

**FACTORS INFLUENCING LIVESTOCK MARKETING IN MARSABIT REGION:**

**A CASE OF MERILLE LIVESTOCK MARKET**

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**A Research Project Submitted in Partial Fulfilment of the Requirements for the Award  
of the Degree of Master of Arts in Project Planning and Management of the University  
of Nairobi**

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## **DECLARATION**

I declare that this Research Project is my original work and has not been submitted for a degree in any other university or college for examination or academic purposes.

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This research Project has been submitted for examination with my approval as the University Supervisor.

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## **DEDICATION**

I dedicate this work to my wife, children, relatives and other well-wishers for their Overwhelming supports and encouragement towards my academic excellence in education this far.

Great dedications to my University Lecturers and other university support staffs for imparting such great knowledge and skills in my life in an endeavour to support Wellbeing of humanity forever.

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## **ABBREVIATIONS AND ACRONYMS**

**ACDI / VOCA:** Agricultural Co-operatives Development International/ Voluntars Community Assistance.

**ALRMP:** Arid Lands and Resource Management Project

**ASAL:** Arid and Semi-Arid Lands

**AU:** African Union

**CCF:** Community Contracting Fund

**CRSP:** Center for Research in Security Prices

**CSA:** Community Supported Agriculture

**GDP:** Gross Domestic Product

**IBAR:** India Benchmark Advance Rate

**KLMC:** Kenya Livestock Marketing Council

**LINKS:** Livestock Information Network and Knowledge

**LMA:** Livestock Marketing Association

**LMD:** Livestock Marketing Division

**MLD:** Ministry of Livestock Development

**NEPDP:** North Eastern Pastoral Development program

**PPG:** Pastoralist Parliament Group

**REGAL AG:** Resilience and Economic Growth in Arid Lands – Accelerated Growth

**SCC:** Samburu County Council

**SNV:** SNV Netherlands Development Organization

**USAID:** United States Agency for International Development

## ABSTRACT

The Kenya Livestock Marketing Council (KLMC) is mandated to address marketing issues of livestock in Kenya. However, it is weak and does not receive adequate budget for its operations. Merille market encounters challenges of operational systems for financial transactions and operational machines such as weighing scales for transparency in transactions processes, price variability, limited marketing support services and market information and credit services to traders and producers, absence of effective producer organizations at the grassroots and limited access to markets which provide inadequate opportunities for increased incomes. The purpose of the study was to investigate factors influencing livestock marketing in Marsabit region focusing on Merille livestock market. The study was guided by the following objectives: to establish the influence of socio economic characteristics, regional conflict, access to market and livestock market infrastructure and management on livestock marketing in Merille livestock market. The study was grounded on the following theories that include; market expansion theories, social exchange theory and attribution theory. A descriptive research design was used. The target population under the study was included; County Officials, Ministry of livestock officials, Livestock Traders, Residents, Marketing group committees and Administrative leaders. Random sampling was used to obtain the study sample proportionately. Further, the sample of 219 was drawn from a population of 512 using the formula by Kathuri and Pals (1993). Stratified proportionate random sampling method was applied to choose the respondents. This research applied primary data. The questionnaires were distributed by use of drop-and-pick later method to the respondents. In this study Statistical Package for Social Sciences (SPSS Version 25.0) was used for analysis. All the questionnaires received were referenced and items in the questionnaire were coded to facilitate data entry. After data cleaning, which entailed checking for errors in entry, descriptive statistics such as frequencies, percentages, mean score and standard deviation was estimated for all the quantitative variables. The qualitative data from the open-ended questions was analysed using conceptual content analysis and presented in prose. In addition, inferential data analysis was done using multiple regression analysis. Multiple regression analysis was used to establish the relations between the independent and dependent variables. Results were presented in form of tables. The study found that livestock marketing in Merille livestock market is greatly influenced by socio-economic characteristics, regional conflict, and access to market information and livestock market infrastructure and management. The study concludes that Livestock market infrastructure and management had the greatest influence on Livestock Marketing in Merille Livestock Market followed by socio economic characteristics, then access to market information while regional conflict had the least influence on the Livestock Marketing in Merille Livestock Market in Kenya. The study recommends that Livestock Marketing Association and the animal producers need to carry out capacity building in management of the market and livestock productivity, that there is also a need for appropriate revenue sharing formula to be adopted, that there is a need to adopt and implement best livestock management practices and that county government need to markets. This will increase the revenue of the market.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the study

Livestock marketing provides the mechanism whereby producers exchange their livestock and livestock products for cash. Producers directly sell their animals in primary, secondary and tertiary markets, and the estimates quoted here are an average of prices prevailing at all market levels. The livestock collectors often operate in marketplaces as brokers, acting as intermediaries between buyers and sellers. On the other hand, livestock traders operate at various levels of the trading chain. Large traders can usually count on high levels of capital, own their own trucks and have contracts with buyers (Zerga, 2015).

In the semi-arid and arid parts of the world, the pastoral communities depend mainly on their livestock for their livelihoods. Pastoralism that depends essentially on animal products and does not trade is now a rare form. Pastoralism that consumes or even grows crops, and sells milk, hides and skins to purchase them, but still does not produce for the market, is common. Livestock in general and cattle in particular are indispensable components of rural livelihoods. The primary markets are characterized by being patronized by producers and traders and are found within the production areas mainly within the village centres. Stock traders take the cattle they have purchased in the primary markets to the larger secondary markets found in larger urban areas (Fareh, 2011).

According to Aklilu and Cartley (2010), livestock trade predates colonialism and remains lively, resilient and impervious to the obstacles placed on its path by custom controls, grossly inadequate transport and communications, officialdom, perennial insecurity and state borders. This trade follows the logic of the region's natural economy, which the geopolitical pattern imposed by colonialism on the region violates. It strives to meet demand through the shortest route in order to minimize cost, because normally animals are trekked to markets with considerable weight loss on route. Pastoralists are heavily involved in this trade as producers, labourers, traders and transporters. Market participation in this case is a coping strategy, not conscious commercialization. Pastoralists who use the open range or ranching system to produce for the market practise the latter.

Lack of marketing facilities imposed serious market access constraints. Some of the other challenges include poor infrastructure, lack of transport, dearth of market information,

insufficient expertise on grades and standards and poor organizational support (Kandachar & Halme, 2017). There are some perceptions that smallholder livestock farmers' participation in the beef markets is insignificant because they see cattle as a form of non-monetary asset. Some smallholder livestock farmers are not forthcoming to participate in livestock markets as they have misgivings in the prices offered at these marketing channels (Ortmann & King, 2010).

### **1.1.1 Global Perspective**

Across the world, sustained integration of pastoralists into commercial agriculture has empowered resource poor pastoralists to diversify their livelihoods into non-farm enterprises. The new enterprises have crystallized into socioeconomic development hubs. Associated with the growth of the agricultural sector in developed nations has been the development of highly market integrated agribusinesses manned by few commercial farmers. The proximity of a livestock market is an indicator of the ease with which producer can access the markets. This also can be seen as an indicator on the cost of participating in a market. The distances can be an indicator of the size of the market in terms of the area it serves as well as the type of a market. The proximity to markets was estimated based on the distances on the main catchment areas of a particular market. It was measured both in terms of the length of time taken to trek livestock from the catchment areas to the markets, as well as the distance in Kilometers from the catchment areas to the market (Calvo, 2014).

Growing livestock herd size globally is driving an imperative need to enhance the productivity by employing efficient systems to simplify the management of large volumes of animals. Moreover, the increasing concerns over global food security and sustainability have facilitated heavy investments by governments across the world. The global livestock monitoring & management market is strongly motivated by the substantial support of the government in terms of investments, favourable initiatives and trade policies owing to these factors, the livestock monitoring & management market is expected to grow at a high CAGR of 17.8% from 2016 to 2021. Moreover, the rapid penetration of Internet of Things (IoT) technology in the livestock farming practices has led to the enhancement in productivity level by minimizing the manual labor and providing efficient platform for proper management. Increasing implementation of cloud-based software systems, wherein shared resources and data are provided to computers and other devices on demand, has fuelled the market for livestock management (Sourisseau, Descamps & Maraux, 2016).

According to Sims and Flammini (2014), livestock volumes in the markets are an indication of the potential supply levels, stability and vibrancy of a market. The volumes also indicate potential revenues both for the community from the sale of their livestock as well as for the county government from the market cess collected from the markets. For purposes of uniformity in the analysis, the heads of shoats were used as an indication of the volume of livestock traded in the market. The shoats were chosen over camel and cattle because they are the highest traded stocks in the markets throughout most counties in Northern Kenya. The ongoing massive shift to agro-pastoralism involves settlement of part of the household and has serious gender implications. It modifies significantly the gender division of labour within the family, imposing additional tasks on the women who head the part of the household that settles, while the men move with the herds in search of pasture. The main additional burden women shoulder is crop cultivation in fields near the house and gardens around it. Separation from the herd means loss of rights over livestock products traditionally assigned to women, especially milk, which now men sell.

### **1.1.2 Regional Perspective**

According to Dira and Hewlett (2016), the primary reason for selling livestock in most African pastoralists is the generation of income to meet unforeseen expenses. Pastoralists also, besides using livestock as sources of food and as a form of saving and wealth, sell animals at times of cash needs to purchase food and other necessities. Pastoralism is an ancient mode of mobile livestock production that makes extensive use of grazing lands in the lowlands of the Great Rift in eastern Africa and the Horn. Pastoralists in this region inhabit an arid dryland terrain that does not support continuous crop cultivation and cannot sustain large population numbers. Although pastoralist communities never formed states of their own in the region, they lived in a rough equilibrium with centralized states created by agrarian societies yet preserved a fiercely defended autonomy.

The reluctance of pastoralists in eastern Africa and the Horn to embrace the capitalist marketplace introduced by colonialism is the subject of enduring debate dogged by misunderstanding. Animals play a prominent role in social relations in many pastoral societies, so much so that in the eyes of many outsiders this role tends to obscure their value in economic terms. Hence the suggestion that pastoralist reluctance to part with their animal's springs from socio-psychological needs. Pastoralists trade animals when the need arises and the terms of trade are right, but they do not raise livestock for the market. In capitalist logic this does not make sense. Pastoralists much prefer to accumulate livestock as protection against the vagaries

of nature and to accumulate ‘social capital’, which represents status and influence in their community. Critics of this notion have fought to rebut the charge of economic irrationality and chosen to do so in terms of economic logic (Mahlobo, 2016).

According to Babikir et al. (2015), In Uganda, for example, five livestock production systems can be distinguished: mobile pastoralism and agro-pastoralism, settled livestock, livestock/crop, commercial livestock, dairy production. Uganda’s pastoralist zone, known as the ‘cattle corridor’, stretches from the border with Tanzania in the south, to the Sudan border in the north and the Kenyan border in the east. Pastoralists live in 29 out of the country’s 56 districts, which contain 40 per cent of the total population. Security claimed 13.9 per cent of current expenditure in the Ugandan budget for 2001, while the share of agriculture was 1.6 per cent.

Conflict depopulates land when people flee for fear of violence, and elsewhere limits the land available for grazing, due to the use of buffer zones separating the territories of rival groups. Conflict is a major cause of internal displacement and leads to the congregation of people around security centres and relief stations. Tanzania’ pastoralist population is thinly spread in the north and consists mainly of the Barabaig, Baraguyu and Maasai groups. The Ngorongoro district has a population of some 120,000, nearly all of them Maasai. One estimate puts the pastoralist population at 3 per cent of Tanzania’s total. Karamoja region in Uganda has become infamous for violence and cattle raiding, and a serious ‘security problem’ for the state (Newman, 2016).

Particularly important to this region is the potential for live animal trade in markets. The total value of live animal exports peaked in 1983 at nearly \$300 million (\$240 million worth of live sheep/goat shipments with the remainder accounted for by beef exports). This aggregate value accounted for 8 percent of the world value of live animal trade in 1982, or \$3.7 billion. However, live animal shipments have dramatically declined with regional exports averaging \$140 million over the 1996-1998 period (less than 4 percent of the value of global live animal trade) and sliding to \$115 million in 2001. Most of the live animal exports play a critical role in the economies of countries. In developed countries with livestock industry, it contributes to country’s GDP, 40 percent of the agricultural sector output and more than 25 percent of the country’s total exports (Mahlobo, 2016).

### **1.1.3 Local Perspective**

Livestock trade is one of the main economic activities and a critical source of livelihood for the pastoral populations in Kenya (Mahmoud, 2010). The livestock sub-sector in Kenya accounts

for approximately 10% of the National Gross Domestic Product (GDP), and about 30% of the agricultural GDP in the country. The sub-sector also provides employment to Kenyans, with an estimated 50% of the national agricultural workforce and about 90% of the Arid and Semi-Arid Lands (ASAL) workforce getting their jobs in the livestock sub-sector. Moreover, livestock production in the Arid and Semi-Arid Lands (ASALs) accounts for nearly 90% of the livelihood base and nearly 95% of household income. Livestock production is therefore a major component of the ASALs economy and indeed the Kenyan economy at large (Gitau, Kimenju & Kibaara, 2009)

Livestock industry in Kenya accounts for over 12% percent of GDP and employs 90% of population in Arid and Semi-Arid areas that represent 95% of household income. Pastoralist from these areas produce 86% of Kenya's red meat (cattle and shoats) while dairy farmers and ranchers supply 12% and 2% of red meat respectively. On the other hand, the demand for red meat has been estimated at 537,520 Metric Tons in 2014 in the country. The pastoralists mentioned here are represented by the counties in ASAL areas that include Mandera, Wajir, Garissa, Isiolo, Turkana and Marsabit which are major producers and suppliers of red meat to destination markets. These counties supply meat to Nairobi, Mombasa, Embu and other adjacent town and counties (Harun, 2014)

The government of Kenya supports livestock marketing in the ASAL regions through the Livestock Marketing Division (LMD) that enables livestock farming communities to achieve competitive prices. However, the government discontinued its direct role in livestock marketing during the introduction of the Structural Adjustment Programmes that aimed to implement "free market" programmes and policies in the 1990s. This has led to the degradation of the once well-established markets hence leading to significant inefficiencies including influencing market places, high transaction costs, unstable prices, and insecurity (Wambua, 2014).

The ASALs host about 70 national livestock herd with an annual slaughter of about 1.6 million tropical livestock units, which is equivalent to about 14 percent of the country's gross domestic product (GDP). Indeed, pastoralist supports 30 percent of Kenya's population. Constriction and degradation of the pastoralist zone, accompanied by the loss of complementary economic activity and supplementary sources of income, affected the pastoralist economy vitally by destroying the delicate balance upon which production depends. In the pre-colonial period, sedentary and pastoralist communities lived in a state of rough equilibrium. The last few years have witnessed a renewed interest in the export of live animals and meat from Kenya and



Ethiopia. In both cases, the private sector has taken the lead in initiating or advocating for the revival of the export business, prompting the respective governments to pay attention to the potentials of livestock trade (Ibrahim, 2015).

#### **1.1.4 Livestock Marketing in Marsabit Region**

The markets in Marsabit are well distributed and serve almost equal population. However, the area is fast recovering and growing. Intervention by REGAL AG in any of the markets is likely to have relatively equal number of beneficiaries with slight variations. Based on population any one of the markets would be appropriate for CCF investments. In Marsabit county, the total heads of shoats are sold in the markets are currently estimated to be 20,260 per month as estimated by the communities. The average heads of shoats are 2251 per month in each market in the county of Marsabit. On average distance to the markets in Marsabit was estimated at 55km. producers take an average of 27hours to drive livestock to the livestock markets (Dibaba, 2017).

Marsabit, markets that are distal to pastures have exhibited seasonality in their operations. The Ilaut market lies within the trading centre of Ilaut in Korr/Ngurnit Ward, Laisamis sub-county. The trading centre is reputed to be one of the oldest colonial outposts in northern Kenya and straddles the southern border of Samburu County. Thus, this vibrant market had attracted closely related communities (Samburu, Areal/Rendille) on either county. The market is equally old (in the fifties) whereby trading terms were on barter basis until 3 years ago when FK-Kenya constructed a sales yard and a loading ramp. This had the effect of attracting external traders from as far as Isiolo. It is a mainly a small stock market held every fortnight (Tuesdays) with volumes peaking 3000 animals. A small number of camels and cattle are also offered for sale. The area has a very poor road network and is inaccessible during the rainy seasons. Furthermore, there are no telecommunication network coverage in the area. There are a few middlemen who act as intermediaries between the buyers and sellers during market days in terms of price bargain. Participation in market activities is by all since it's a free market and approximately 1000 people interact during market days which are colourful and encouraging. There are no cultural barriers that affect or hinder the smooth functioning of the market (Harun,2014).

The Kalacha livestock market is in Kalacha trading centre, Marsabit North district and lies 170 kms to the north of Marsabit County headquarter. The area is inhabited by the Gabbra community who keep camels, cattle, sheep and Goats which forms the backbone of their

livelihood. Kalacha has a livestock market which traces its origin to way back in early 90's but infrastructure (sale yard facility) put by a USAID-funded project (ARC) in 2006 and has 2 market days- Wednesday and Thursday where livestock owners from Kalacha and its vicinity converge to sell their livestock. The livestock traders are exclusively local and few in number and purchase the trade animals from the producers Thus in terms of proximity, the market is considered distant to attract external buyers, especially from other ethnic groups. The stability of a livestock market considers the ability of the market to handle a large volume of livestock as well as the consistency of the market activities. It also considers other businesses that have resulted from activities in the livestock markets. The accessibility of livestock markets the extent to which actors can obtain goods and services from the market at the time it's needed. It also looks at the ease with which a market can be reached from other locations. The area is served by poor road network which are impassable during rainy seasons. Most traders and producers trek their livestock to the market except those destined for Nairobi/Isiolo which are trucked to terminal market (Ibrahim, 2015).

Dirib market is located about 9 kilometres east of Marsabit Sub County. It serves Shura, Kubi Qallo, Badasa and Jaldesa among other occasional. It's located in the middle of agro-pastoralist communities and lack good livestock catchment. It started as an informal market and a feeder market to Jirime market until the infrastructure was developed by JICA through JICA-ECORAD funding in January 2013. At the moment this market is not active due to the fact that Gabbra and Rendille who are predominantly pastoralist tend to evade participation in this market due to fear related to past experience of ethnic conflict. Currently these communities co-exist in harmony and the fear is only imagined. The livestock producers who spend overnight pay for night Bomas and grazing lands as they wait for the next market day. Most of the time they trek animals back home or go to Jirime market which is located in Marsabit town. Approximately 40 small stocks are traded every market day (Migosi, 2017).

The new modern Merille market has been constructed by ACDI/VOCA under the project Resilience and Economic Growth in Arid Lands- Accelerated Growth (REGAL-AG) at cost of Ksh.47 million covering an area of approximately 2 acres. The market will serve as one stop place for livestock traders and vendors, who will be coming to the market on days of operations to offer services, sell and buy animals. The market will be receiving large numbers of livestock traders, market vendors, camel, cattle and shoats on days of operations and they will pay animal cess, service fee and rents that will act as sources of revenue for the market. To run the market, a manager, IT personnel, market attendants, cleaners and security personnel will be employed by

the management. Other operating costs for the market are water, electricity, administration, maintenance, insurance and insurance (Mahlobo, 2016).

In future Merille market is projected to handle cash transactions from animal sale worth Ksh.56.4 million per day of operation. The market will generate yearly gross revenue of Ksh.11, 847,333 million and it will incur annual operation costs of Ksh.1, 975,203. This translates into annual net profit of Ksh.8, 687,397. The County Government will receive 89% of the gross revenue while the LMA will get only 11% of the net profit after deducting operation costs. The above financial indicators show that the market will be a viable business venture that can be undertaken in the region to benefit the County government and the community (Harun,2014).

## **1.2 Statement of the Problem**

The Government of Kenya through the Ministry of Livestock addresses support for the subsector. However, there still remain some issues that have not been adequately addressed, particularly market prices and related factors such as rangelands management, insecurity, and other relevant incentives and support. The Kenya Livestock Marketing Council (KLMC) which is mandated to address marketing issues of livestock is weak and does not receive adequate budget for its operations, hence depending on donor funding for majority of its activities. Despite the high economic and environmental potential of the ASAL areas, there are evidently high levels of poverty in those regions. Moreover, pastoralist communities have limited voice in relevant policy debates compared to the more settled agricultural groups and urban populations who at times get opportunities to voice their concerns and consequently contribute to policies. Pastoralists are therefore more likely to be marginalized (Mwawasi, 2013).

Merille market encounters challenges of lack of operational systems for financial transactions and operational machines such as weighing scales for transparency in transactions processes, price variability, limited marketing support services and market information and credit services to traders and cattle keepers, absence of effective producer organizations at the grassroots and limited access to markets provide inadequate opportunities for increased incomes. Revenue in the markets is only charged to the livestock that has been sold. Following information from the communities involved the estimation of revenue was based on the notion that about 40% of the total livestock presented are sold (Dibaba, 2017). Poor marketing opportunities during non-drought times mean that traders and producers have to trek long distances to improve their selling prospects. This results in significant transaction and transport costs and animal weight loss, which in turn reduces profit margins. The market has been poorly performing where by

start of January 2018 amount collected was 37,500 which decreased by mid-January to 32,500. When drought intensifies, livestock body condition deteriorates and market activity is further depressed. The lack of markets is also a major hindrance to destocking, particularly during drought. This has greatly affected the pastoralists where they have insufficient food and their livestock die due lack of pasture. In addition, pastoralists in Merille have low income levels due to lack of proper market for the livestock they able to maintain through the harsh environmental condition (Migosi, 2017).

A number of studies had been done livestock marketing such as Mohammed (2009) who did a study on efficiency of cattle marketing in Kajiado District, Kenya, Abdullahi (2014) did a research on market price determinants of live cattle: the case of Garissa livestock market, Ogara (2007) established the challenges and opportunities in livestock marketing in kenya under the current economic and market realities: policy concerns. However, none of these studies focused on factors influencing livestock marketing in Marsabit Region. Therefore, this study sought to fill this gap by establishing factors influencing livestock marketing in Marsabit Region: a case of Merille livestock market.

### **1.3 Purpose of the Study**

The study established the factors influencing livestock marketing in Marsabit region: a case of Merille livestock market.

### **1.4 Objectives of the Study**

The study was guided by the following objectives:

- i. To establish the influence of socio economic characteristics on livestock marketing in Merille livestock market.
- ii. To assess the influence of regional conflict on livestock marketing in Merille livestock market.
- iii. To evaluate the influence of access to market information on livestock marketing in Merille livestock market.
- iv. To determine the influence of livestock market infrastructure and management on livestock marketing in Merille livestock market.

### **1.5 Research Questions**

The study sought answers to the following research questions:

- i. What is the influence of socio economic characteristics on livestock marketing in Merille livestock market?
- ii. To what extent does regional conflict affect livestock marketing in Merille livestock market?
- iii. How does access to market information affect livestock marketing in Merille livestock market?
- iv. What is the influence of livestock market infrastructure and management on livestock marketing in Merille livestock market?

## **1.6 Significance of the Study**

### **1.6.1 County Government**

The findings of this study would contribute immensely and positively to the county management as it may assist county officials in addressing the factors influencing livestock marketing in Marsabit region. For the livestock marketing projects managers in Marsabit County the study findings would be of good importance by contributing to a better understanding and knowledge of strengthening proper livestock marketing projects. The finding for this study would consider some of the pertinent issues facing the livestock sub-sector.

### **1.6.2 Government Policies**

The information obtained in this study would be significant to the policy makers/ministry of agriculture, livestock and fisheries and local authorities as it would give a rational evaluation of implementation of livestock marketing projects and bridge the gaps that are there to enhance proper livestock markets in county governments. The study would assist policy and decision makers adopt sustainable strategies towards livestock marketing projects. The policies for this study would consider some of the pertinent issues facing the livestock sub-sector. These issues include, insecurity such as the rampant cattle rustling, market access and pricing, rangelands management for better access to pastures

### **1.6.3 Academicians and Researchers**

The study also aims at providing empirical literature as a step for further research that would add to the body of knowledge of factors influencing livestock marketing. The study would benefit researchers and scholars who may use its findings as a reference and to enrich livestock marketing literature.

#### **1.6.4 General Public and Residents**

The pastoralists would benefit from the finding of the study. They would be informed of the factors influencing livestock marketing in pastoral. Also, they would be aware of government relevant policies regarding the livestock marketing which remains crucial to the livelihoods of pastoralists and the Kenyan economy in general.

#### **1.7 Delimitation of the Study**

The study would establish the factors influencing livestock marketing in Marsabit region: A case of Merille livestock market. The study would focus on the influence of socio economic characteristics, regional conflict, access to market information and livestock market infrastructure and management on livestock marketing in Merille livestock market Laisamis Sub-County, Marsabit County. The target population under the study would include; the County Officials, Ministry of livestock officials, Livestock Traders, Residents, Marketing group committees and Administrative. The study would be carried out for a period of three months.

#### **1.8 Limitations of the Study**

Success of a research study depends on the cooperation of the respondents in responding to the research questionnaires administered in a drop and pick later method so that they voluntarily participate in the interviews and give accurate reliable information. The researcher anticipated being required by the respondents to explain the purpose for the collection of the data. Therefore, a letter from the university was used and an assurance of confidentiality was given. Communication was a problem due to language barrier. The researcher used local interpreters from within the area of study.

#### **1.9 Basic Assumptions of the Study**

The study assumes that there were no serious changes in the composition of the target population that might affect the effectiveness of the study sample. This study also assumed that the respondents were honest, cooperative and objective in the response to the research instruments and were available to respond to the research instruments in time. Finally, the study assumed that the authorities in Marsabit County granted the required permission to collect data from employees.

### 1.10 Definition of Significant Terms Used in the Study

The following are the definitions of terms that were used throughout this study:

**Access to market information** is the ability to be updated about prices, sales volumes, disease status and the levels of national and international demand of the market. Involves a system in which marketing data is formally gathered, stored, analysed and distributed to managers in accordance with their informational needs on a regular basis.

**Drought** is a period of below-average precipitation in a given region; resulting in prolonged shortages in the water supply, whether atmospheric, surface water or ground water. A drought can last for months or years.

**Financial Transaction** is an agreement, or communication, carried out between a buyer and a seller to exchange an asset for payment. It involves a change in the status of the finances of two or more businesses or individuals.

**Livestock market infrastructure** is a multilateral system among participating financial institutions, including the operator of the system, used for the purposes of recording, clearing, or settling payments, securities, derivatives, brokers or other financial transactions

**Livestock marketing:** involves the sale, purchase or exchange of products such as live animals, milk, wool and hides for cash or goods in kind. When sales (or purchases) are made in cash, the price paid to (or by) the producer is known as the market price.

**Livestock:** Domestic animals, such as cattle or horses, raised for home use or for profit, especially on a farm.

**Marketing:** The process or technique of promoting, selling, and distributing a product or service

**Regional Conflict:** present their own set of unique challenges to the international community. These conflicts may be political, economic, environmental, or social in nature, but are deeply tied to a sense of place. These conflicts can only be resolved with multiple nations involved.

**Securities:** These are things deposited or pledged as a guarantee of the fulfilment of an undertaking or the repayment of a loan, to be forfeited in case of default.

**Socioeconomic characteristics** is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic and social position in relation to others, based on income, education, and occupation.

### **1.11 Organization of the Study**

This study was organized into five chapters. Chapter one contains the introduction to the study. It presents background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the Study, delimitations of the study, limitations of the Study and the definition of significant terms. On the other hand, chapter two reviewed the literature based on the objectives of the study. It further looked at the conceptual framework and finally the summary. Chapter three covers the research methodology of the study. The chapter described the research design, target population, sampling procedure, tools and techniques of data collection, pre-testing, data analysis, ethical considerations and finally the operational definition of variables. Chapter four presented analysis and findings of the study as set out in the research methodology. The study closed with chapter five which presents the discussion, conclusion, and recommendations for action and further research.



## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents literature review on factors that influence livestock marketing in Marsabit County. It starts with an overview of the livestock sub-sector in Kenya. It is then followed by a theoretical framework which comprises of three theories (Market expansion theories, social exchange theory, and attribution theory). The chapter also outlines conceptual framework.

#### 2.2 Overview of Livestock Marketing in Kenya

In Kenya, the livestock sub-sector accounts for approximately 10% of National GDP and 30% of agricultural GDP. It employs about 50% of the agricultural workforce and about 90% of the ASAL workforce. Approximately 95% of Arid and Semi-Arid Land households' income is derived from this sub sector (Awuor, 2007). Kenyan livestock sector is dominated by small producers and most of the livestock production is concentrated in the ASAL areas. Livestock from pastoral production systems account for almost 80% of Kenya's consumption and the demand for red meat outstrips the local supply. Currently, supply from pastoralist areas stands at 71%. Communities in the pastoralist setting have always had to continuously rely on livestock as their single most important source of livelihood. Besides providing food directly in form of meat and milk, they are also able to trade to meet urgent cash needs such as school fees and staple foods. Until around 1983, the Government supported livestock marketing from the region through the livestock marketing division that enabled the pastoralists to get competitive prices (Ortmann & King, 2010).

Nevertheless, the collapse of this marketing channel led to acute inefficiencies in livestock value chain leading to high transaction costs, unstable markets and prices. These high transaction costs emanate from the lengthy channels of trade (high numbers of middle men) necessitated by the long distances to markets. The high transactions cost reduces margins for producers. The long distances involved in trekking animals to the market, lead to livestock mortalities, reduces animal/carcass value and exorbitant charges en-route, high transport cost, and loss through theft of stock. Besides limited education and knowledge of national language amongst producers limits their effective participation (especially for women and youth) and a hindrance to maximizing profits. In an attempt to deal with these challenges, SNV in partnership with Samburu Integrated Development Programme (SIDEPE), Kenya Livestock

Marketing Council (KLMC) and Samburu County Council (SCC) explored the potentials of interior (primary) markets as a business model to address these challenges (CSA, 2009).

### **2.3 Socio Economic Characteristics and Livestock Marketing**

Livestock is the main stay of the pastoralist economy in the arid and semi-arid areas of Marsabit and is the fundamental physical, financial and social capital of pastoralist livelihoods. In the drylands of northern Kenya and southern Ethiopia, as elsewhere, the accumulation of large herds in times of plenty is a well-known insurance strategy against climatic stresses. To facilitate post-crisis recovery, herd composition is strongly biased towards female animals, ensuring high rates of reproduction and regular milk supplies (Watakila,2015).

In for Moyale district (Now Moyale sub-county) Marsabit, for example, the total number of adult female cattle is estimated at around 146,000, compared with just 35,000 males. Ownership of large herds is also an important determinant of social status and prestige. Livestock transfers, whether in the form of sale, barter or exchange, are widely used to meet social obligations, including traditional safety net mechanisms such as clan restocking schemes, and in settlement of disputes between and within clans. In Borana, infringements of traditional natural resource management mechanisms are settled with the payment of cattle by the offender. Camels are the most expensive livestock species in the study area. A mature camel in good condition can fetch up to 70,000 KES (just under \$1,000) in Moyale Ethiopia market (ALRMP, 2009).

Camels' resistance to climate variability and harsh environmental conditions has made them increasingly important (Behnke et al., 2011). Lactating camels produce large quantities of milk several times a day, providing an abundant source of nutrition for the household. During droughts camels are the last animals to reduce and eventually stop milk production, and therefore represent an important and reliable source of food in times of stress. Cattle are also a traditionally attractive asset for pastoralists in the Horn of Africa. Boran breed cattle grown in the Borana plateau of Ethiopia are renowned for their beefy conformation, fast growth rate and large size. A Boran bull can reach maturity and optimum weight in just three years,<sup>3</sup> and a fattened, full-grown bull can fetch over 5,000 ETB (\$365). Sheep and goats (shoats) are also important in pastoral livelihood systems. Thanks to their small body size, rapid rates of reproduction and low-price shoats are more easily marketable than cattle and camels and therefore represent a critical liquid asset. Ordinary household expenses are predominantly met with the sale of shoats, and pastoralists often refer to them as 'small change' (Pavanello, 2010).

Clan based marketing is an important feature of the livestock marketing chain, both in the focus areas of this study and in the livestock trade in the Horn of Africa generally, is its strong reliance on personal and clan relationships based on trust (Fahmi,2014). In the absence of formal systems of credit enforcement, weak infrastructural and market support services and widespread insecurity in pastoral areas, the informal institution of livestock marketing is sustained by high levels of social capital among key market actors. In this uncertain business environment, the social ties based on clan affiliation and kinship that bind livestock marketing actors together become an important risk management mechanism (Zerga, 2015).

In order to obtain livestock price information, contacted brokers in relevant markets via mobile phones. While the majority of respondents said that they trusted brokers ethnically related to them to provide up-to-date and reliable information, some admitted that these brokers would at times act to further their own interests. Similarly, members of the trader cooperatives interviewed said that they acquired market information from brokers or other trusted market agents belonging to their clan. Some cooperatives deliberately placed members in key markets such as Moyale and Nairobi in order to provide regular, reliable and timely market information, in addition to managing administrative and financial matters. While trust-based relationships and clan-controlled networks greatly facilitate livestock transactions, they can also be highly exclusive and can distort livestock supply and movement (Eyasu,2009).

#### **2.4 Regional conflict and Livestock Marketing**

Conflict has grown rapidly in Africa in the last three decades, and pastoral areas are among the most vulnerable. Conflict is now widespread in the arid and semi-arid zones, and often overlaps with extreme food insecurity. Many local civil society organizations have programmes to manage conflict, and international NGOs, intergovernmental organizations and donors are increasingly preoccupied with understanding conflict and experimenting with solutions. There is an urgent need for a stocktaking of our present analysis of conflict, and the lessons we can draw from experience so far of conflict mediation and management (Brottem,2016).

Periodic droughts considerably reduce pasture and water resources leading to death of both animals and people. To mitigate drought consequences, pastoralists sometimes move their livestock to high rainfall areas and this result in the spread of livestock diseases and conflicts along migration routes. Some of those who lose their herds to drought resort to livestock rustling leading to more animosities and loss of human life. Persistent droughts in ASALs increase the vulnerability of pastoralists to food insecurity, often forcing them to frequently rely

on famine relief aid. Poor famine relief strategies and a narrow national food policy that particularly overemphasizes maize production, worsen their condition. In addition, the failure of the public to respond decisively and expeditiously to drought-induced distress has increased pastoralists vulnerability to the vagaries of the weather. Regional instability in neighboring countries has negatively impacted on the Kenyan pastoral economy (Newman, 2016).

First, these conflicts have spilled into the country, leading to loss of human life and property. Second, the conflicts have increased the supply of illegal firearms, particularly amongst the pastoralists, who use the guns in livestock rustling. Third, regional conflicts have increased the influx of refugees whose animals compete with those of the Kenyan pastoralists for pasture and water resources. Such competition has ended up in violent and fatal skirmishes. Fourth, regional conflicts have increased the entry and exit of illegal and untaxed merchandise including drugs, stolen livestock and consumer goods (Mahlobo, 2016).

The policies to improve the marketing of pastoral livestock should include: establishment of an effective livestock marketing infrastructure by both the government and the local councils, e.g., market days, transport routes, holding grounds, stock routes, and watering points. Implementation of appropriate regulations to reduce transaction costs e.g. the government should get rid of corrupt civil servants along the marketing chain. Regularization of the legal status of pastoral groups to ensure the protection of property and contract rights may require some lobbying and advocacy especially by the Pastoralist Parliament Group (PPG). Provision of credit schemes to livestock traders by the government with the help of other development partners, Development of regional abattoirs and re-structuring of KMC (or an equivalent facility) to improve livestock marketing exploration of possibilities of exporting Kenyan livestock and livestock products to international markets. This will require the creation of disease free zones and livestock movement corridors to control, disease and vector spread (Ibrahim, 2015).

## **2.5 Access to Livestock Market Information**

Poor and uneven access to market information is a well-known constraint to livestock trade in the region (Adugna, 2006). In order to make timely and well-informed decisions, sellers and buyers need access to a wide range of market information, including prices, sales volumes, disease status and the levels of national and international demand. Producers in Borana zone and in Marsabit obtain livestock price information from brokers and other producers, either at end markets or at markets in Borana zone itself in Ethiopia and Nairobi terminal markets in

Kenya. They arrive at markets with information of variable accuracy, and with no exact knowledge of the going rate on the day. Depending on the severity and urgency of household needs, producers may decide not to sell if the price offered is too low and does not meet their expectations. In other instances, household needs may be such that producers cannot afford to base their marketing decisions on prices but must sell however low the price: access to livestock prices before trekking to the market was seen as largely irrelevant (Dibaba, 2017).

In Borana zone Ethiopia, access to poor and outdated market price information appeared to be a more significant constraint to trade for producers than for traders. Interviews with traders' cooperatives and private traders pointed to a well-organized system for sharing price information for shoats among traders, from which producers were largely excluded. When producers wanting to sell shoats arrive at Harobake market, for example, they are approached by brokers, who operate on behalf of traders. If their animals match the specific characteristics requested by traders, for instance colour and weight, the brokers will offer the producers the going rate per kilo of live weight. While there might be a negotiation, producers have very little room for manoeuvre, as all the other traders offer more or less the same price. In Dubluk, traders meet on Wednesdays to agree the buying price for the market day on Friday, based on a number of different pieces of information, including market trends, the previous week's purchases and prices at terminal markets. Traders said that producers are not invited to these meetings, and that none of the information discussed is disclosed to them. The final price is then reviewed and fixed on market day morning and may be adjusted downwards if a large number of shoats arrive for sale (Migosi, 2017).

A number of initiatives aim to build and support viable livestock market information systems. One example is the Livestock Information Network and Knowledge System (LINKS), established as part of the USAID-funded Global Livestock CRSP (GLCRSP) project to support the collection and dissemination of market information in Kenya, Ethiopia and Tanzania. Funding for this project was however terminated in June 2009, and data collection has stopped. While several government and non-government projects are collecting data on livestock prices and sales volumes in major markets, this information was only available in hard copy and data was not being analyzed or presented in an easily digestible way. Key challenges to effective price information dissemination include the remoteness of pastoral communities, high levels of illiteracy and in some case the disruption of dissemination efforts by traders and brokers intent on preventing producers from accessing market information (Aklilu & Catley, 2010).

## **2.6 Livestock Market Infrastructure and Livestock Marketing**

Since 2006, as part of the Livestock Marketing component of the USAID-funded Pastoralist Livelihoods Initiative (PLI), ACDI/VOCA has built 25 pieces of market infrastructure in Afar, Somali and Oromiya regions, with the overall objective of improving pastoralist livestock marketing through increased sales (ACDI, 2007). While the type of infrastructure and services varies from market to market, the majority of market yards have been equipped with a brick fence, separate compartments for shoats, cattle and camels, loading ramps, feeding and watering troughs and shaded areas. In some markets, such as Dubluk and Harobake, the small ruminant yards have also been equipped with scales for weighing shoats. For the most part, markets have been constructed near villages and towns on sites that had long been used by traders and producers (Turner, 2016).

There has been a stark contrast between the level of trading activity and market infrastructure development in the market sites visited in Borana zone and in Marsabit. Both producers and traders complained of structural constraints significantly restraining livestock trade even without the drought, however, the business environment in Borana has not been good due to lack of infrastructure where Borana had no any basic livestock market infrastructure and none had a fixed weekly market day, making trade extremely unpredictable. There were no fences delimiting the market yards, no holding grounds and no partitions to separate small from big ruminants. Water, fodder and veterinary services were all absent. This is a challenge and has made Marsabit be characterized by very low, almost non-existent, trade, with only a handful of sellers (Dibaba, 2017).

It is also evident that some of the institutional gaps affecting smallholder livestock producers include remoteness of livestock markets, limitations in financial services and limited capacity of livestock marketing associations. With regard to livestock markets, Bekure (2016) highlights that market is an important aspect of any livestock system that provides the mechanism whereby producers exchange their livestock and livestock products for cash; for acquiring goods and services which they do not produce themselves. AfDB (2008), stated that well developed market infrastructure is necessary for the development of a sustainable livestock sector. Markets have the potential to strengthen pastoralists' economy and harness participation of poor pastoralist producers along the value chain (Zerga, 2015).

However, the livestock market systems in the East African region, home to the largest number of pastoral livestock in Africa, is characterized by series of limitations resulting in poor

performance of smallholders (Peccerella, 2012). Livestock marketing among East African smallholders is characterized by poor market infrastructure, insecurity, and unfavorable market access by herders where ethnicity tends to assume an important role in market transactions

In Kenya, the lack of an integrated policy and institutional framework between the Ministry of Livestock Development (MLD) and local County Councils has constrained the development of livestock marketing. Livestock markets are considered public services, and the land on which they stand belongs to County Councils. As such, councils manage the markets and collect taxes, leaving little incentive for the MLD to invest in the development and maintenance of livestock markets. Rather than perceiving livestock marketing as a vital pastoralist livelihood strategy, a significant economic activity and an important source of investment, local authorities have long regarded it as a means to control diseases and movement, and as a source of revenue. These problems are exacerbated by longstanding tensions between pastoral communities and formal institutions (Kandachar & Halme, 2017).

Decades of inappropriate and biased national policies, protracted isolation and the lack of representation of pastoralists within the national political arena, deeply rooted misconceptions about pastoralism among national decision-makers and the neglect of pastoral areas in the provision of basic services have all led to mutual mistrust and suspicion. Pastoralists we interviewed in Marsabit saw local authorities as unresponsive, collecting taxes while consistently failing to provide services and market infrastructure. Communities reported that they had not established a designated market day or constructed basic market facilities for fear that organizing and developing market sites would lead to higher taxation, with no infrastructure or services provided in return (Peccerella et al, 2012).

In addition, communities also noted that they could not build permanent structures such as fences or holding grounds without obtaining a permit from the authorities, a lengthy and costly process requiring repeated visits to government offices, travel expenses, lobbying and political connections and the paying of bribes. Because of their limited resources and skills and their inability to communicate effectively, interviewees felt unable to manage such a demanding process. An initiative supported by the Netherlands Development Organisation (SNV) has facilitated dialogue and partnership between the local community – through a livestock marketing committee – and the local County Council in Samburu and other districts (Pavanello, 2010). In this ‘co-management model’, revenues are split equally between the two parties; the

County Council is responsible for collecting revenue and maintaining the sales yard, and the livestock marketing committee is in charge of market activities and trade.

In the Borana zone livestock market centres constructed under the ACIDI/VOCA initiative are managed by various different authorities. Dubluk market, for instance, is run by the municipality, while Harobake is managed by Pastoralist Association (PA) leaders. Markets managed by the municipality appear to have been better looked after as municipalities collect taxes through the Revenue Office and reinvest part of the revenue in maintaining facilities and infrastructure. The PA does not have an organized structure or mechanisms to collect taxes or reinvest revenues in market maintenance. According to a recent evaluation of the ACIDI/VOCA livestock marketing component, livestock markets were constrained by financing and management problems. The evaluation noted that the planning of the market development initiative had focused on the physical aspects of markets 'to the exclusion of management and sustainability issues (Harun,2014).

## **2.7 Theoretical Review**

This study has attempted to use three theories to explain the relationship that exists among the phenomena in livestock marketing. These theories include; market expansion theories, social exchange theory and attribution theory.

### **2.7.1 Market Expansion Theories**

A wide range of theories deal with foreign market expansion and the attractiveness factors of foreign markets. Market expansion theories were put forward by Caddick and Dale in 1987. Contributions to a classical country selection could be found in systematic planning decision making theories, as well as in extant economic theories of foreign trade, location advantages or direct investments, early behavioristic approaches, transaction cost approaches, entrepreneurship theory, cost-benefit reflection etc. The following theories developed in international business are particularly relevant (Kandachar & Halme, 2017).

First, economic location advantage theory or foreign trade theories concentrate on the home-country firms' environmental and resource constraints. Often, such factors, like national law, state policy, infrastructure or culture, language, etc. are the key variables to explain international market expansion. For instance, Caddick and Dale (1987) pointed out that the existence of various regional cooperation pacts influences the choice of where to source. The deterministic nature of these factors is often integrated in firms' strategic decisions. For example, the well-



known eclectic framework of foreign direct investment proposed the analysis of location advantages in terms of the factors (low labour costs) that make it profitable to locate a given business activity, particularly manufacturing, in a specific country. However, a firm engaging in sourcing and selling needs to consider other factors that pertain to each activity. For example, low cost land and labour or high productivity are important in the sourcing side but market size, market potential and competitive moves are more important in the selling side. Foreign trade theories are relevant in the study in bringing a better understanding of how livestock market infrastructure and management relates with livestock marketing (Dunning, 2013).

Based on the behavioral theory of the international firm, models of a gradual internationalization process were proposed by Johanson and Vahlne (2009), and further developed by Forsgren (2002), among others. A critical variable, they pointed out, is the importance of experiential market knowledge. Their research explains how firms move into more culturally or physically distant countries. Other analyses of behavioral decisions are based on subjective perceptions of physical proximity, affinity to the culture or mentality. Papadopoulos and Denis (1988) attributed this to providing simplified information while other authors associate this with firms' resources (Randy & Dibrell, 2002). Behavioral theory thus explains access to market information as a factor influencing livestock farming.

### **2.7.2 Social Exchange Theory**

Social exchange theory was put forward by George Caspar Homans in 1992 who argued that it is a social psychological and sociological perspective that explains social change and stability as a process of negotiated exchanges between parties. Social exchange theory posits that all human relationships are formed by the use of a subjective cost-benefit analysis and the comparison of alternatives. The theory has roots in economics, psychology and sociology. Social exchange theory is tied to rational choice theory and on the other hand to structuralism, and features many of their main assumptions. American sociologist George Caspar Homans is usually credited with the consolidation of the foundations of Social Exchange Theory. Homans's article entitled Social Behavior as Exchange is viewed as the seminal work on this theory (Bailey et al, 1999).

John Thibaut and Harold Kelley are two social psychologists who further developed the theory of social exchange. They proposed the following reasons that make people to engage in a social exchange: anticipated reciprocity; expected gain in reputation and influence on others; altruism and perception of efficacy and direct reward. Another important work is Mark Knapp's Social Intercourse: From Greeting to Goodbye. In addition, Gerald Miller and Mark Steinberg's book,

Between People, added to the theory by noting the differences in the types of information we have about one another: cultural, sociological and psychological. This theory thus explains socio economic characteristics as a factor affecting livestock marketing (Dwyer & Schurr,1987).

### **2.7.3 Attribution Theory**

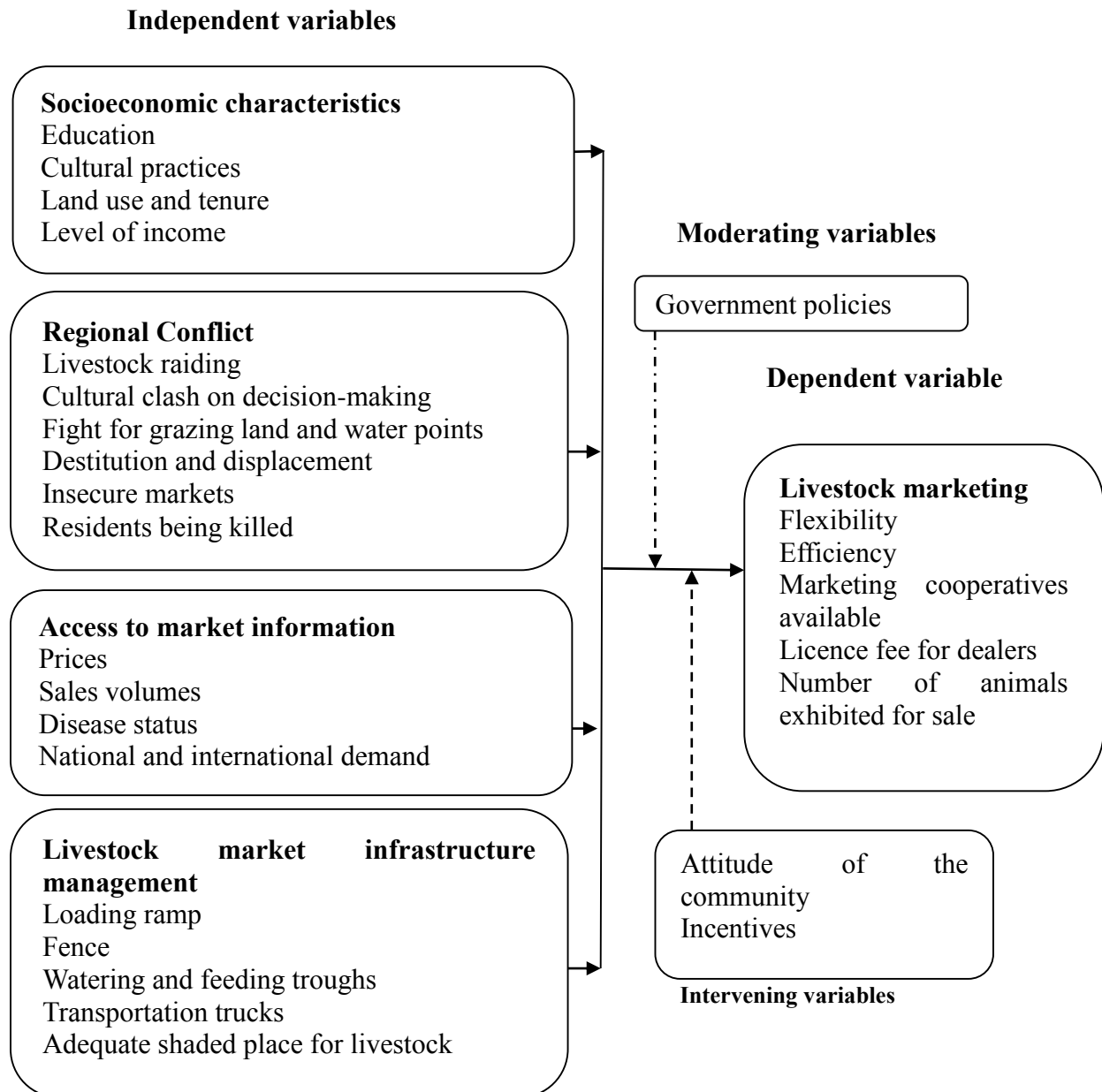
Attribution theory was postulated by Fritz Heider in the year 1944 who stated that it has a long and rich history in the field of psychology and social psychology. It has made important contributions simply because it attempts to account for and explain everyday explanations that bring order and predictability to a world that might not otherwise be orderly and predictable. Attribution theory (which is actually a group of theories) is all about explanations of “why.” “Why am I being ignored?” Attribution theory attempts to understand how people explain and account for causality. It is based upon the premise that individuals are seldom passive observers of events and behavior. Rather, they are active perceivers searching for the reasons accounting for what they observe. It classifies attributions according to two fundamental types: External or situational attributions that account for causality by assigning responsibility to external factors (e.g., the weather). Internal or dispositional attributions answer the “why” question by assigning responsibility to the person. In practice, these two perspectives can produce different research focuses. The first can produce research that addresses control, management, and environmental issues. The second can produce examination of issues related to personality and self-worth. But, this perspective can also produce keen insights related to control, e.g., self-control and behavior change (Awuor, 2007).

Weiner focused his attribution theory on achievement. He identified ability, effort, task difficulty, and luck as the most important factors affecting attributions for achievement. Attributions are classified along three causal dimensions: locus of control, stability, and controllability. The locus of control dimension has two poles: internal versus external locus of control. The stability dimension captures whether causes change over time or not. For instance, ability can be classified as a stable, internal cause, and effort classified as unstable and internal. Controllability contrasts causes one can control, such as skill/efficacy, from causes one cannot control, such as aptitude, mood, others' actions, and luck (Aklilu & Catley, 2010).

### **2.8 Conceptual framework**

This research study is set to determine the factors influencing livestock marketing in Marsabit County. The independent variables were socio-economic characteristics, regional conflict, access to market information and livestock market infrastructure and management. This study

determined the relationship between the independent variables and the dependent variable (livestock marketing).



**Figure 2. 1: Conceptual framework**

## 2.9 Summary and Research Gaps

This study is grounded on the market expansion theories, social exchange theory and attribution theory. From the literature reviewed, Kenyan livestock sector is dominated by small producers and most of the livestock production is concentrated in the ASAL areas. Livestock from pastoral production systems account for almost 80% of Kenya's consumption and the demand for red

meat outstrips the local supply. Livestock is the main stay of the pastoralist economy in the arid and semi-arid areas and is the fundamental physical, financial and social capital of pastoralist livelihoods.

In pastoral communities, ownership of large herds is also an important determinant of social status and prestige. Clan based marketing is an important feature of the livestock marketing chain, both in the focus areas of this study and in the livestock trade in the Horn of Africa generally, is its strong reliance on personal and clan relationships based on trust. Poor and uneven access to market information is a well-known constraint to livestock trade in the region. There has been a stark contrast between the level of trading activity and market infrastructure development in the market sites, making trade extremely unpredictable.

Locally, studies have been carried out in relation to livestock marketing such as; Mohammed (2009) who did a study on efficiency of cattle marketing in Kajiado District, Kenya, Abdullahi (2014) did a research on market price determinants of live cattle: the case of Garissa livestock market, Ogara (2007) established the challenges and opportunities in livestock marketing in Kenya under the current economic and market realities: policy concerns. However, none of these studies focused on factors influencing livestock marketing in Marsabit Region. Therefore, this study seeks to fill this gap by establishing factors influencing livestock marketing in Marsabit Region: a case of Merille livestock market.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the procedures and techniques that were used in the collection, processing and analysis of data. Specifically, the following subsections were included; research design, target population, sample size and sampling procedures, methods of data collection procedures, pilot testing, data analysis techniques, ethical considerations and finally operational definition of variables.

#### **3.2 Research Design**

Gorard (2013) noted that study design is an outline which enhances the smooth running of the different research operations, thereby making it as effective as possible thereby producing maximum data with minimum expenses in endeavour, time and funds. Bryman and Bell (2011) assert that a descriptive survey design sought to get information that describes existing phenomena by asking questions relating to individual perceptions and attitudes. It entailed gathering information that describes happenings and then categorizes, tabulates, represents and describes the information. A descriptive research shows the variables by giving response on what, how and who responds to questions (Krueger & Casey, 2014). Since this research was determining the factors influencing livestock marketing in Marsabit region: a case of Merille Livestock Market, descriptive research was then the most excellent design to employ.

#### **3.3 Target Population**

Yin, (2017) defined population as the whole group of people or items under reflection in any field of investigation and have a common element. The target population under the study included; County Officials, Ministry of livestock officials, Livestock Traders, Residents, Marketing group committees and Administrative leaders as shown in Table 3.1.

**Table 3. 1: Target Population**

Category	Target population	Percentage
County Officials	17	3.3
Ministry of livestock officials	15	2.9
Livestock Traders	76	14.8
Residents	319	62.3
Marketing group committees	72	14.1
Administrative leaders	13	2.5
<b>Total</b>	<b>512</b>	<b>100.0</b>

**3.4 Sample Size and Sampling procedures**

The study captured the County Officials, Marsabit Residents and livestock traders involved in Livestock marketing in Merille Livestock Market. This section included the sample size determination and sampling procedures.

**3.4.1 Sample Size**

Random sampling was used to obtain the study sample proportionately. Further, the sample was drawn using the formula by Kathuri and Pals (1993) is as follows:

$$n = \frac{\chi^2 NP (1-P)}{\sigma^2 (N - 1) + \chi^2 P (1 - P)}$$

Where:

n = required sample size

N = the given population size from the sampling frame

P = Population proportion, assumed to be 0.50

$\sigma^2$  = the degree of accuracy;  $\sigma$  value is 0.05

$\chi^2$  = Table value of chi-square for one degree of freedom, which is 3.841

**Table 3. 2: Sample Size**

Category	Target population	Percentage	Sample
County Officials	17	42.9	7
Ministry of livestock officials	15	42.9	6
Livestock Traders	76	42.9	33
Residents	319	42.9	137
Marketing group committees	72	42.9	31
Administrative leaders	13	42.9	6
<b>Total</b>	<b>512</b>		<b>219</b>

### 3.4.2 Sampling procedures

Stratified proportionate random sampling method was applied to choose the respondents. Stratified random sampling is impartial sampling way of grouping varied population into homogenous subsets then creating a choice within the individual subset to make sure representativeness. The objective of stratified random sampling is to realize the desired representation from different sub-groups in the populace (Garg & Kothari, 2014).

In stratified random sampling subjects are selected in such a manner that the existing sub-groups in the populace are more or less represented in the sample. The method as well involves dividing the populace into a series of applicable strata, which means that the sample is expected to be more representatives (Saunders et al., 2009).

### 3.5 Methods of Data Collection

This research applied primary data. Primary data as defined by Bell (2014) is the data gathered for the first time whereas secondary data is the data which has previously been gathered and taken through statistical procedure. The use of questionnaires was the generally applied approach when respondents are accessible and are ready to respond appropriately. Brewer (2010) noted that the questionnaire design states the problem and the specific research objectives. In this study, the questionnaires consisted of open ended as well as closed ended questions. The open-ended questions allowed the respondents to communicate their thoughts and behaviour in line with the research questions. The questionnaires were distributed by use of drop-and-pick later method to the respondents. This method was applied where the respondents are away or are not in a position to fill the questionnaire right away due to limitation of time

### **3.6 Pilot Testing**

Pilot testing refers to putting of the research questions into test to a different study population but with similar characteristics as the study population to be studied (Kumar, 2005). According to Yin (2011), a pilot study comprised of 10% of the actual sample size. In this study therefore, the respondents for pilot study was 20. After one day, the same participants were requested to respond to the same questionnaires but without prior notification in order to ascertain any variation in responses of the first and the second test. This is very important in the research process because it assists in identification and correction of vague questions and unclear instructions. It is also a great opportunity to capture the important comments and suggestions from the participants. This helped to improve on the efficiency of the instrument. This process was repeated until the researcher is satisfied that the instrument does not have variations or vagueness.

### **3.7 Validity of Research Instruments**

According to Kothari (2004), validity is the accuracy and meaningfulness of inferences, based on the research results. One of the main reasons for conducting the pilot study is to ascertain the validity of the questionnaire. The study used content validity which draws an inference from test scores to a large domain of items similar to those on the test. Content validity is concerned with sample-population representativeness. Yin (2011) stated that the knowledge and skills covered by the test items should be representative to the larger domain of knowledge and skills. Expert opinion was requested to comment on the representativeness and suitability of questions and give suggestions of corrections to be made to the structure of the research tools. This helped to improve the content validity of the data that was collected. Content validity was obtained by asking for the opinion of the supervisor, lecturers and other professionals on whether the questionnaire was adequate.

### **3.8 Reliability of Research Instruments**

Instrument reliability on the other hand is the extent to which a research instrument produces similar results on different occasions under similar conditions. It's the degree of consistency with which it measures whatever it is meant to measure (Bell, 2010). Reliability is concerned with the question of whether the results of a study are repeatable. The questionnaires were administered to a pilot group of 20 randomly selected respondents from the sample population and their responses used to check the reliability of the tool. This comprised of 10% of the sample size. A construct composite reliability co-efficient (Cronbach alpha) of 0.7 or above, for all the constructs, is considered to be adequate for this study (Rousson, Gasser & Seifer, 2012).



Reliability coefficient of the research instrument was assessed using Cronbach's alpha ( $\alpha$ ) which is computed as follows:

$$A = k/k-1 \times [1 - \sum (S^2) / \sum S^2_{sum}]$$

Where:

$\alpha$  = Cronbach's alpha

k = Number of responses

$\sum (S^2)$  = Variance of individual items summed up

$\sum S^2_{sum}$  = Variance of summed up scores

### 3.9 Data Analysis Techniques;

Data analysis is a process of inspecting, cleansing, transforming and modelling data with the goal of discovering useful information, suggesting conclusions, and supporting decision-making. In this study Statistical Package for Social Sciences (SPSS Version 25.0) was used for analysis. All the questionnaires received were referenced and items in the questionnaire were coded to facilitate data entry. After data cleaning, which entails checking for errors in entry, descriptive statistics such as frequencies, percentages, mean score and standard deviation was estimated for all the quantitative variables and information presented in form of frequency tables. The qualitative data from the open-ended questions were analyzed using conceptual content analysis and presented in prose.

In addition, inferential data analysis was done using multiple regression analysis. Multiple regression analysis was used to establish the relations between the independent and dependent variables. Multiple regressions were used because it is the procedure that uses two or more independent variables to predict a dependent variable. Since there are four independent variables in this study the multiple regression model generally assumes the following equation;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where: -

Y = Livestock marketing

$\beta_0$  = constant,  $\beta_1, \beta_2, \beta_3$  and  $\beta_4$  = regression coefficients

$X_1$  = Socioeconomic characteristics

$X_2$  = Regional conflict

$X_3$  = Access to market information

$X_4$  = Livestock market infrastructure management

$\epsilon$  = Error Term

### **3.10 Ethical Considerations**

In accordance to Kothari (2004), morals entail making a decision on moral and immoral behaviour. Morals as indicated by National Research Council (2002) are described as standards leading human behaviour which have a considerable influence on human wellbeing in this research, privacy was of concern as the data significant to the research is of strategic significance. Incidentally, the respondents' names were not revealed and any other information given was held confidential. In addition, the researcher sought the informed consent of the respondents before administering the questionnaires. The questions were only administered to respondents who had consent to participate in the study.

### 3.11 Operational Definition of Variables

The Operationalization of variables was shown in Table 3.3.

**Table 3. 3: Operationalization of variables**

<b>Objectives</b>	<b>Type of Variable</b>	<b>Indicator</b>	<b>Measuring of Indicators</b>	<b>Scale</b>	<b>Tools of analysis</b>	<b>Type of analysis</b>
To assess how Socioeconomic characteristics influence on livestock marketing in Marsabit region	Independent	Socio-economic characteristics	Education Cultural practices Land use and tenure Level of income	Nominal interval ordinal	Percentages Mean score	Descriptive statistics Regression analysis
To determine the influence of regional conflict on livestock marketing in Marsabit region.	Independent	Regional conflict	Livestock raiding Cultural clash on decision-making Fight for grazing land and water points Destitution and displacement Insecure markets Residents being killed	Nominal Interval Interval ordinal Nominal	Percentages Mean score	Descriptive statistics Regression analysis

To determine influence of Access to market information on livestock marketing in Marsabit region	Independent	Access to market information	Prices Sales volumes Disease status National and international demand	Nominal Nominal Nominal	Percentages Mean score	Descriptive statistics Regression analysis
To examine the influence of Livestock market infrastructure management on livestock marketing in Marsabit region.	Independent	Livestock market infrastructure management	Loading ramp Fence Watering and feeding troughs Transportation trucks Adequate shaded place for livestock	Interval Ordinal Interval Ordinal Ratio	Percentages Mean score	Descriptive statistics Regression analysis
	Dependent	Livestock marketing	Flexibility Efficiency Marketing cooperatives available Licence fee for dealers	Nominal	Mean score	Descriptive statistics Regression analysis

			Number of animals exhibited for sale			
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## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

#### 4.1 Introduction

This chapter presents the findings obtained from the data collected using questionnaires. It discusses the characteristics of the respondents and their opinions on factors influencing livestock marketing in Merille livestock market. The researcher summarized the collective reactions of the respondents and presented in tables with their interpretations presented in prose.

#### 4.2 Response Rate

The researcher administered questionnaires to 219 respondents but only 157 were able to return fully filled questionnaires. This gave a response rate of 71.7% which was within what Gorard (2013) prescribed as a significant response rate for statistical analysis and established it at a minimal value of 50%.

**Table 4. 1: Response Rate**

	<b>Respondents</b>	<b>Response Rate</b>
Response	157	71.7%
Non-response	62	28.3%
<b>Total</b>	<b>219</b>	<b>100</b>

#### 4.3 Reliability Analysis

Reliability analysis was subsequently done using Cronbach's Alpha which measures the internal consistency by establishing if certain items within a scale measure the same construct. The Cronbach Alpha was established for every objective which formed a scale. Table 4.2 shows the reliability analysis results.

**Table 4. 2: Reliability Analysis**

	<b>Alpha value</b>	<b>Comments</b>
Socio Economic Characteristics	0.713	Reliable
Regional conflict	0.866	Reliable
Access to market information	0.723	Reliable
Livestock market infrastructure and management	0.787	Reliable

The findings in Table 4.2 illustrates that all the four variables were reliable as their reliability values exceeded the prescribed threshold of 0.7, Kothari (2004). This, therefore, depicts that the research instrument was reliable and therefore required no amendments.

#### 4.4 Background Information

This section required the respondents to indicate their general information including their highest level of education and how long they have been involved in livestock marketing. This was to ascertain the eligibility of the respondents to participate in the study. This general information is presented in form tables.

##### 4.4.1 Highest Level of Education

The respondents were asked to indicate their highest level of education. Their responses were presented in Table 4.3.

**Table 4. 3: Highest Level of Education**

	<b>Frequency</b>	<b>Percent</b>
Certificate	86	54.8
Diploma	36	22.9
Bachelors	22	14.0
Masters	10	6.4
PhD	3	1.9
<b>Total</b>	<b>157</b>	<b>100.0</b>

From the findings, majority of the respondents were in certificate level as shown by 54.8%. Other respondents were in diploma level as shown by 22.9%, bachelors' level as shown by 14%, masters' level as shown by 6.4% and PhD level as shown by 1.9%. This indicates that all the respondents had basic education to be able to comprehend the subject under study and give reliable information.

##### 4.4.2 Period of Involvement in Livestock Marketing

The respondents were requested to indicate how long they have been involved in livestock marketing. Their responses were as shown in Table 4.4.

**Table 4. 4: Period of Involvement in Livestock Marketing**

	<b>Frequency</b>	<b>Percent</b>
Less than 3 years	30	19.1
4-6 years	41	26.1
7-9 years	71	45.2
10 years and above	15	9.6
<b>Total</b>	<b>157</b>	<b>100</b>

From the findings, most of the respondents indicated that they have been involved in livestock marketing for 7 to 9 years as illustrated by 45.2%, for 4 to 6 years as shown by 26.1%, for less than 3 years as indicated by 19.1% and for 10 years and above as expressed by 9.6%. This shows that most of the respondents were familiar with marketing and the information they gave could be relied upon.

#### **4.5 Factors Influencing Livestock Marketing;**

The study established the factors influencing livestock marketing in Marsabit region, a case of Merille livestock market. These factors included socio economic characteristics, regional conflict, access to market and livestock market infrastructure and management.

##### **4.5.1 Socio Economic Characteristics;**

The researcher asked the respondents using a Likert scale of 1-5 to indicate the extent to which socio-economic characteristics influence livestock marketing in Merille livestock market. Their responses were presented in Table 4.5.

**Table 4. 5: Extent of Influence of Socio Economic Characteristics**

	<b>Frequency</b>	<b>Percent</b>
Low extent	9	5.7
Moderate extent	40	25.5
Great extent	53	33.8
Very great extent	55	35.0
<b>Total</b>	<b>157</b>	<b>100</b>



From the findings, the respondents indicated that socio economic characteristics influence livestock marketing in Merille livestock market very greatly as shown by 35%, greatly as indicated by 33.8%, moderately as shown by 25.5% and lowly as shown by 5.7%. This clearly implies that socio economic characteristics influence livestock marketing in Merille livestock market very greatly.

Further, the researcher requested the respondents to use a Likert scale of 1-5 and indicate the extent to which aspects of socio economic characteristics influence livestock marketing in Merille livestock market. Their replies were illustrated in Table 4.6.

**Table 4. 6: Extent of Influence of Aspects of Socio Economic Characteristics**

	<b>Mean</b>	<b>Std. Dev.</b>
Education	4.369	.811
Cultural practices	3.917	.808
Land use and tenure	2.637	.579
Level of income	3.561	.592

As per the study findings, the respondents indicated that education as expressed by a mean of 4.369, cultural practices as indicated by a mean of 3.917 and level of income as shown by an average of 3.561 influence livestock marketing in Merille livestock market in a great extent. However, the respondents indicated that land use and tenure as expressed by a mean of 2.637 influence livestock marketing in Merille livestock market in a moderate extent.

#### **4.5.2 Regional Conflict**

The respondents were asked to indicate the extent to which regional conflict influence livestock marketing in Merille livestock market. Their answers were as illustrated in Table 4.7.

**Table 4. 7: Extent of Regional Conflict Influence on Livestock Marketing**

	<b>Frequency</b>	<b>Percent</b>
Low extent	16	10.2
Moderate extent	44	28.0
Great extent	65	41.4
Very great extent	32	20.4
<b>Total</b>	<b>157</b>	<b>100</b>

From the study findings, the respondents indicated that regional conflict influence livestock marketing in Merille livestock market in a great extent as shown by 41.4%, in a moderate extent as shown by 28%, and in a very great extent as shown by 20.4% and in a low extent as shown by 10.2%. This implies that regional conflict influence livestock marketing in Merille livestock market in a great extent.

The researcher also asked the respondents to indicate the extent to which aspects of regional conflict influence livestock marketing in Merille livestock market using a Likert scale of 1-5. Their responses were as shown in Table 4.8.

**Table 4. 8: Extent of Influence of Regional Conflict Aspects on Livestock Marketing**

	<b>Mean</b>	<b>Std. Dev.</b>
Livestock raiding	4.083	.862
Cultural clash on decision-making	3.936	.904
Fight for grazing land and water points	2.522	.584
Destitution and displacement	4.178	.813
Insecure markets	3.905	.883
Residents being killed	2.433	.580

From the findings, the respondents indicated that destitution and displacement as indicated by a mean of 4.178, livestock raiding as shown by a mean of 4.083 and cultural clash on decision-making as expressed by a mean score of 3.936 as well as insecure markets as indicated as shown by a mean of 3.905 influence livestock marketing in Merille livestock market in a great extent. Moreover, the respondents indicated that fight for grazing land and water points as illustrated by

a mean of 2.522 influenced livestock marketing in Merille livestock market in a moderate extent while residents being killed as shown by a mean of 2.433 influenced livestock marketing in Merille livestock market in a low extent.

#### 4.5.3 Access to Market Information

The researcher also requested the respondents to give their response on the extent to which access to market information influence livestock marketing in Merille livestock market. Their responses were as shown in Table 4.9.

**Table 4. 9: Extent of Access to Market Information Influence**

	Frequency	Percent
Low extent	12	7.6
Moderate extent	54	34.4
Great extent	69	43.9
Very great extent	22	14.0
<b>Total</b>	<b>157</b>	<b>100</b>

The respondents indicated that access to market information influence livestock marketing in Merille livestock market in a great extent as illustrated by 43.9%, in a moderate extent as illustrated by 34.4%, in a very great extent as illustrated by 14% and in a low extent as shown by 7.6%. This implied that access to market information influence livestock marketing in Merille livestock market in a great extent. The researcher also asked the respondents to give their response on the extent to which access to market information aspects influence livestock marketing in Merille livestock market. Their responses were as shown in Table 4.10.

**Table 4. 10: Extent of Access to Market Information Influence**

	Mean	Std. Dev.
Prices	4.115	.869
Sales volumes	3.720	.890
Disease status	2.478	.584
National and international demand	3.962	.876

As per the study findings, the respondents indicated that prices as illustrated by a mean of 4.115, national and international demand as shown by a mean of 3.962 and sales volumes as indicated as shown by a mean of 3.720 influence livestock marketing in Merille livestock market in a great extent. However, the respondents indicated that disease status as expressed by a mean score of 2.478 influence livestock marketing in Merille livestock market in a low extent.

#### **4.5.4 Livestock Market Infrastructure and Management**

The researcher asked the respondents to give their response on the extent to which Livestock market infrastructure and management influences livestock marketing in Merille livestock market. Their responses were as shown in Table 4.11.

**Table 4. 11: Extent of Livestock Market Infrastructure and Management Influence**

	<b>Frequency</b>	<b>Percent</b>
Low extent	30	19.1
Moderate extent	35	22.3
Great extent	63	40.1
Very great extent	29	18.5
<b>Total</b>	<b>157</b>	<b>100</b>

From the findings, the respondents revealed that livestock market infrastructure and management influences livestock marketing in Merille livestock market in a great extent as shown by 40.1%, in a moderate extent as shown by 22.3%, in a low extent as shown by 19.1% and in a very great extent as shown by 18.5%. This clearly reveals that livestock market infrastructure and management influences livestock marketing in Merille livestock market in a great extent.

The researcher further asked the respondents to give their response on the extent to which Livestock market infrastructure and management influences livestock marketing in Merille livestock market. Their responses were as shown in Table 4.12.

**Table 4. 12: Extent of Livestock Market Infrastructure and Management Influence**

	<b>Mean</b>	<b>Std. Dev.</b>
Loading ramp	4.184	.792
Fence	2.739	.671
Watering and feeding troughs	4.236	.761
Transportation trucks	4.063	.806
Adequate shaded place for livestock	2.898	.833

From the findings, the respondent showed that watering and feeding troughs as shown by a mean of 4.236, loading ramp as expressed by a mean of 4.184 and transportation trucks as illustrated by a mean of 4.063 influence livestock marketing in Merille livestock market in a great extent. However, the respondents indicated that adequate shaded place for livestock as indicated as shown by a mean of 2.898 and fence as expressed by a mean score of 2.739 influence livestock marketing in Merille livestock market in a moderate extent.

#### **4.5.5 Livestock Marketing in Merille Livestock Market**

The researcher requested the respondents to indicate the trend of the various aspects of livestock marketing in Merille livestock market for the last five years. Their collective responses were presented in Table 4.13.

**Table 4. 13: Trend of Livestock Marketing in Merille Livestock Market**

	<b>Mean</b>	<b>Std. Dev.</b>
Flexibility	4.242	.827
Efficiency	3.911	.835
Marketing cooperatives available	3.223	.739
Licence fee for dealers	4.210	.809
Number of animals exhibited for sale	3.955	.983

The respondents indicated that flexibility as illustrated by a mean of 4.242, licence fee for dealers as shown by a mean of 4.210, number of animals exhibited for sale as shown by a mean of 3.955 and efficiency as expressed by a mean score of 3.911 have improved over the last five

years. However, the respondents indicated that marketing cooperatives available as indicated as shown by a mean of 3.223 had been constant for the last five years.

#### 4.6 Regression Analysis

The researcher conducted a multiple regression analysis to test the relationship between the variables. This showed how the dependent variable is influenced by the independent variables.

**Table 4. 14: Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>
1	0.865	0.748	0.741	0.807

From the findings, the independent variables were statistically significant predicting the dependent variable since adjusted R square was 0.741. This implied that 74.1% variations in livestock marketing in Merille Livestock Market are explained by socio-economic characteristics, regional conflict, and access to market information and livestock market infrastructure and management. Other factors influencing livestock marketing in Merille Livestock Market that were not covered in this study accounted for 35.9% which calls for further studies.

**Table 4. 15: ANOVA Test**

<b>Model</b>		<b>Sum of Squares</b>	<b>Df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	299.111	4	74.778	112.522	.000
	Residual	101.013	152	0.665		
	<b>Total</b>	<b>400.124</b>	<b>156</b>			

From the ANOVA Table, p-value was 0.000 and F-calculated was 112.52. Since p-value was less than 0.05 and the F-calculated was greater than F-critical (2.4472), then the regression relationship was significant in determining how socio-economic characteristics, regional conflict, and access to market information and livestock market infrastructure and management influenced Livestock Marketing in Merille Livestock Market.

**Table 4. 16: Coefficients of Determination**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.981	0.092		10.663	.000
Socio Economic Characteristics	0.812	0.181	0.714	4.486	.001
Regional conflict	0.631	0.308	0.506	1.984	.042
Access to market information	0.768	0.206	0.662	3.728	.000
Livestock market infrastructure and management	0.862	0.276	0.771	3.123	.003

The established model for the study was:

$$Y = 0.981 + 0.812X_1 + 0.612X_2 + 0.768X_3 + 0.862X_4$$

Where: -

Y= Livestock Marketing in Merille Livestock Market

X<sub>1</sub>= Socio Economic Characteristics

X<sub>2</sub>= Regional conflict

X<sub>3</sub>= Access to market information

X<sub>4</sub>= Livestock market infrastructure and management

The regression equation above has established that taking (Socio-economic characteristics, regional conflict, access to market information and livestock market infrastructure and management), Livestock Marketing in Merille Livestock Market will be 0.981. The findings presented also show that increase in the socio-economic characteristics leads to 0.812 increase in the score of livestock marketing in Merille Livestock Market if all other variables are held constant.

Further it was found that if regional conflict increases, there is a 0.812 increase in Livestock Marketing in Merille Livestock Market. Further, the findings show that a unit increases in the scores of managements support would leads to 0.768 increases in the scores of Livestock Marketing in Merille Livestock Market. The study also found that a unit increases in the scores of Livestock market infrastructure and management would lead to a 0.862 increase in the scores of Livestock Marketing in Merille Livestock Market.

Overall, Livestock market infrastructure and management had the greatest influence on Livestock Marketing in Merille Livestock Market followed by socio economic characteristics,

then access to market information while regional conflict had the least influence on the Livestock Marketing in Merille Livestock Market. All the variables were significant since their p-values were less than 0.05.



## CHAPTER FIVE

### SUMMARY, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presented summary and discussion of the findings, conclusions as well as the recommendations of the study. This study focused on the factors influencing livestock marketing in Merille livestock market.

#### 5.2 Summary

The study sought to establish the influence of socio economic characteristics on livestock marketing in Merille livestock market. It was clear that socio economic characteristics influence livestock marketing in Merille livestock market very greatly. The study revealed that the residents' education, cultural practices and level of income influence livestock marketing in Merille livestock market greatly. It was also established that land use and tenure moderately influence livestock marketing in Merille livestock market.

Further the study sought to assess the influence of regional conflict on livestock marketing in Merille livestock market. Regional conflict was found to influence livestock marketing in Merille livestock market greatly. Moreover, it was clear that destitution and displacement, livestock raiding and cultural clash on decision-making as well as insecure markets influence livestock marketing in Merille livestock market greatly. Further the study found that fight for grazing land and water points moderately influenced livestock marketing in Merille livestock market while residents being killed lowly influenced livestock marketing in Merille livestock market.

The study further sought to evaluate the influence of access to market information on livestock marketing in Merille livestock market. The study established that access to market information greatly influence livestock marketing in Merille livestock market. It was clear those prices, national and international demand and sales volumes greatly influence livestock marketing in Merille livestock market. Further the study found that disease status lowly influence livestock marketing in Merille livestock market.

Finally, the study sought to determine the influence of livestock market infrastructure and management on livestock marketing in Merille livestock market. The study found that livestock

market infrastructure and management influences livestock marketing in Merille livestock market. The study established that watering and feeding troughs, loading ramp and transportation trucks influence livestock marketing in Merille livestock market greatly. Moreover, the study revealed that adequate shaded place for livestock and fence moderately influences livestock marketing in Merille livestock market.

### **5.3 Discussion of the Findings**

This section presents the discussion the findings where the results were linked to the literature review. The study focused on four factors that include socio-economic characteristics, regional conflict, and access to market information and livestock market infrastructure and management.

#### **5.3.1 Socio-Economic Characteristics**

The study found that socio economic characteristics influence livestock marketing in Merille livestock market very greatly. This is in line with Fahmi (2014) who argue that clan-based marketing is an important feature of the livestock marketing chain, both in the focus areas of this study and in the livestock trade in the Horn of Africa generally, is its strong reliance on personal and clan relationships based on trust.

The study revealed that the residents' education, cultural practices and level of income influence livestock marketing in Merrille livestock market greatly. It was also established that land use and tenure moderately influence livestock marketing in Merille livestock market. Zerga (2015) argues that in the absence of formal systems of credit enforcement, weak infrastructural and market support services and widespread insecurity in pastoral areas, the informal institution of livestock marketing is sustained by high levels of social capital among key market actors. In this uncertain business environment, the social ties based on clan affiliation and kinship that bind livestock marketing actors together become an important risk management mechanism.

#### **5.3.2 Regional Conflict**

Regional conflict was found to influence livestock marketing in Merille livestock market greatly. Moreover, it was clear that destitution and displacement, livestock raiding and cultural clash on decision-making as well as insecure markets influence livestock marketing in Merrille livestock market greatly. This concurs with Brottem (2016) who noted that many local civil society organizations have programmes to manage conflict, and international NGOs, intergovernmental

organizations and donors are increasingly preoccupied with understanding conflict and experimenting with solutions. There is an urgent need for a stocktaking of our present analysis of conflict, and the lessons we can draw from experience so far of conflict mediation and management.

Further the study found that fight for grazing land and water points moderately influenced livestock marketing while residents being killed lowly influenced livestock marketing in Merille livestock market. In addition, the failure of the public to respond decisively and expeditiously to drought-induced distress has increased pastoralists vulnerability to the vagaries of the weather. Regional instability in neighboring countries has negatively impacted on the Kenyan pastoral economy.

### **5.3.3 Access to Market Information**

The study established that access to market information greatly influence livestock marketing in Merille livestock market. It was clear those prices, national and international demand and sales volumes greatly influence livestock marketing in Merille livestock market. These findings correlate with Dibaba (2017) who argues that depending on the severity and urgency of household needs, producers may decide not to sell if the price offered is too low and does not meet their expectations. In other instances, household needs may be such that producers cannot afford to base their marketing decisions on prices but must sell however low the price: access to livestock prices before trekking to the market was seen as largely irrelevant.

Further the study found that disease status lowly influence livestock marketing in Merille livestock market. This is similar to Aklilu and Catley (2010) who note that key challenges to effective price information dissemination include the remoteness of pastoral communities, high levels of illiteracy and in some case the disruption of dissemination efforts by traders and brokers' intent on preventing producers from accessing market information.

### **5.3.4 Livestock Market Infrastructure and Management**

The study found that livestock market infrastructure and management influences livestock marketing in Merille livestock market. This is in line with Kandachar and Halme (2017) who argues that in Kenya, the lack of an integrated policy and institutional framework between the

Ministry of Livestock Development (MLD) and local County Councils has constrained the development of livestock marketing.

The study established that watering and feeding troughs, loading ramp and transportation trucks influence livestock marketing in Merille livestock market greatly. Moreover, the study revealed that adequate shaded place for livestock and fence moderately influences livestock marketing in Merille livestock market. These findings conform to Kandachar and Halme (2017) who noted that decades of inappropriate and biased national policies, protracted isolation and the lack of representation of pastoralists within the national political arena, deeply rooted misconceptions about pastoralism among national decision-makers and the neglect of pastoral areas in the provision of basic services have all led to mutual mistrust and suspicion.

#### **5.4 Conclusions**

The study concluded that socio economic characteristics very greatly, positively and significantly influence the livestock marketing in Merille livestock market. This was attributed to the fact that there was a great influence on livestock marketing by residents' education, cultural practices as well as level of income. It was also established that land use and tenure moderately influence livestock marketing in Merille livestock market.

Further the study concluded that regional conflict significantly influences livestock marketing in Merille livestock market. This was attributed to the fact that destitution and displacement, livestock raiding and cultural clash on decision-making as well as insecure markets influence livestock marketing greatly. The study also deduced that fight for grazing land and water points moderately influenced livestock marketing.

The study also concluded that access to market information greatly and significantly influence livestock marketing in Merille livestock market. The study deduced those prices, national and international demand and sales volumes greatly influence livestock marketing and that disease status lowly influence livestock marketing in Merille livestock market.

The study further concluded that livestock market infrastructure and management influences livestock marketing in Merille livestock market positively and significantly. It was deduced that watering and feeding troughs, loading ramp and transportation trucks influence livestock

marketing in Merille livestock market greatly. Moreover, the study made it clear that adequate shaded place for livestock and fence moderately influence livestock marketing.

### **5.5 Recommendations**

The study recommends that Livestock Marketing Association and the animal producers need to be capacity built in management of the livestock market and livestock productivity respectively. Livestock Marketing Association requires various trainings in proper management of modern livestock market so as to achieve the projected performance of the market through adoption and implementation of best livestock market management practices. Animal producers on the other hand need to be trained in best animal husbandry practices so that they can increase their production to meet market demand and quality specifications such as marketing requirement in-terms of age, weight and meat quality. The most important capacity building should be geared towards information sharing between the market, animal keepers and traders so that both can know the quantity and prices of animals offered at each specific day of market operation. This can be made easier by linking the market management with the organizations that have developed simple applications for sharing information at livestock markets.

There is also a need for appropriate revenue sharing formula to be adopted between county Government and local Livestock marketing association. The revenue collected from the market should benefit both the County government and the community, and this requires that the two parties come up with appropriate sharing formula (than the current one) to ensure that the community benefits maximally from the market. Low benefits for the community will not give any incentives for the people of Merille to participate in the market as the success of the market is entirely dependent on the positive involvement of the community for the ownership and eventual sustainability.

The study also recommends that there is a need to adopt and implement best livestock management practices: The County government and Livestock Marketing Association need to adopt and implement the best livestock market management practices geared towards improving markets and increase innovations for value chain in order to increase production and prices. These practices will act as the guidelines on how to run the market as a profitable business. The County government should be in forefront in enforcing the adoption and implementation of these

practices, making sure that the Livestock Marketing Association activities are streamlined to meet the objectives of the market.

The study also recommends that county government need to further invest in the livestock markets. This will increase the revenue of the market. These investments must be aimed at increasing the number of infrastructures and services available at the market to meet the preferences of all market users. Other support needed includes passing of legislature to govern the market, creation of disease free zones and posting of staff to make agro-vet centre and other potential infrastructures in Livestock marketing arena operational. County government and Livestock Marketing Association need to install necessary infrastructure such as animal weighbridge, electricity and internet and more stalls that will make possible to implement practices such as grading, online sales, creation of websites and information sharing to make the market a desired business hub.

The study further recommends that Livestock Marketing Association as well as the county government need to encourage active participation of women and youth in all livestock markets by incorporating more income activities (holding grounds, retailing shops, food stalls) in the market that support businesses/ventures operated by youth and women.

There is also a need to create information online sharing system between livestock producers, buyers and vendors in the market. The county governments in conjunction with other stakeholders in livestock value need to create information sharing software that will enable the customers from end markets to view livestock photos, make order and payments without the need to be at the market. The livestock producers on the hand will be able to take photos and upload them on the website and get current prices of livestock for the animals.

#### **5.6 Recommendations for Further Studies**

This study was limited to factors influencing livestock marketing in Marsabit region, a case of Merille livestock market. Therefore, there is a need to conduct another study focusing on other regions in Kenya with Livestock markets to establish the factors affecting Livestock markets.

The study was also limited to Merille Livestock Market only. Therefore, the study suggests that the same study need to be done focusing on other Livestock markets in Marsabit region,

especially along cross border areas with Ethiopia to determine the factors affecting the Livestock marketing.

The study on factors influencing livestock marketing in Merille Livestock Market are explained by socio-economic characteristics, regional conflict, and access to market information and livestock market infrastructure and management accounted for 74.1%. Other factors influencing livestock marketing in Merille Livestock Market that were not covered in this study accounted for 35.9% which calls for further studies.

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## **APPENDICES**

### **Appendix I: Introduction Letter for Respondents**

Dear Sir/Madam,

#### **RE: LETTER OF INTRODUCCION**

I am a Master of Arts in Project Planning and Management student at University of Nairobi. I wish to conduct a research entitled: Factors Influencing Livestock Marketing in Marsabit Region: A case of Merille Livestock Market.

Kindly spare some time to complete the questionnaire attached herein. The information given will be handled with utmost confidentiality.

Yours faithfully

ARERO HALKANO

**Reg No: L50/61099/2010**

**Appendix II: Research Questionnaire**

All the information in this questionnaire will be treated with strict confidentiality.

**SECTION ONE: GENERAL INFORMATION**

1. Indicate highest Level of Education

PHD [ ] Masters [ ] Bachelors [ ] Diploma [ ] Certificate [ ]

2. How long have you been involved in livestock marketing?

Less than 3 years [ ] 4-6 years [ ] 7-9 years [ ]

10 years and above [ ]

**SECTION B: FACTORS INFLUENCING LIVESTOCK MARKETING IN MARSABIT REGION, A CASE OF MERILLE LIVESTOCK MARKET:**

**Socio Economic Characteristics**

3) To what extent does a socio economic characteristic influence livestock marketing in Merille livestock market?

Very great extent [ ] Great extent [ ]

Moderate extent [ ] Little extent [ ] No extent [ ]

4) Please indicate the extent that the following aspects of socio economic characteristics influence livestock marketing in Merille livestock market?

Where: 5- Very Great Extent      4-Great Extent      3-Moderate Extent

2-Low Extent      1- No Extent

	1	2	3	4	5
Education					
Cultural practices					
Land use and tenure					
Level of income					

5) In what ways does a socio economic characteristic influence livestock marketing in Merille livestock market?

.....  
 .....

**Regional conflict**

6) To what extent does regional conflict influence livestock marketing in Merille livestock market?

Very great extent [ ] Great extent [ ]  
 Moderate extent [ ] Little extent [ ] No extent [ ]

7) Please indicate the extent that the following aspects of regional conflict influence livestock marketing in Merille livestock market?

Where: 5- Very Great Extent      4-Great Extent      3-Moderate Extent  
 2-Low Extent      1- No Extent

	1	2	3	4	5
Livestock raiding					
Cultural clash on decision-making					
Fight for grazing land and water points					
Destitution and displacement					
Insecure markets					
Residents being killed					

8) In what ways does regional conflict influence livestock marketing in Merille livestock market?

.....  
 .....

**Access to market information**

To what extent does access to market information influence livestock marketing in Merille livestock market?

Very great extent [ ] Great extent [ ]  
 Moderate extent [ ] Little extent [ ] No extent [ ]

9) Please indicate the extent that the following aspects of access to market information influence livestock marketing in Merille livestock market?

Where: 5- Very Great Extent      4-Great Extent      3-Moderate Extent  
 2-Low Extent      1- No Extent

	1	2	3	4	5
Prices					
Sales volumes					
Disease status					
National and international demand					

10) In what ways does access to market information influence livestock marketing in Merrille livestock market?

.....  
 .....

**Livestock market infrastructure and management**

4) To what extent does livestock market infrastructure and management influence livestock marketing in Merille livestock market?

Very great extent [ ] Great extent [ ]  
 Moderate extent [ ] Little extent [ ] No extent [ ]

5) Please indicate the extent that the following aspects of livestock market infrastructure and management influence livestock marketing in Merille livestock market?

Where: 5- Very Great Extent    4-Great Extent    3-Moderate Extent  
 2-Low Extent    1- No Extent

	1	2	3	4	5
Loading ramp					
Fence					
Watering and feeding troughs					
Transportation trucks					
Adequate shaded place for livestock					

6) In what ways does livestock market infrastructure and management influence livestock marketing in Merille livestock market?

.....  
 .....



**Livestock marketing**

4) What has been the trend of livestock marketing in Merille for the last five years?

Where: 5- Greatly Improved                      4-Improved                      3-Constant  
2-Decreased                      1- Greatly Decreased

	1	2	3	4	5
Flexibility					
Efficiency					
Marketing cooperatives available					
Licence fee for dealers					
Number of animals exhibited for sale					

5) In your opinion what do you recommend should be done to improve livestock marketing in Merille livestock market?

.....  
.....

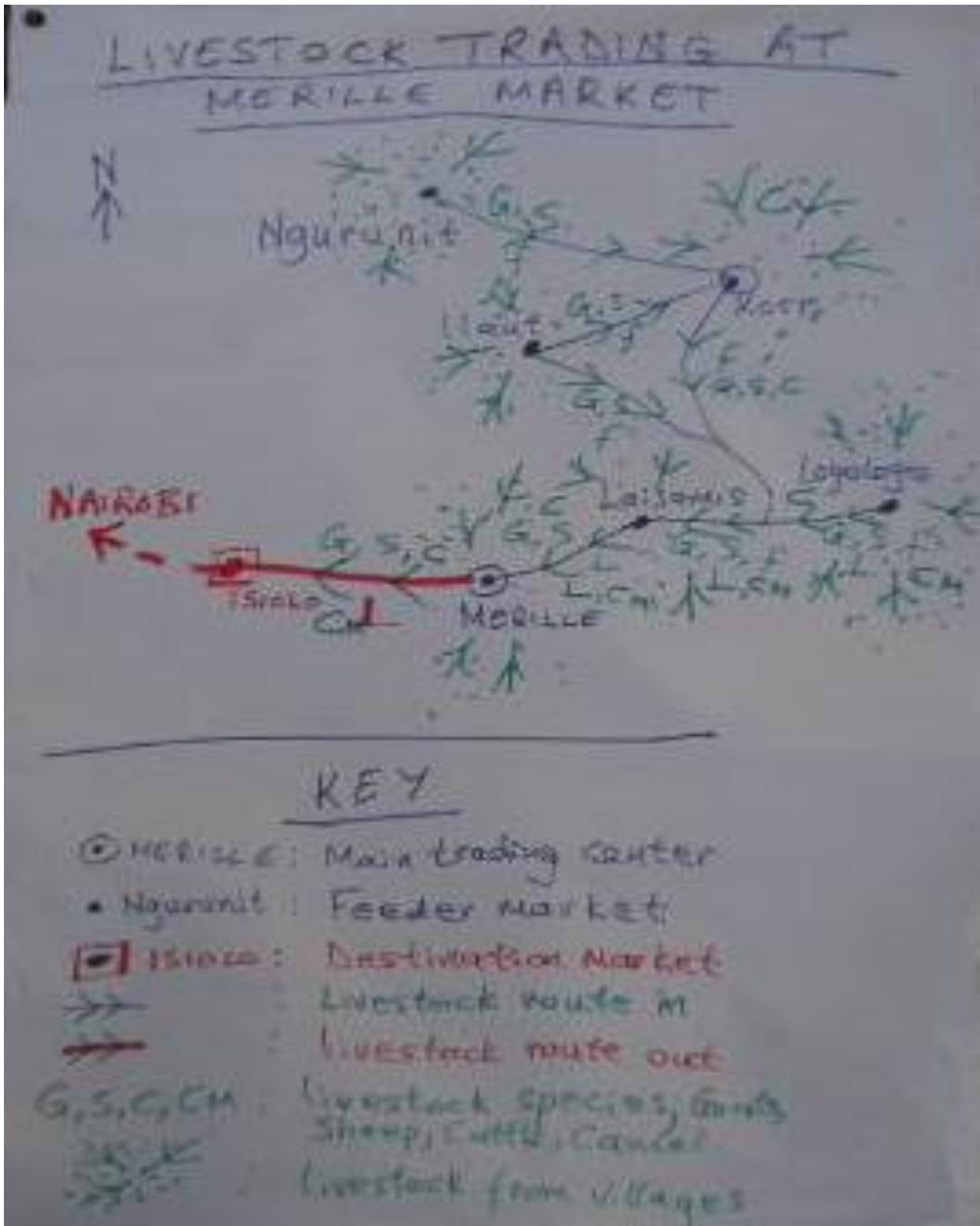
**Appendix III: Work Plan**

Description	2018								
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Proposal development									
Proposal defense									
Data collection									
Data coding and analysis									
Report writing									
Presentation									

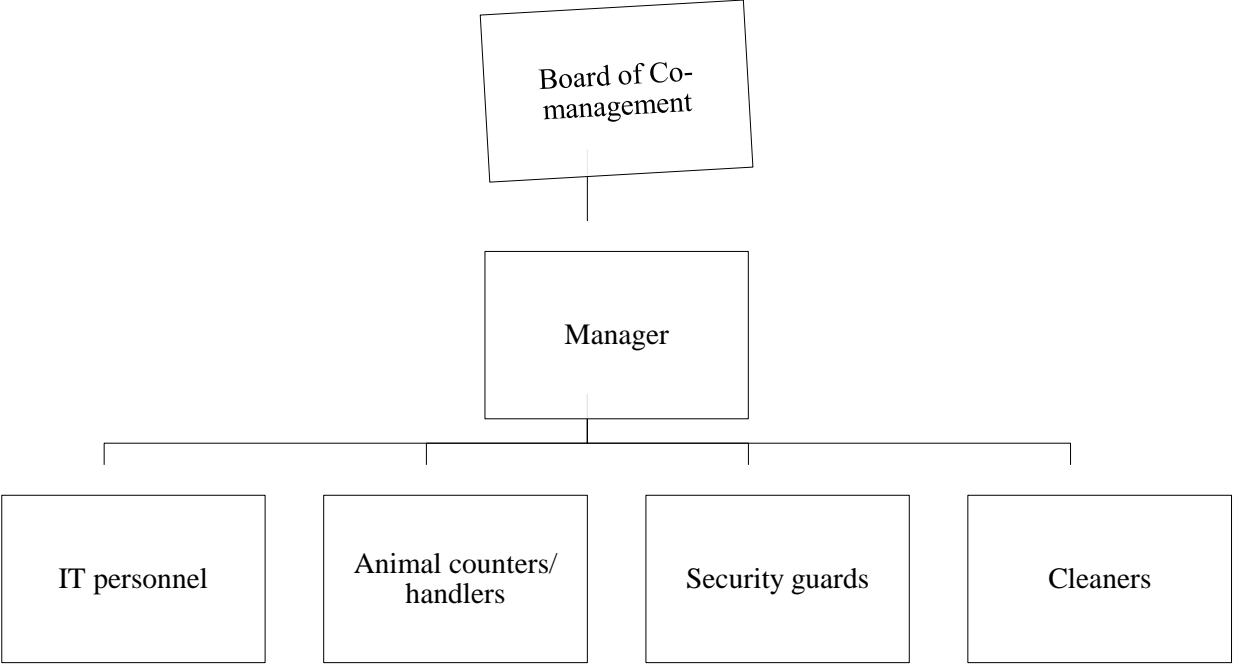
#### Appendix IV: Research Budget

<b>Item</b>	<b>Description</b>	<b>Quantity No. of Units</b>	<b>Cost Per Unit Kshs</b>	<b>Total Amount Kshs</b>
1.	Flash disk	2	3,500	7,000
2.	Typing paper	10	400	4,000
3.	Ruled paper	2	500	1,000
4.	Ruler	1	50	50
5.	Eraser	1	20	20
6.	Telephone Calls	-	5,000	5,000
7.	Data collection	-	-	3,000
8.	Data Analyst	1	10,000	10,000
9.	Report Writing	-	10,000	10,000
10.	Research Assistants	1	4,000	4,000
11.	Traveling	-	2,500	2,500
12.	Miscellaneous		5,000	5,000
<b>Total</b>				<b>69,500</b>

**Appendix V: Livestock Trading At Merille Market**



**Appendix VI: Organizational structure of Merille livestock market**



## Appendix VII: Merille Livestock Market

