitors, their source of supply and buying and selling price for better decision.

The existing livestock markets are loosely integrated due to lack of necessary market information. Thus, a market information system is mandatory that allows stakeholders to get information on quantity and price, both on the domestic and foreign markets. From the survey result, 79(65.7%) of the respondents have no goat price information before they sell or buy (Table 4.3). But 41(34.3%) of the respondents have information about the current price of goats in the market from their customers at the destination market and other traders which are not reliable and adequate to make decisions in full confidence (Table 4.3). There is no information as to the extent of the competitive market. This reveals that, in the study area, lack of reliable and adequate information is one of the barriers to enter the goat trading business. This in turn can cause the trading activities to be dominated by few who have relatively better access to market information.

4.5.2. Market Conduct

Market conduct refers to market behaviour that the market participants adopting in pricing, buying and selling of the product in the market. In acceptable conduct, there are enough firms in the market to create some uncertainty about whether the price change ups and down; there is no collusion among different firms; there is no pricing or other matter (Wolde, 1994; Belay, 2009).

Structure of the market that; whether the number of participants and their power concentration in the market determine market conduct. As indicated in the market concentration ratio, almost there is an oligopolistic structure in all markets except Assayita which is strongly oligopolistic and Abaala market which is a competitive market. These large firms who jointly possess the largest share of the market have an influence to distort the market price. Thus, buyers have all the power to set prices. In general goats' markets in the region are dominated largely by pastoral/producer sellers and some local assembler. Because of their large number compared to the buyers, pastoralists bargaining power is generally weak. As observed from the market concentration ratio that is characterized by oligopolistic market structure, price is mainly determined by some group of buyers.

The result of group discussion with market participants indicates that the price at which they buy animals at the local market is set by deducting miscellaneous costs and the net profit margin of the prevailing price in the terminal market constant with the finding of Belay (2009). This indicates that the local market price is largely determined in relation to the terminal market price. It has been explained by traders that prices in terminal markets change quickly between the time they find out the price in terminal markets and the time they transport and sell their animal in the terminal markets. The price fluctuation in the terminal market is not transmitted to local and regional markets rapidly. Thus to avoid the risks these high price volatility traders used to add a premium at their marketing margins.

From the above discussion it is clear that, the competition state which is the component of market structure and the pricing conditions that is the component of market conduct indicates the expectance of poor marketing performance by creating oligopolistic market structure in which the large scale traders have a superior power to determine market price.

The relationship between access to credit and information sources, and market power was another useful finding of the study which has an important policy implication. Those goat traders who have a strong capital employed a relatively monopolistic position. At the same time, those traders who had access to timely and accurate primary market information relatively were found to have superior market power.

Lack of capital and credit service together with no or unreliable primary and secondary market information have made small scale traders weak in their market decision and reducing market risks, which is characterized by weak market power constant with the finding of Andrew (2008), Wolde (1994), Belay (2009).

According to the discussion with agricultural product marketing expertise in Chifra and Aba'ala woreda, there is no any practical move to organize pastoralists in the form of cooperative and to establish agricultural product marketing institution like marketing board in regional and woredas level to alleviate the problem.

4.6. Practices of Pricing and their effect on Price instability

4.6.1. Characteristics of goats

Body condition and Weight of goats

On the basis of the characteristics of the animal, the body condition is the most preferable criteria to determine the price of the animal in sample market in agreement with the finding of Gezahegn *et al*, (2003) and Hailemariam *et al*, (2009). The survey result shows that, 85(72.5%) of the respondents used the visual assessment of body condition (observing the animal whether it is very fat, fat, tin or very tin visually) of the animal to determine the price of the goats and only 19(15.2%) of the respondents used weight (Table 4.6).From group discussion with traders, the main reasons not to use weighting

scale were or not familiar in live weight price determination techniques absence of the information about grade and standards, lack of weighing facilities, lack of awareness and knowledge about live weight measurements and the seller's preference to visual estimation technique. Even though the officials use grade to collect daily price performance data for documentation, the traders and producers have no any idea about scientific grading and standardizations. There is no attempt of the government to practice grading and standardization techniques in market participants. Especially, farmers are familiar with visual estimation. So that, they have no interest to sell their product using live weight bases and also they have no confidence in the reliability of the instrument. However, abattoirs and large exporters hand over goats using weighing scales from their agents and traders. This means, there is non-uniform system of transaction in the goats supply chain.

In addition to this, the survey result indicates that, 102(84.3%) of the respondents use 'eye ball' estimation to determine price in sample market. 16(13.2%) of the respondents were used both 'eye ball' estimation and live weight determination technique and only 2(1.7%) used live weight method (Table 4.6). In agreement with this finding eye ball pricing was reported in many researches that conducted in animal marketing system (Ayele *et al.*, 2003; Gezahegn *et al.*, 2003; Endeshaw, 2007).

In a system where animals are collected from the market using visual estimation and sold to the exporters and abattoirs by weight scale, traders who collect the animal and supply to abattoirs and exporters can't be certain about their profit margin. They have to negotiate and cut down price in the source market in order to ensure their profits.

Also collectors operating in such uncertain system always try to keep their risk to the minimum level by operating at smaller scale which is finally create excess supply in primary and secondary market level and supply shortage in the destination market. Therefore, producers and consumers would be the first losers since every trader wants to avoid risk. This kind of subjective pricing practice is the main cause for the existing price instability which is one indicator of poor market performance. Thus, it would be crucial to establish uniform systems of transaction in the goats' markets.

Age and Sex of Goats

From the survey 11(9.2%) and 5(4.1%) of respondents use age and sex factor to determine price respectively (Table 4.6). From this it is clear that, most traders don't consider difference in age and sex for pricing matter. This suggests that there is no price difference in their end product price like their meat and hide. Therefore, these two factors have no significant effect in pricing and price instability.

4.6.2. Time of the Transaction

Time of the transaction in the market day is also one factor that influences the price of the animal constant with the finding of Teresa (2006). According to 76(63.1%) of the respondents, the price of the goat is high at early morning (6am-8am) (Table 4.6). This is mainly for that, at the early morning the suppliers are not willing to sale their animals by expecting more price but small scale buyers like butcher, hotel and restaurant owners and trekking traders come to market and try to purchase at the early morning. But, according to 73(61.2%) of the respondents, majority of goats sold in the morning (8am-12am). In this period the price is lower. This is because, most small scale buyer come out from the market by purchasing at higher price and sellers come to fade up and start to sale their animals in a given price. Understanding these situation large traders hold the price low. This indicates that there is high price variation and price instability in the system mainly because of the market information gap between actors of the goats marketing system. This unfixed pricing practice implies poor performance of the goat's marketing system. Thus, seller's special producers are losers from this poor marketing system. Delivery of services like weighing scales and consistent marketing information helps to avoid such kind of unstable pricing practices.

4.6.3. Sellers and Buyers Behavior

The survey result (Table 4.6) indicates that, in the sample market large assemblers have more powerful in setting the price of goats. Similarly, traders price determination in their purchase and sales market mainly influenced by the customer decision in the destination market. Thus, producers and local traders are more likely enforced to sell their animals at price determined by large traders. This resulting from a relatively weaker farmers bargaining ability associated with their desire to meet instant cash needs and lack of up to date market information.

In general, from the discussions above on the practices that influence the pricing of goats, it is clear that the price of one goat can show variation within the same market and within the same day due to unfair pricing practice which mainly resulted from the lack of facilities like weighting scale, lack of reliable marketing information about price and grades, and lack of awareness. These unstable pricing practices indicate that the performance of goats marketing is poor in the region. But, this piece of information is useful to designing appropriate goat pricing approaches like provision of facilities like weighting scale, provision of services like reliable marketing information in the area of price, , and grading and standardization, and giving training to improve the awareness of traders and producers which in turn can avoid these unfair pricing practices. These measures could enhance the performance of the market by improving the goat pricing system and consequently boost the livelihoods of producers and incentive of traders

Table 4.6: Pricing practices

Variable	Item	Frequency	Percent
Base to trade goats	1. 'Eyeball' Estimation	102	84.3
	2. live weight base	2	1.7
	3. both	16	13.2
Best animal characteristics to determine price	1. age	11	9.2
	2. Sex	5	4.1
	3. body condition	85	72.5
	4. weight	19	15.2
Time of transaction price of goats high	1. 6am-8am	76	63.1
	2. 8am-12am	36	30.3
	3. 12am-6pm	8	6.6
Time of transaction majority of goats sold	1. 6am-8am	8	6.6
	2. 8am-12am	73	61.2
	3. 12am-6pm	39	32.1
Trader's price determination	1. Own personal observation	42	34.7
	2. Communicating with other traders like me	20	16.5
	3. Communicating with regular customer in distension market	46	38.0
	4. Depending on other previous market information	12	10.2
More powerful to set price in the market	1. producer	29	24.2
	2. retailer	8	6.6
	3. assemblers	59	49.1
	4. chamber of comers	0	0
	5. market itself	24	20.1

Source: Survey Result, 2012

CHAPTER FIVE

5. Conclusion and Recommendation

5.1. Conclusions

Goat's marketing in the study area follows four tier marketing system known as farm gate, primary, secondary and terminal market by having various market participants (like pastoralists, pastoralist traders, assemblers, consumers) and different volume of animal traded. In another round, goats in the region traded through four main marketing channels namely: export channel in which goats exported to abroad in formal and informal trade routes; meat export channel mainly goats transported to Abergale, Modjo and Debrezeyt export abattoirs; neighbouring regions trade channel in which goat traded to neighboring regions for the purpose of consumption, reproduction, and butchery; local consumption channel mainly distributed by pastoralists (producers) and local traders for consumption. The participants of the goat's marketing system include pastoralists; local (pastoralist) traders, assemblers (export agents, export abattoirs' agents, retailers) and Brokers, and each of them have different purpose in each level of the market. Assemblers are small in number compared to pastoralists and local traders and operate at large scale at all levels of market in the region. In using economy of scale, especially in transportation cost, they take the largest market share and profit from retail price in terminal markets at the cost of pastoralists and small-scale traders.

Finding of the study indicates that, most of the livestock markets in the region are constricted with necessary livestock market place facilities like loading ramps, veterinary inspection posts, feed and water troughs, and holding areas. But all these facilities were not provided with necessary services like weighting scale, water, food, and veterinary services.

Most of the respondents (64%) revealed that, in the region access to formal market is poor. Due to lack of formal market centres near to pastoralists, pastoralists from the border areas expected to travel for three or four days to reach those formal markets. This

can influence them to look for another informal border markets and can create supply shortage in formal markets.

Trekking is the main means of transportation in the region. The main reason of the respondents to use trekking than trucking is that, trekking is cheaper than trucking. Lack of trucking service providers mainly due to unavailability of well-constructed roads in the market channels is the main reason for high cost of trucking. Existence of poor credit services and lack of reliable and adequate market information is another useful finding of the study and it has an important policy implication.

Most of the markets in the region have an oligopolistic market structure with a higher market concentration ratio by large traders. As a result the largest market shares go away with these groups plus they also have the power to influence prices at the same time. Therefore, the existing competition state and the pricing conditions which are the components of market structure and market conduct indicates that large scale traders have a superior power to determine market price. In the region most goats' transactions done based on 'eyeball' estimation, therefore, traders estimate the price of goats by looking physical condition of goats visually and by touching different body parts of goats by hand. Determination of price on the basis of live weight is not common in the sample markets. In such subjective and biased pricing system, price can vary often and no one can be sure about the exact price of product on hand which indicates the existence of high price instability in goat's marketing system of the region.

In general, the performance of the goat's marketing system in the region is poor characterized by: poor market place services like food, water, weighting scale and veterinary services; lack of reliable and adequate market information; poor access to formal market centres; lack of transportation due to lack of well constricted road networks; poor access to capital; oligopolistic market structure with a higher market concentration ratio by large traders, and high price instability due to subjective /biased pricing practices.

5.2. Recommendation

Livestock production and marketing is the major economic activity in the Afar region that supports the livelihood of pastoralists in cash income. Since goats encompass a large part of livestock in the Afar region, the livelihood of the many pastoralists in the region is mainly dependent on the goat and the cash income from this animal. But, challenging marketing system has left the pastoralist and pastoralist traders with low-income and this low-income also constrained them from expansion of their business. To solve this problem, external body other than the market actors, has to move the first wheel to make the marketing system more advanced and efficient. The areas that need the intervention to improve the performance of the goat's marketing system are mentioned as follows.

Establishment of Necessary Market Facilities with their Respective Services

Establishment of necessary market facilities with their respective services is one of the main **investment** areas in the development of goat's marketing particularly and livestock marketing in general. In fact, efforts are made by NGOs and governments in the area of physical market construction accommodated with some facilities like loading ramps, veterinary inspection posts, feed and water troughs, holding areas in most market locations of the region. But all these facilities are not provided with necessary services like weighing scale, food, water, veterinary services. Establishing market institutions like: "Agricultural Product Marketing Board" in woreds level is the best solution to alleviate such kinds of problem.

Development of Transportation Infrastructure and New MarketCenters

Development of transportation infrastructure along the potential animal routs is another important investment area. Well-constructed road network along the potential animal routs invite modern transportation service providers to offer transportation services in low-cost which in turn helps pastoralists to reach formal market centres easily. Also having modern transportation service easily along the channel helps the traders to use economy of scale from transportation cost: generally alter the trend of trekking to trucking. Besides this, development of infrastructures such as holding stations, pasture

water points along with the the potential animal routes will maintain the conditions and volumes of goats traded better.

Pastoralists from the border areas expected to travel for three or four days to reach those formal markets. This poor access to formal market can influences the marketing behaviour of pastoralists that have to go to immediate informal border markets to sale in low price. Consequently, this will create supply shortage in formal markets the region as well as the country and welcome illegal trade. To attract such resources to the central markets, there is a need to carefully evaluate these remote areas and open primary markets with roads linking them to secondary markets.

Provision of Reliable and Updated Market Information

The physical infrastructure alone doesn't increase the pastoralist bargaining power unless they are provided with current, accurate, reliable and organized marketing information. Public and privet market information renders should take part in the area of marketing of live animals. Marketing information system that focuses to increase the goats' sales volume with a better bargaining power will increase the pastoralist's and trader's income from the resource at hand. Then the income again will drive them to follow the fastest growing global marketing system is mandatory to compete with others against, the growing and changing tastes and preference of customers.

Creating Access to Working Capital

Access to credit should be given relevant attention. Credit is critical for firm start up or expansion, need to that the formal credit delivery police should be improved. Most of the time, the extension of bank credit is conditioned by the availability of collateral which often prevent small holders from obtaining loans from banks. Therefore, micro-finance institution and credit cooperatives should established in the area to increasing the dimension of access to credit.

On the other hand, the study revealed that most of the pastoralist traders, special Muslim traders have no interest to have credit because of their religious principle. For this the government should give special attention and follow different mechanisms (rather than formal credit service mechanism) to give working capital (money) to Muslim traders. For instance, convincing them to take money by covering the transaction cost of the government is may be one mechanism.

Creating Free and Competitive Marketing Environment

The study result shows that most of the markets in the region have oligopolistic market structure with a higher market concentration by large wholesale buyers. This is another reason for the existence of poor marketing performance in the region. In this juncture, providing updated timely information, increasing access to capital, institutional setup like association of pastoralist in the form of livestock marketing cooperatives, will be more use full to save goats marketing system from oligopolistic market structure by creating free and competitive marketing environment which in turn will improving the performance of the goat's marketing system.

Providing Training for Producers and Traders in the Area of Weight Based Transaction and Grading System

To reduce exploitation by middle men and to increase the benefit of pastoralists, small-scale traders and consumers the government or other privet organizations should take measure through directly participating in goat marketing system in practicing weight based transaction system. So that producers and traders should be trained on the area of live weight transaction grading system. This measure can avoid price instability and helps to have uniform transaction throughout the system.

Implication for Further Research

In order to reach in more practical conclusion on the issue raised in this study, the studies should be conducted in the following research topics in Afar region.

- ✓ Analyzing the Determinants of Market Prices of Goats in Afar Region, Ethiopia.
This topic will help to find out effect of weight, body condition, age, sex, time of transaction, season, type of seller, type of buyer and etc, on the price of goats.
- ✓ Assessment of the performance of livestock marketing system in Afar Region.
This topic helps to assess factors that affect live stock marketing system in general.

REFERENCES

- Alan King and E.Mukasa-mugerwa, 2002. Livestock marketing in southern Sudan with practical reference to cattle trade between southern Sudan and Uganda, *pan African program for the control of epizootics*
- Andargachew, K., Brokken, R.F, 1993. Intra-annual sheep price patterns and factors underlying price variations in the central highlands of Ethiopia. *Agric. Econ.* 8. 125-138
- Andrew Kizito 2008. Structure-Conduct-Performance and Food Security. USAID, FEWS NET Markets Guidance, No 2
- Asfaw Negassa, Shahidur Rashid, and Berhanu Gebremedhin, 2011. Livestock Production and Marketing. Development Strategy and Governance Division, International Food Policy Research Institute – Ethiopia Strategy Support Program II, Ethiopia. *ESSP II Working Paper 26*
- Ayele Solomon, Assegid Workalemahu, Jabbar M.A, Ahmed M.M and Belachew Hurissa., 2003. Livestock marketing in Ethiopia: A review of structure, performance and development initiatives. Socio economics and Policy Research Working Paper 52. *ILRI*, Nairobi, Kenya.
- Ayen Mulu, 2004. Sheep and Goats Marketing System Study. Agricultural Commodity Marketing System Study Project, Bahir Dar.
- Belay Hagos, 2009. Performance of cattle marketing in Jijiga zone, somale Region, Ethiopia. Unpublished MSc thesis, *University of Mekelle*, Mekelle, Ethiopia.
- Belete Shenkute, 2009. Production and Marketing Systems of Small Ruminants in Goma District of Jimma Zone, Western Ethiopia. M. Sc. Thesis, *Hawassa University*, Awassa
- Businessdictionary.com (2013) *market- performance*. Available at: [http://www.businessdictionary.com/definition/market performance. html#ixzz35kBXxdVm](http://www.businessdictionary.com/definition/market%20performance.html#ixzz35kBXxdVm) (Accessed: 27 May 2013).
- Buzzle.com, (2013) market-structure Available at: <http://www.buzzle.com/articles/market-structure.html> (Accessed: 5 May 2013)

- BoFED, 2009. Regional Atlas 2: Afar National Regional State. *Finance and Economic Development Bureau*, Samara Ethiopia.
- Chris B., 2001. Livestock Pricing and Markets Performance. Pastoral Risk Management Project, *The Global Livestock CRSP*, Utah State University
- CSA (Central Statistical Authority). 2009. Agricultural Sample Survey, 2008/2009 (2001 EC), Report on Livestock and Livestock Characteristics. *Statistical Bulletin 446*. Addis Ababa: FDRE.
- CSA, 2006. Ethiopian agricultural sample survey. Vol II. Report on livestock and livestock characteristics. *Statistical Bulletin 388*. CSA, Addis Ababa, Ethiopia.
- DeeVon, B., Christopher, B., Barrett, P., Little, and Francis C., 1999. Livestock Markets and Risk Management Among East African Pastoralists: A Review and Research Agenda, *The Global Livestock CRSP* Utah State University
- Desta Hamito, 2009. Estimation of weight and age of sheep and goats, Ethiopia Sheep and Goat Productivity Improvement Program (ESGPIP), *Technical Bulletin No. 23*
- Endeshaw Assefa, 2007. Assessment of Production and Marketing System of Goats in Dale District, Sidama Zone. Unpublished M.Sc Thesis, Awassa College of Agriculture, *University of Hawassa*, Awassa, Ethiopia
- ECSP 2011-2015, 2011. Federal Democratic Republic of Ethiopia Country Strategy Paper 2011-2015. *African Development Bank Group*
- G. Pesmen, M. Yardimci 2008, Estimating the live weight using somebody measurements in Saanen goats, *AfyonKocatepe University, Faculty of Veterinary Medicine, Department of Animal Husbandry, ArchivaZootechnica 11:4, 30-40*,
- Gezahegn Ayele, Mohammad A. Jabbar, Hailemariam Teklewold, Elias Mulugeta and Getahun Kebede, 2003. Seasonal and inter-market differences in prices of small ruminants in Ethiopia. *Ethiopian Development Research Institute, Journal of Food Products Marketing (USA)*, 12(4): 59-77
- Gujarati, D.N., 2003. *Basic Econometrics*. 4th Edition. McGraw-Hill, New York. 563-636p.

- Hailemariam Teklewold, Getachew Legese, Dawit Alemu and Asfaw Negasa, 2009. Determinants of Livestock Prices in Ethiopian Pastoral Livestock Markets: *International Association of Agricultural Economists*, Beijing, China.
- Kohls R.L and J.N. Uhl, 1985. *Marketing of Agricultural Products*. 6th Edition, Lawrence M, Riccardo C, Ibrahim O, Samuel O, Jabbar M, Negassa Asfaw and Amos O. A, 2008. Rapid Appraisal of Institutions Supporting Somali Livestock Export, *International Livestock Research Institute, Addis Ababa, Ethiopia*, Discussion Paper No. 14
- M Mahieu, M Navès and R Arque, 2011. Predicting the body mass of goats from body measurements, UR143, URZ, INRA Antilles Guyane, domaine de Duclos, *Livestock Research for Rural Development* 23 (9) . USA
- Mohammad A. J., 2006. Trader Behavior and Performance in Live Animal Markets in Rural Ethiopian Markets. *International Livestock Research Institute*, Gold Coast, Australia
- MOFED 2005. National Accounts Statistics of Ethiopia: Sources and Methods 1992 (1999/2000) Base Year Series (draft). National Accounts Department, MOFED, Addis Ababa.
- NABC, 2010. Fact Sheet: Livestock Ethiopia. Livestock in Ethiopia and opportunity analyses. *Dutch investment. Netherland as-African Business Council*.
- PIF, 2010. Ethiopia's Agricultural Sector Policy and Investment Framework. *FDRE, Ministry of Agriculture and Rural Development 2010-2020*. Final Report.
- Rick Y. (2006) *Research Design and Statistical Analysis in Christian Ministry IV: Statistical Procedures*, 4th ed.
- Roy, B., 2010. The Contribution of Livestock to the Economies of IGAD Member States. *IGAD LPI*. Working Paper No. 02 – 10
- S.C. Slippers, B.A. Letty and J.F. de Villiers, 2000. Prediction of the body weight of Nguni goats, *South African Journal of Animal Science*, 30(Supplement 1)
- Solomon Gizaw, Azage Tegegne, Berhanu Gebremedhin, 2010. Sheep and goat production and marketing systems in Ethiopia: *International Livestock Research Institute (ILRI)*, Addis Ababa, Ethiopia

- Suiter, J. (1994). *Body condition scoring of sheep and goats*. Department of Agriculture, Western Australia. Farmnote 69/1994
- Teresa Adugna, 2006. Determinants of Market Prices of Cattle in Eastern Ethiopia, Alemaya University, Contributed paper prepared for presentation at the *International Association of Agricultural Economists Conference*, Gold Coast, Australia, August 12-18.
- Tesfaye Asmare, 2010. Factors influencing marketing margin of artisanal gold miners of minge woreda, benshaguli gumuzi region, Ethiopia. Unpublished MSc Thesis, *University of Mekelle*, Mekelle, Ethiopia.
- Tesfaye Berihun, 2008. Performance Efficiency Analysis of Livestock Marketing in Afar Region Ethiopia. Unpublished MSc Thesis, *University of Mekelle*, Mekelle, Ethiopia.
- Thomas, A., 2007. Review of Trade and Markets Relevant to Food Security in the Greater Horn of Africa. *United States Agency for International Development Famine Early Warning Systems Network (FEWS NET)*
- Tsedeke Kocho, 2007. Production and marketing Systems of Sheep and Goats in Alaba. Southern Ethiopia. Unpublished MSc thesis, *University of Hawassa*, Awassa, Ethiopia
- Woldemichael Somano, 2008. Dairy Marketing Chains Analysis: the Case of Ohashemane, Hawassa and Dale District's Milk Shed, Southern Ethiopia. Unpublished M.Sc Thesis, *Haramaya University* Haramaya Ethiopia.
- Yacob Aklilu and Andy Catley, 2010. Commercialization, Livelihoods and Wealth Disparity in Pastoralist Areas of Ethiopia. *Feinstien international center*, Tufts University, Medford.
- Yacob Aklilu, 2004. The Emergence of Pastoral Livestock Marketing Groups in Southern Ethiopia: Challenges and Prospects”, *Institutional and Policy Support Team (IPST)*, AU-IBAR

Appendixes

Appendix 1: Goat Traders Interview Schedule

Mekelle University
College of Business and Economics
Department of Management
Masters of Business Administration (MBA) Program

This questionnaire is prepared to assess ‘*The Performance of Goats Marketing System in Afar Region, Ethiopia*’ by zewdie kifle for the partial fulfillment of the award of Master degree in business administration (MBA).

Mobile: +251913135521

Name of enumerator-----Name of market ----- Date-----

Section one: Characteristics of the Respondent

1. The name of respondent-----
2. Age-----
3. Sex. 1. Male 2. Female
4. Educational status 1. Illiterate 2. Read and write 3. Elementary school 4. Secondary school 5. Above secondary
5. How long have you been in goats’ trading? 1. <1 year 2. 1-3 3. >3 years

Section two: Trader’s Activities

6. What is your main activity in this market today 1. Selling goats 2. Buying goat’s 3. other activity, specify-----
7. If your answer for question No. 6 is buying goats, what is your purpose? 1. Reseal 2. Restaurant 3. Butchery 4. Consumption 5. Other, specify-----
8. How do you undertake the goat’s trade activity?
1. Alone 2. Partnership 3. Other-----
9. Mainly from whom you can purchase? 1. Farmers’ 2. Farm gets traders (small traders) 3. Whole sellers 4. Others, please mention ---

Section three: Pricing practices

10. How you trade your goats 1. Live weight basis 2. 'Eye ball' Estimation 3. Both
11. If your answer for Q10 is 'Live weight' basis, why do you prefer this mode? (More than one answer is possible) 1. Purchasers like this 2. Suppliers like this 3. Reliable 4. Saves my time 5. Other reason, specify-----
12. If your answer for Q11 is 'Eyeball' Estimation, why do you prefer this mode? (More than one answer is possible) 1. Purchasers like this 2. Suppliers like this 3. Reliable 4. Saves my time 5. Another reason, specify-----
13. What is your reason if you are not to use live weight mode? (More than one answer is possible) 1. Lack of knowledge about instrument operation 2. The instruments are expensive 3. Not reliable 4. Purchasers not like this 5. Suppliers not like this 6. Another reason, specify-----
14. Which one is the best to determine price? 1. Sex 2. Age 3. Body condition 4. Weight
15. At what marketing time the price of goats is relatively high? 1. 6am-8am, 2. 8am-12am, 3. 12am-6pm
16. What is the reason for this? -----
17. In which part of marketing time the majority of goats are sold? 1. 6am-8am, 2. 8am-12am, 3. 12am-6pm
18. In your opinion, who have the more power to set the price in this market? 1. producers 2. Retailers' 3. Wholesalers' 4. Chamber of commerce 5. The market itself 6. other, specify-----
19. How you can decide the selling/buying price in this market? 1. Own personal observation 2. Communicating with regular customer in destination market 3. Communicating with other traders like you 4. Communicating with brokers) 5. Depending on previous markets' information

Section four: Marketing Place Services and Facilities

20. Are there any marketing services that you used in this market place? 1. Yes 2. No
21. If your answer for Q20 is yes, what are they? (More than one answer is possible)
1. Veterinary services 2. Watering service
3. Security service 4. Others, please specify-----
22. If your answer for Q20 is yes, how did you evaluate the adequacy of the services?
1. Very low 2. Low 3. Moderate 4. High 5. Very high
23. Are there any market facilities that you used in the goat's market place? 1. Yes 2. No
24. If your answer for Q23 is yes, what are they? 1. Weighting facility 2. Fence 3. Holding ground 4. Others, please mention -----
25. How did you evaluate the adequacy of the facilities?
1. Very low 2. Low 3. Moderate 4. High 5. Very high

Section Five: Credit Services

26. What are the sources of the working capital run this business? 1. Own
2. Friend or Relative 4. Ekub 6. NGO 7. Other traders' 8.
Borrowed/credit 9. Another source-----
27. Are you interested to have credit? 1. Yes 2. No
28. If your answer for Q27 is No what is your reason? -----
29. If your answer for Q27 is yes, do you get credit services? 1. Yes 2. No
30. If your answer for Q29 is yes, who was/were your source of credit 1. Bank
2. Privet money lenders 3. Micro finance 4. Others -----
31. If your answer for Q29 is no, or did not get credit but interested, what is the major problem you faced to get credit services?
- A. Unavailability of credit agent 1. Yes 2. No
- B. High interest rate 1. Yes 2. No
- C. Collateral need for credit 1. Yes 2. No
- D. Credit in group is not suitable 1. Yes 2. No
- E. Unnecessary bureaucracy 1. Yes 2. No
32. How do you evaluate the access to credit service in your area?
1. Very poor 2. Poor 3. Moderate 4. Good 5. Very good.

Section six: Transportation

33. What mode of transportation do you use? 1. Trekking 2. Trucking 3. both
34. If you use trekking, what is your reason to choose trekking than trukking?
35. If you use trekking, who perform the activities? 1. Yourself 2. Relatives'
3. Hired laborers 4. Others-----
36. If you use Trucking, what type of vehicles you use? -----
37. On average how many goats do you trek/truck on marketing day?
38. Where is the final destination of these goats from this market? -----

Section seven: Market Information

39. Did you know the market price of goats before you sold/buy?
1. Yes 2. No
40. If your answer for Q40 is yes, what are your main sources of information?
1. Livestock and natural resource bureau 2. Trade and industry bureau
3. Other traders' 4. Customers
5. Radio and television 6. News paper
7. Others, please mention-----
41. How did you evaluate the reliability of this market information? 1. Very low
2. Low 3. Moderate 4. High 5. Very high
42. How did you evaluate the adequacy of this market information? 1. Very low
2. Low 3. Moderate 4. High 5. Very high

Section eight: Access to Market

43. Mainly to whom you sell the goats? (more than one answer is possible) 1. Retailers' 2. Consumers' 3. Butchery 4. Restaurant and hotels 5. Collectors' 6. Exporters and abattoir agents
44. Where do you supply the animals you purchase today? 1. Within the region market 2. Another region market 3. Another country market
45. Please mention the name of the market and its respective region/country-----

46. How long does it take you to reach the resale market? 1. one day 2. Two day 3. Three day 4. Four day 5. Five day 6. Six day 7. More than six day
47. How do you evaluate the access of market to goats trading?
1. Very poor 2. poor 3. Moderate 4. good 5. Very good
48. What you can do if you cannot sell the animal you offered to the market?
1. Take them back to the home 2. Take them to the other market
3. Sell at lower price 5. Other means indicate-----

Section nine: Tax and License

49. Do you pay the tax for the goats you purchase? 1. Yes 2. No
50. If your answer for Q50 is yes, where? 1. At purchase place 2. On the way of destination 3. At destination 4. At all place
51. What is the base for this tax? 1. Age 2. Sex 3. Weight 4. Body condition 5. The same payment
52. What is your opinion regarding the market fee paid in this market compare to other markets 1. Very low 2. Low 3. Moderate 4. High 5. Very high
53. Does goats' trading in this market need the trading license? 1. Yes 2. No
54. Are you licensed? 1. Yes 2. No
55. If your answer for Q55 is No, what is your reason? 1. The complicated nature of the licensing procedure 2. High pay for license 3. High capital requirement to be licensed 4. I do not have reason
56. If you are licensed:
1. How does the procedure look like to get the license? 1. Complicate 2. Easy
 2. How much do you pay for goats' trade license? -----birr
 3. What is the minimum capital requirement to be licensed -----birr
 4. How much you pay to renew the license -----birr

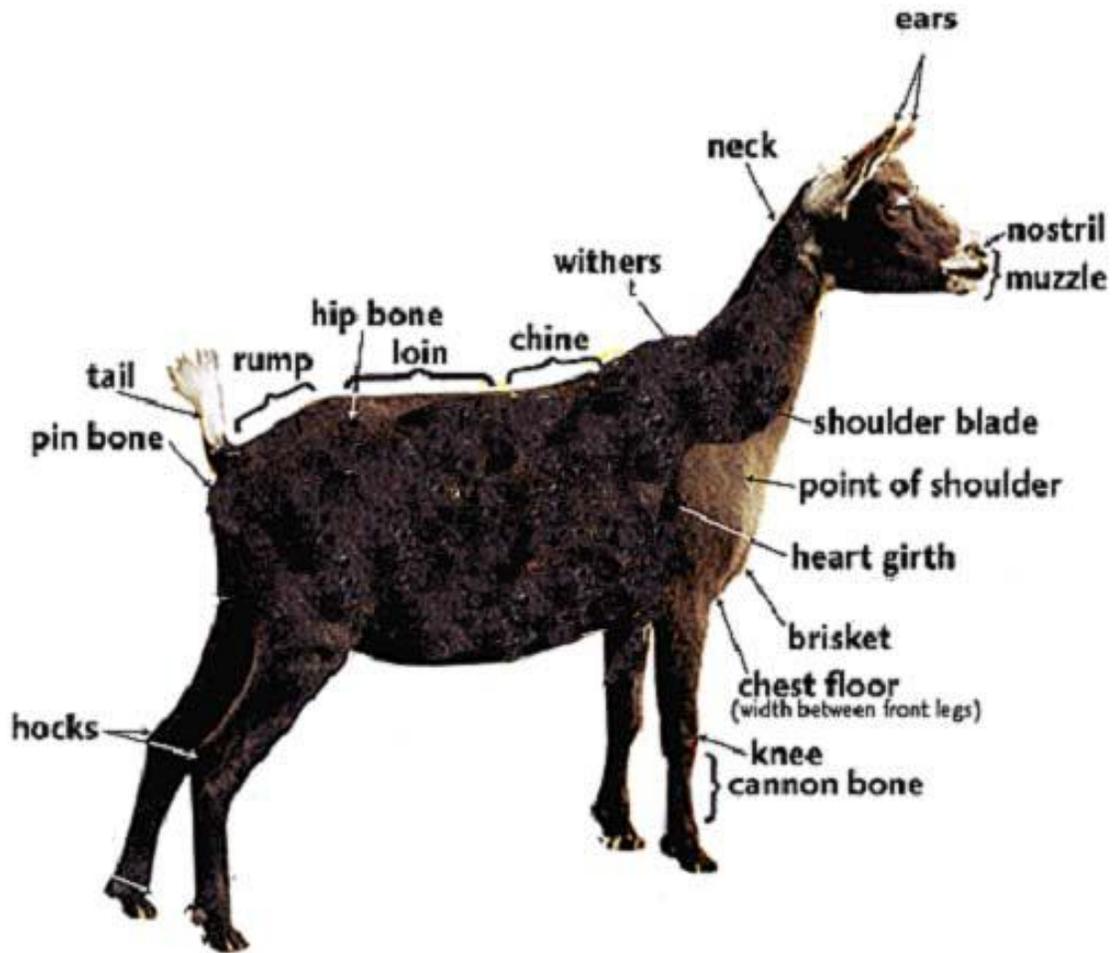
Appendix 2: Check List for Focus Group Discussion with market participants

1. How you can decide the price of goat in this market?
2. Can you guess average educational level of traders in this market? What could be the reason to stop their education in this level?
3. Averagely how many goats come to this market on main market day?
4. What are your main reasons not to use weighting scale?
5. What are the main channels and routs of goat trade in this region? And, what is the main purpose. Of buyers from this market?
6. How many days it takes for pastoralists to rich this market?
7. Can brokers participate in goat marketing system? If so, how you can express the role of brokers in goat marketing system?
8. What is the main means of transportation used by traders? What is the reason to choose this mode of transportation?
9. Do you have any idea about grading and standardization mechanisms?

Appendix 3: Check List for Interview with livestock marketing promotion bureau officials of the Region.

1. Can you tell me the main goats markets in the region with their respective zone?
2. Do you have any recorded data about the number of traders and the volume of animal traded in each market?
3. What is the condition required for goats trading?
4. All goat traders in the market are licensed? If not what is the reason?
5. What are the major goats marketing tiers (levels) in this region?(primary, secondary and terminal)? Is there any terminal market in this region?
6. What are the main channels and routes of goat trade in this region? And, the main purpose of buyers?
7. Who are the major participants in each tier? What is their main purpose?
8. What are the facilities that exist in each market outlet? And what are the respective services provided in each market outlet?
9. How you can express access to market for pastoralists?
10. Is there any attempt from the government to establish market institutions like agricultural product marketing board and to organize pastoralists in the form of cooperative?
11. Is there any mechanism for grading and standardization and to provide of price information to market participants on the basis of weight and grade?

Appendix 4: BodyParts of a Goat



Source: Adopted from Desta, 2009

Appendix 5: Measuring of Live Weight of Goats



Source: Adopted from Desta, 2009

Live Weight Values Corresponding to Heart Girth measures for Goats

Heart girth (cm)	Live weight (kg)	Heart girth (cm)	Live weight (kg)	Heart Girth (cm)	Live weight (kg)
64	15.15	82	39.15	100	69.72
65	16.85	83	40.85	101	71.42
66	17.55	84	42.55	102	73.12
67	18.25	85	44.25	103	74.82
68	20.95	86	45.95	104	76.52
69	21.64	87	47.64	105	78.22
70	22.34	88	49.34	106	79.92
71	24.04	89	51.04	107	81.62
72	25.74	90	52.74	108	83.32
73	26.43	91	54.43	109	85.02
74	27.13	92	56.13	110	86.72
75	29.83	93	57.83	111	88.42
76	30.53	94	59.53	112	90.12
77	32.38	95	60.38	113	91.82
78	33.92	96	62.92	114	93.52
79	35.65	97	64.65	115	95.22
80	36.32	98	66.32	116	96.92
81	38.02	99	68.02	117	98.62

Source: Adopted from G. Pesmen and M. Yardimci, 2008 and Desta, 2009

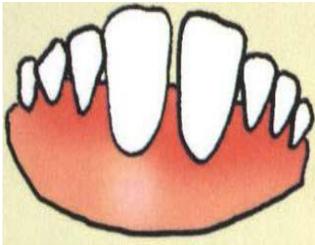
Appendix 6: Estimated Age for Goats with Different Numbers of Erupted Permanent Incisors

No. of Permanent Incisors and Estimated Age range of Goat

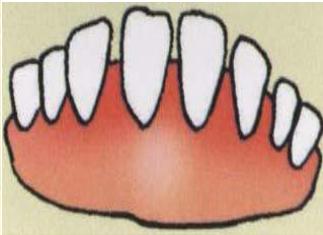
Incisors	Estimated age	
	0 pair	year Under 1 year
1 pair	1-2 years	
2 pairs	2-3 years	Young
3 pairs	3-4 years	
4 pairs	More than four years	Matured
Broken mouth	Aged	

Dentition Showing the Estimated Ages of Goats

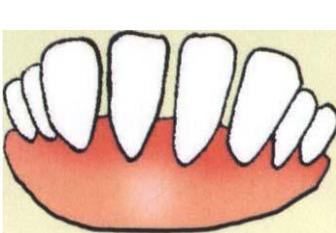
Milk teeth



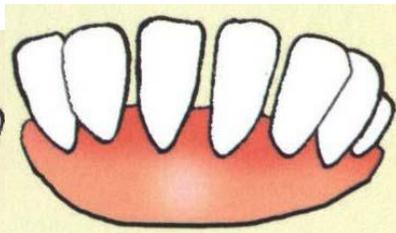
2 permanent (central) teeth



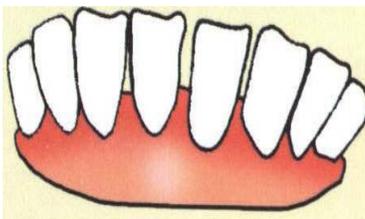
4 permanent teeth



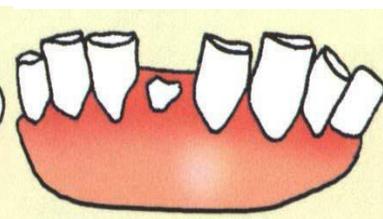
6 permanent teeth



Full mouth – 8 permanent teeth

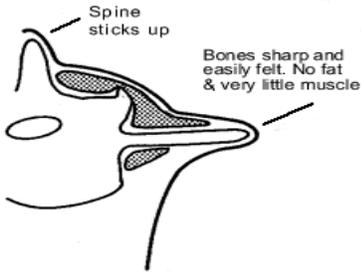
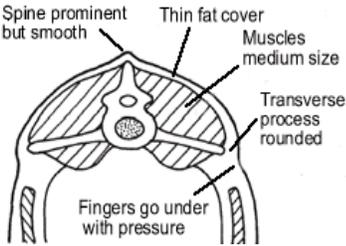
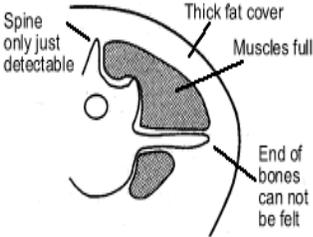
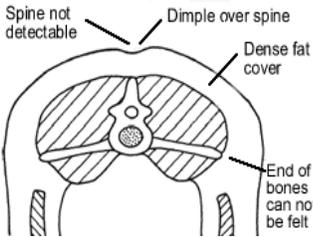


Broken mouth



Source: Adopted from Vattaet *al*, 2006 as cited in Desta, 2009

Appendix 7: Body Condition Scores

Score	Description		Details	
1	<p>Very thin</p> <p>All individual vertebrae can be felt easily. There is no muscle or fat covering the bones.</p>	 <p>Spine sticks up</p> <p>Bones sharp and easily felt. No fat & very little muscle</p>	Backbone	Prominent and sharp
			Short ribs	Ends are sharp and easy to press between, over and around
2	<p>thin</p> <p>Individual bones can be felt, but they are rounded rather than sharp. There is some muscle covering the bones, but this feels concave rather than convex.</p>	 <p>Spine prominent but smooth</p> <p>Thin fat cover</p> <p>Muscles medium size</p> <p>Transverse process rounded</p> <p>Fingers go under with pressure</p>	Backbone	Prominent but smooth
			Short ribs	Smooth well-rounded ends can feel between, over and around each smoothly
3	<p>Fat</p> <p>The ends of the bones are not detectable, but their position can just be made out with very firm pressure. There is a thick covering of fat over the muscle covering the vertebrae.</p>	 <p>Spine only just detectable</p> <p>Thick fat cover</p> <p>Muscles full</p> <p>End of bones can not be felt</p>	Backbone	Detectable with pressure on the thumb
			Short ribs	Individual short ribs can only be felt with firm pressure
4	<p>Very fat</p> <p>Nothing can be detected under a thick layer of fat covering the loin; even the tips of the spinous processes of the backbone are buried in fat.</p>	 <p>Spine not detectable</p> <p>Dimple over spine</p> <p>Dense fat cover</p> <p>End of bones can not be felt</p>	Backbone	Can be felt with firm pressure
			Short ribs	Cannot be felt even with firm pressure

Source: Adopted from Suiter, J. (1994)

Appendix 8: livestock market facilities

Livestock Market Outlet (Chifra)



Source: Own Picture

Feeding Troughs (Aba'ala)



Source: Own picture

Water Trough (Chifra)



Source: Own Picture

Loading Rump (Aba'ala)



Source: Own Picture

Veterinary Inspection post (Aba'ala)



Source: Own Picture