

**MAJOR FACTORS THAT AFFECT LIVESTOCK
MARKETING IN KENYA: A CASE STUDY OF MAIKONA AND
NORTH-HORR DIVISIONS, MARSABIT DISTRICT.**

BY

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DECLARATION

This Management Project is my original work and has not been presented for a degree in any other University.

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

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DEDICATION

To my Mother, Haloni Galgallo Barako without whose love, care and encouragement, I could not have come this far.

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ABSTRACT

The primary objectives of the study were to identify major factors that affect livestock marketing as perceived by the livestock traders. It also sought to rank the factors in order of importance.

In order to achieve these objectives, all those individuals engaged in livestock trade in the study area (Maikona and North-Horr administrative divisions) were considered as the population of interest. A convenience sampling technique was utilized to select a sample of sixty livestock traders for the interview. The instrument for data collection was a structured questionnaire. The questionnaire was in two parts. Part A was concerned with the current nature of livestock marketing. Part B was designed with the intention of identifying the most critical factors in livestock marketing. The data collected was analysed by means of summary statistics like percentages and proportions for part A. Part B was analysed through use of factor analysis, with the help of statistical computer package.

The results of the study showed that a number of factors affect livestock marketing. The final varimax rotated factors matrix revealed eight categories of factors as significant. However, on the basis of the aggregate average for each category, only four of the eight categories were found to be important. Among the factors that featured as critical in the livestock marketing are; high transportation costs (mean score=4.57), lack of reliable market information (mean score=4.26), lack of trucks to carry

livestock to various markets (mean score=4.26), inadequate capital to do the business comfortably (mean score=4.19), lack of credit facilities to support traders (mean score=4.19), lack of formal business training (mean score=4.15), and poor quality roads (mean score=4.15).

On the basis of these findings, the areas of concentration for the government, and other organizations, like NGOs should be, to improve the infrastructure in the district, extension of loan facilities to livestock traders, and to strengthen education system, including the adult literacy section.

The study was limited by time and financial resources. Also there was difficulty in translating some words in the questionnaire into the local vernacular of the respondents. Areas for further research on the same (livestock marketing), can be to extend similar study to other parts of the district. Since this study focused mainly on livestock marketing, similar study with emphasis on marketing of livestock products like meat, milk, hide and skin can also be done in Maikona and North-Horr divisions or elsewhere. The government and Non-governmental Organizations' officers may hold different opinions and attitudes and the same study can be extended to this group of people.

Since the reliability coefficient resulting from the scale score was 0.6042 (60.42%), the scale used for the study is quite reliable. Thus the findings of the study is reliable to the extent that policy makers in the livestock sector can rely upon.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Marketing is an important determinant of the success or failure of organizations, and it is a predominant aspect of the economy and society (Scott, et al 1985). No business entity can do without marketing including the livestock sector. The significance of marketing to livestock has been emphasized by Bekure and Tilahun (1983) in their paper on the livestock marketing studies by arguing that:

"Marketing is an important aspect of any livestock system. It provides the mechanism whereby producers exchange their livestock and livestock products for cash. The cash is used for acquiring goods and service which they do not produce themselves, in order to satisfy a variety of needs ranging from foods items, clothing , medication and schooling to the purchase of breeding stock, and other production inputs and supplies ... in any country, livestock marketing studies are essential to provide vital information on the operation and efficiency of the livestock marketing system for effective research, planning and policy formation in the livestock sector."¹

Despite the significance of the sector to the Kenyan economy, very little attention has been given to it. His Excellency the President summarised the sector's importance to the national economy during the 1993 Nakuru Agricultural show by stating that the livestock sector in Kenya contributes about 8% of the Gross Domestic Product (GDP), 20% of the marketed production, more than

¹Bekure S. and Tilahun, N. **Livestock Marketing Studies, Pastoral Systems Research in Sub-Saharan Africa.** Proceedings of the workshop held at ILCA. Addis Ababa, Ethiopia, 21st-24th March, 1983.

33% of the total export earnings and provided 42% of the employment opportunities. According to a recent publication by the Ministry of Agriculture, Livestock Development and Marketing, the livestock sector currently contributes 10% of the Gross Domestic Product (GDP). Because of its significance to the National economy the sector requires much greater attention.

In solving performance constraint in any organization, a good starting point is to define the problem accurately. Writing on livestock rearing in Sahel Toure, a UNESCO range management expert based in Dakar argued that:

"There have been many livestock projects since the drought, but very few positive results. Things go wrong in the implementation, planners do not have an overview of the problem."²

Little has been verified through empirical studies on the factors that actually affect the marketing of the livestock and its products. A lot more needs to be done on what actually affect the livestock sector in Africa, and more so in the Kenyan context. Proper knowledge of the marketing problems encountered by those involved in livestock trade³ greatly help in designing policies that will improve the sector's productivity. Perrier (1992), in his paper on the future directions for livestock policy research in Africa stated that:

² Cited in Grainger, A. **The Threatening Desert: Controlling Desertification.** Earthscan Publication limited, 1990. PP 120.

³This refers to trade in camels, cattle, goats and/or sheep purely for monetary gain. For the purpose of this study trade and marketing are used synonymously.

"There is need for more micro-level studies in different livestock system to see the effects of wealth, herd composition and production goals and strategies on household marketing strategies. This information is vital to the understanding of how the government price policy and/or market forces will affect off-take, stocking rate and household production strategies. Inadequate understanding of these issues has been a major causes of failure of many African livestock initiatives." ⁴

Most of the research institutes in Kenya have scientific bias mainly dealing with diseases control with no concern for the marketing of the livestock. To the best of the researcher's knowledge no comprehensive national study has been done on the sector's current and potential productivity. However, a few studies have been done in various rangelands. Bekure and Chabari (1986), for instance did their study in Eastern Kajiado. They lamented of general lack of time-series data on livestock marketing in Kenya. Gatere and Dow (1980) on the other hand asserted that:

"The lack of market information is perhaps the weakest link in the beef marketing chain in Kenya."⁵

To the best knowledge of the author the single major study in this region was done between 1976-1984 by Integrated Project in Arid Lands (IPAL) team. In one of their technical report (No. A-6), the team emphasized inadequate market structure as a constraint on livestock management and husbandry. In part, the report states:-

⁴ Perrier, G. **Future Directions for Livestock Policy Research: Livestock and Resource Management Policy: Issues and Priorities for Research.** Research Planning Workshop held at ILCA, Addis Ababa Ethiopia, March, 1992, pp. 33.

⁵Cited in **Range Development and Research in Kenya:** Proceedings of the Conference held at Agricultural Research Centre, Egerton College, Njoro, Kenya 1-5 April, 1986. pp 357.

... in analysing the needs of the pastoralist it can only be said bluntly that present market facilities for livestock are inadequate. Prices are low, auctions are infrequent, irregular, or non-existent and the market is geared to serving the interests of buyers and merchants rather than the needs of the pastoralist.⁶

Even for IPAL study most of their project were based in the southern part of Marsabit (Rendille region). This then, points to the fact that there is need for more studies in other parts of the district.

Despite the divisions' (North-Horr and Maikona) livestock production potential, there is no study which has been done to get more insight into the management practices by the people in this region. Most of the studies which have been done are mainly anthropological in nature. Examples are, studies by Romilly (1970), Torry (1973), and Wood (1995).

For Marsabit district, livestock is as important to the residents as agriculture is to the farmers in Central or Rift Valley Province. Thus Livestock is the mainstay of the District's population since only five percent of the land area is arable. The rest (95%) is arid land only suited to livestock rearing. A comparative income generation table by the two sectors in the district is given (See Appendix 4&5).

⁶Lusigi W. Integrated Resource Assessment and Management Plan for Western District Marsabit, Kenya. In IPAL Technical Report Number A-6, March 1984, PP. 385.

1.2. MARSABIT DISTRICT⁷

Marsabit district in Eastern Province is one of the driest districts in the country. With the exception of high potential areas around Mt. Marsabit, Kulal, Hurri hills and Moyale - Sololo escarpment, the rest of the district is arid. It is one of the ten districts in Eastern province. It has an international boundary with Ethiopia to the North, borders Turkana district to the West, Samburu to the South, Wajir and Isiolo districts to the East. With an area of 78,078 square kilometres Marsabit, which accounts for 13% of Kenya's surface area, is the largest district in the country. This area includes 4,125 square kilometres covered by Lake Turkana. The district has seven administrative divisions namely, Central, Laisamis, Loiyangalani, Maikona, North-Horr, Moyale and Sololo.

Maikona and North-Horr divisions make up over half the total area of the district. A majority of the small stocks (goats and sheep), and camels are reared in these two administrative divisions. Except for Hurri-Hills where little farming is practised, no farming activity is undertaken. Most of the people are nomads. The major tribe that occupies the two administrative divisions are the Gabras.

In his Ph.D. Dissertation on subsistence ecology among the Gabra nomads of Kenya, Torry, (1973) states that it would be unlikely that the Gabra could survive in this forbidding

⁷The report on Marsabit District is extracted from Marsabit District Development Plan (1994-1996).

environment without their herds of camels, cattle, sheep and goats to sustain them. He goes on to say that these tribesmen acquire the bulk of their staple foods from the products of their herds and most daily activities are subordinated to tasks required to keep the beasts alive and productive, agriculture is not practised. This depicts clearly significance of livestock to the residents of Maikona and North-Horr divisions (the Gabras). Thus for any meaningful development in this region, the main focus should be on the livestock sector. The premise of the study is that livestock is the main life-sustaining aspect of the residents.

1.3. STATEMENT OF THE PROBLEM

According to a report contained in the Marsabit District Development Plan (1994-1996), 85% of the District's population derive its livelihood from livestock rearing. In the case of Maikona and North-Horr divisions the entire population depend on livestock because of climatic conditions which are not suited to crop farming. Thus any development effort in this region revolve around increased productivity and profitable take-off of these stocks.

Over the past few years the district has been affected seriously by drought making most people depend completely on relief foods. The long-term effect of this relief food is to encourage dependency rather than self-reliance. Although relief food supplies are crucial in the affected areas, they are not in anyway a lasting solution. As Siemann argues in the Daily Nation of July

5th 1994 "unless the World Food Programme (WFP) and others intend to supply relief food to Marsabit forever, they would do better to phase out support and instead encourage the local people to live sustainably and within their means in this dry region." Hopcraft, Priscilla, and Sidney (1977), in their paper on Arid Lands; Economic, Social and Environmental Monitoring, expressed similar sentiments when they asserted that:

"As food production systems become less viable due to population increases, environmental stress and government neglect, increasing numbers of people will be forced to rely on famine relief. This situation creates very serious problems, when groups of people begin receiving food they tend to become dependent on relief and expect that they will be given food indefinitely, but countries at the early stages of economic growth cannot afford to have whole sections of their populations dependent on relief. Yet, given proper management, the arid lands do have production systems capable of producing substantial incomes from domestic animals and wildlife. There is no reason why they should become an economic burden on the rest of the society."⁸

Sustainability of the region can only be enhanced by focusing on the livestock production and marketing, since this is the only viable option of utilising the land. Whereas a number of factors are said to affect the sector, the relative importance of the factors has not been studied. Given the district's potential in general, there are limited resources to address all problems. From a casual observation of the livestock marketing in Maikona and North-Horr divisions one can clearly see a large number of people engaged in the business. Others have been in this business for many years, but they seem to have stagnated. Little is known of

⁸Hopcraft, P.N., Priscilla, R., Sidney, B.W., Arid Lands-Economics, Social and Ecological Monitoring, IDS Occasional Paper No. 22, 1977, University of Nairobi.

the cause of the observed situation.

It is in light of the above arguments that a study is deemed necessary to identify factors which are very crucial to livestock traders to profitably undertake this business.

1.4. OBJECTIVES OF THE STUDY

- i) The main objective of the study is to identify factors which affect livestock marketing in Marsabit District. The knowledge about these factors will be useful as a guide to policy framework for improving the sector's contribution to the living standard of the District's residents.
- ii) To determine the relative importance of the identified factors. This will be of help in prioritising resource allocation so as to address each factor in relation to its importance.

1.5. IMPORTANCE OF THE STUDY

The findings of this study will be of interest to:-

- i) Marsabit District Development Committee:- The findings of the study will be of value to this body which is entrusted with all development activities in the district. Livestock rearing being a major economic activity, the study's results will provide them with an insight into the factors to be addressed to enhance performance of the sector.

- (ii) Non-Governmental Organizations (NGOs) which are involved in development of the livestock sector. Examples are Farm- Africa, and Intermediate Technology Development Group (ITDG). Other bilateral and multi-lateral organisations operating in the district will also benefit from the study. For instance, the German Agency for Technical Cooperation (GTZ), and Kenya Livestock Development Project (KLDP), will, it is hoped, find the research findings professionally useful.
- (iii) At national level recommendations of the study can be utilized in designing livestock marketing policies in other pastoral areas (districts).
- (iv) The study will add to existing body of knowledge which is currently scanty.

1.6 BRIEF OUTLINE OF THE STUDY

This project is made up of five chapters. Chapter 1 discusses background, statement of the problem, objectives and importance of the study. In chapter 2, the literature relating to livestock marketing is discussed in detail. The literature cited covers the work of livestock marketing institutions in Kenya, constraints to livestock marketing and livestock marketing system model. In chapter 3, the project research design is discussed. The findings of the data analysis are presented in chapter 4. Chapter 5 discusses the limitations of the study, summary, recommendations based on the findings and suggestions for further research.

CHAPTER 2:

LITERATURE REVIEW

LIVESTOCK MARKETING INSTITUTIONS IN KENYA

INTRODUCTION

Besides traders and/or butchers, there are two main marketing agencies for livestock and meat. These are The Kenya Meat Commission (KMC) and the Livestock Marketing Division (LMD).

Although the functions of the livestock Marketing Division and the Kenya Meat Commission supplement each other to some extent, they both compete with traders and butchers.

2.1 THE LIVESTOCK MARKETING DIVISION (LMD)

2.1.1 HISTORICAL BACKGROUND

The Livestock Marketing Division was established by the Kenya Government in 1952 as part of the Veterinary Department. Before this period there was the African Livestock Marketing Organization (ALMO).

The functions of ALMO were stated as:

- a) To organize, sponsor and encourage, in close collaboration with Provincial Administration, the maximum outlets within Kenya for the sale of African Livestock produced in the pastoral reserves with the objective of reducing overstocking.
- b) To supply stock to the Kenya Meat Commission.
- c) Development of Holding Grounds and stock routes for use

- by those in livestock trade.
- d) Encourage establishment and maintenance of livestock markets in all districts of Kenya.
 - e) Control of livestock diseases by quarantining livestock on Holding Grounds till they are cleared by veterinarians.
 - f) Break price "ring" but avoid any interference on any organised markets; and
 - g) Purchase of immature stock from the North and re-sale for fattening in the ranching areas.

2.1.2: THE LMD AND ITS RESPONSIBILITIES TO THE KMC

Many of the difficulties faced by the LMD over the years have occurred because of its relationship to the KMC. It has always been handicapped in its trading activities by conflicting aims and responsibilities as laid down by the KMC ordinance. On one hand, it was set up as a marketing organization and on the other it had to purchase low-value stock as part of the destocking programme. It was also required to sell to one body, the KMC, at prices determined by the Government. In addition, the KMC was obliged, under the terms of its ordinances to take only what it required at any time.

Connected with the difficulties of the LMD and KMC under the terms of the ordinance is the pricing policy that the Division has been forced to use in the purchase of livestock. All its purchases of slaughter stock, whether in direct haggling with stock owners and trader or through organized auction, must be related to the

prices of KMC, fixed on a cold dressed weight and grade basis. At the same time, incidence of loss from deaths, and condemnation and down-grading because of beef measles' infestation, bruising and others has to be considered. As a result of this, it was stated that the Division "has been handicapped ... by the fact that it required to purchase stock at the cold dressed weight prices scheduled by the minister under the Agriculture ordinance. These prices do not include allowances for hides, skins and offal".

As a result of re-organisation within the Ministry of Agriculture in 1968, LMD was separated from Department of Veterinary Services and it underwent some re-structuring in order to be able to implement the marketing component of the Kenya Livestock Development Project (1968-1982). The whole project had many donors under the auspices of the World Bank with the Marketing component sponsored by the United Kingdom.

2.1.3 KENYA LIVESTOCK DEVELOPMENT PROJECT (KLDP)

The KLDP was implemented in two phases between 1968 and 1982.

During the period LMD:

- i) Developed into a major middleman which bought cattle from both producers and traders. It reached a capacity of supplying over 50,000 cattle a year to KMC and ranches.
- ii) Developed physical facilities necessary for smooth flow of livestock from the pastoral areas to the market.

Several Holding Grounds and outspans all covering over 50,000 hectares were developed. Major quarantine Holding Grounds were Isiolo (124,055 ha) and Kurawa in South Tana River district (16,600 ha.)

2.1.4 BUYING CENTRES

During the latter part of KLDP's history the LMD changed its buying procedure from bargaining process with the seller to that of buying on live weight basis. Over 30 buying centres complete with weighbridges were therefore established in the Rift Valley, North Eastern and Coast Provinces. Many of these, have however been out of use for a number of years because of lack of funds to purchase livestock. For instance , the one at Isiolo is now used by private livestock traders at a fee for buying and selling animals.

2.1.5. TRADING FUNDS:

The LMD was originally financed by a grant which had accrued from wartime and post-war trading activities of the Livestock Control Organization plus a loan from the Treasury. Unfortunately, LMD continually made losses mainly due to applied pressure to buy drought-stricken livestock at an un-realistically high prices and expensive quarantine process coupled with inadequacy of qualified personnel. In the 1983/84 financial year the provision of trading funds was stopped.

2.1.6. CURRENT POLICY:

The LMD has undergone restructuring and its operations are declining due to continuous loss making by the organization. Most of its functions has been delegated to private participants. Thus Currently LMD undertake the following functions:

- i) Policy matters related to food security in the livestock production.
- ii) Development of logistics to support livestock producers and traders including holding grounds and other infrastructure.
- iii) Development of market information system to create transparency in livestock and products marketing.
- iv) Organization of livestock market centres and auctions in consultation with local authorities.

In a policy paper by the Ministry of Agriculture and Livestock Development (May, 1989) the functions of LMD were revised with a view to strengthening it. According to the Paper the Division has been re-structured and strengthened to deal with the following work:

- i) Livestock Marketing extension and market information gathering at the district and national level. Human resource is being strengthened through training and employment of graduates. Each district is envisaged to have a qualified livestock marketing officer and enough support staff in the near future. Sixteen graduates in Agriculture and related fields were employed and posted to the districts in 1988. These

graduates underwent on-the job as well as formal training so as to make them perform marketing activities efficiently. Monthly market information bulletins have been started in Coast Province and in some districts in other areas, but they lack adequate financial back-up.

- ii) Co-ordination and reporting on marketing and markets of all livestock and livestock products. Newsletter and other forms of mass communication media will be utilised on market reporting.
- iii) Development and maintenance of marketing and disease screening facilities in co-operation with other agencies, such as, county councils.
- iv) Purchase of livestock when called upon to do so and depending on the availability of funds. In 1988 funds were provided through KMC for purchase of cattle in some pastoral areas and a total of 1246 cattle purchased in Isiolo. Ideally, funds should be provided for regular purchases and sales.
- v) Co-ordinate and license livestock trade so as to control their distribution. Explore, co-ordinate and monitor exports (and imports) of livestock and products, and
- vi) Work with KMC to ensure supply of slaughter stock, and with Agricultural Finance Corporation (AFC) and other agencies for supply of immature stock for fattening in ranches.

2.2 THE KENYA MEAT COMMISSION (KMC)

2.2.1 HISTORICAL BACKGROUND

The Kenya Meat Commission was formed by a Statute in 1950. There were no shareholders, and it operates on a non-profit making basis. It exercised sole right to buy slaughter stock in the former scheduled areas and to sell meat wholesale in the urban areas of Nairobi, Mombasa, Nakuru and Eldoret. Livestocks are purchased by the Commission at its abattoirs on a cold dressed weight and graded basis, at prices fixed annually by the Minister for Agriculture. Livestock from the large farms and ranches in the scheduled areas are normally railed directly by producers to the main abattoir at Athi River. Slaughter stock purchased in the north by the LMD is assembled on holding grounds and trekked to the nearest railhead, Nanyuki or Thompson's falls, and then railed to Athi River. Traders who constitute the third source of supply of livestock to KMC, either trek their cattle to the nearest abattoir, or send them by rail trucks from the areas which are served by the railway. The Mombasa abattoir used to be supplied by traders operating in the Tana River, Garissa, Kitui and Lamu Districts.

Until 1964 the KMC did not itself purchase livestock in the organized auction markets and purchased only on a cold dressed weight basis at the factories. However, in that year a livestock buying section was set up and the commission's buyers began to attend auctions. This led to a substantial increase in the number of cattle obtained by the Commission from African stock owners in the pastoral and agricultural districts where auction sales are

held.

KMC's canning plant at Athi River produce corned beef, the bulk of which is exported. The plant was opened in 1938, by a private firm, Liebigs. This firm used to organise export sales of this product, most of which goes to the United Kingdom under the Fray Bentos label. When the canning plant was set up, its major purpose was to find an export outlet for the large number of surplus cattle in the Maasai rangelands and the northern and north-eastern pastoral areas.

2.2.2. CURRENT STATUS:

The Kenya Meat Commission is currently undergoing a major restructuring in order to improve its efficiency and profitability. Due to this the commission was virtually non-operational during the financial year 1992/93 and 1993/94.

The Kenya Government and the Mitsubishi Corporation have entered into a contract to overhaul the entire commission. Part one of the papers published by the Ministry of Agriculture, Livestock Development and Marketing states that:

"Our good government has negotiated for rehabilitation of the factory. On the understanding that you (Mitsubishi Corporation), on behalf of the people of Kenya and the government shall steer KMC out of subsidy to a sound profit making institution."⁹

There were some issues raised which were viewed as crucial in revitalising the role of KMC in the livestock sector. These issues

⁹A handout on KMC operation and current restructuring as prepared by the ministry of Agriculture, Livestock Development and Marketing.

are addressed under five headings:

1. Constant Supply Factor: There are two basic considerations under this:-

a) Seasonal Supply Factor:

It is well known that producers and stock traders will never deliver anything to KMC during the rainy season. Thus the commission need to have some strategic stock reserve of about 200,000 herd of cattle, which is equivalent to four months slaughter. The peak periods were identified as January and February, and August and September.

b) Supplier Confidence:

It is noted with concern that producers and stock traders have lost a lot of money through trading with KMC in the past. Payment without delays and institutional commitment may improve this confidence although it may take long to build. Thus an adequate and efficient pay system to the trader is very crucial to the successful operation of the commission.

2. Strategic Reserves:

KMC should explore two possible aspects to facilitate maintenance of strategic herd of 200,000 plus.

a) Use of the LMD Holding Grounds.

b) Contracting Ranches, feedlots and stock traders.

If the commission agrees on the terms with the Ministry on use and maintenance of these facilities, then it could purchase animals and keep them in the Holding grounds.

Alternatively the commission can contract ranches.

3. Transport:

With the current restructuring the commission requires a minimum of three cattle trains, and at least five small lorries (12 tonnes each) to facilitate operations round the clock. The transport fleets are most useful during prolonged periods of dry spells in areas where commercial transport is not available.

4. Management:

This was the major problem that has rendered KMC ineffective in its strategic role of overseeing operations in the livestock sector. It is owing to this that a change of management was considered necessary. Two managers were therefore considered a basic requirement, that is, a qualified financial manager, and a strong credit controller. The paper actually states that "Total overhaul of the rest of the staff will be necessary to eliminate dishonest, uncommitted and unreliable elements".

5. Association with LMD.

Both LMD and KMC play complementary roles in serving the needs of the pastoral communities and the nation at large. The association between the two organizations will be strengthened and

close consultation encouraged where necessary. In fact it was suggested that the Chief Livestock Marketing division be made a mandatory member of the Board of the commission.

6. Competitive Attitude

The period before the decontrol of meat prices (1987), KMC enjoyed protection and explicit monopoly of supplying meat to government institutions. Unfortunately, due to lack of forward planning in procurement of raw materials (livestock) and supplier confidence, KMC never met its obligation. Thus a review of the procurement policies and strategies was found vital.

KMC has started its full operation a few months ago. Whether the re-organization of the commission will yield any fruitful or positive contribution towards its role in the Kenyan economy and more so to the pastoral communities is yet to be seen.

2.3 CONSTRAINTS TO THE MARKETING OF LIVESTOCK

Several constraints impede livestock development in Sub-Saharan Africa. Government negligence and unfair interventions is the most significant factor. ILCA (1994), in one of its publications has noted this:

"while the livestock sector accounted for an average of about 27% of total agricultural gross domestic product (GDP) it receive only 11% of the funds spent on agricultural services as a whole. Thus governments were neglecting their livestock sectors...there is no correlation between the importance of the livestock sector in a country's agricultural GDP and the share it received of the

government's agricultural budget."¹⁰

Among the major factors that affect livestock marketing are:

2.3.1 Lack of Capital

A majority of livestock traders in Marsabit District depend mainly on family savings and support from friends to raise capital and usually run their shops and livestock with capital outlay of less than Kshs. 40,000. The table below on the initial capital of traders in south-west Marsabit, as studied by UNESCO, the IPAL team in 1984 gives a general picture of how things were:

Table 2.1 Initial Capital with which Traders interviewed started Business, 1979-1980.

Amount in (Shillings)	% Traders
1,001 - 5,000	34.4
5,001 - 10,000	34.4
10,001 - 15,000	15.6
15,001 - 20,000	9.4
20,001 - 25,000	3.1
50,000 and above	3.1
Total	100.0

Source: Integrated Project in Arid Lands (IPAL).
Technical Report A-6, Marsabit (1984).

¹⁰ILCA, 1994 **Improving Livestock Product in Africa: Evolution of ILCA's Programme 1974 - 1994** ILCA, Addis Ababa, Ethiopia pp.76.

2.3.2 Poor organization of the livestock Marketing Institutions:

The two main organizations which are directly engaged in livestock marketing are the KMC and LMD. The KMC which was set up to ease livestock marketing in the Kenya's rangelands, has not lived up to its responsibility. Livestock traders have been unable to market all their livestock through this central abattoir mainly due to its operational inefficiencies. What the current restructuring holds for the pastoral communities is yet to be seen. As for the LMD, even those days it was actively engaged in livestock Marketing its policies were not clear to the livestock traders. When livestock traders were interviewed as to why they do not utilize LMD purchase, they cited a number of reasons (UNESCO, IPAL, 1984-Technical Report A-6):

- They (LMD) are very erratic in their requirements, making it difficult for sellers to know exactly what they want in advance so as to bring the right animals.
- There is no fixed time at which the LMD come to Marsabit for the event.
- The LMD takes periods of from two weeks to several months before paying for the purchased animals.
- The LMD buys only cattle.
- The LMD buys animals only once a year at Marsabit.

Currently the LMD function has been reduced only to technical guidance, mainly due to the financial constraints. Proper organization of these institutions may help improve the market for the livestock.

2.3.3. Lack of reliable market information:

For any rational decision to be made, adequate information is a must. Since the region is far away from the terminal markets in Nairobi, information on prices or market conditions can hardly reach in reasonable range of time within which a trader can make accurate and adequate decision. For instance, information on quarantines would enable a trader to make better decisions concerning the timing of purchase and sale, as well as the mode of transport of animals. Most of the information is passed along by words of mouth and it is generally impossible to verify its authenticity. It is often too late to take advantage of the information as the market changes very quickly.

The flow of information is important to facilitate competitive marketing, and also to permit flexibility in trading patterns. The type and quantities of animals sent to different destinations will react to shifts in location and structure of demand only if there is a good flow of information.

2.3.4 Cultural Factors

The pastoral communities in Kenya are very much bound by their cultural values that have made them take passive role in national development. Further, they attach a lot of value to their herds due to their cultural practices. As Lusigi puts it, "they have psychic relationship with their animals". Ikiara notes that:

"Where cultural practices are still prevalent, it becomes difficult to develop livestock industry on modern economic lines. The desire to keep large herds of cattle for prestige purpose in some pastoral communities has the added problem of environmental degradation arising from over-stocking. Such cultural attitudes need to be changed to allow faster economic development in those areas".¹¹

This therefore means that most of the herds of the pastoral communities are mainly for subsistence and is commercialised only when there is need for cash.

In his research in south-west Marsabit in 1981, Njiru disapproves the view that pastoralists are unwilling to sell their livestock. He argued that the problem has been that marketing facilities and essential goods needed by pastoralists are lacking.

Thus whether the culture of the pastoralists inhibits marketing of their herds needs to be studied further.

2.3.5 Difficulties associated with trekking:

Trekking has been the major means by which livestock traders reach most of the markets in which they sell their livestock. One major difficulty is lack of water along the trek routes, the result is hence longer and longer time to reach the market. In addition wet season trekking increases the rate of spread of diseases and frequently causes marketing of livestock in transit to be held up by the quarantine. At times a temporary ban is imposed due to the spread of diseases. During the dry season, lack of forage leads to

¹¹Ikiara, G.K. "Cultural factors and developments". **The Courier**, No. 100, Nov.- Dec, 1986 pp.82.

weight losses. It has been established that animals lose up to 25 per cent of their weight during transit. Noting this as a constraint to livestock trade, The World Bank asserted that:

"In Kenya the large livestock herds in the north and north-east were not well integrated with the national market because of disease problems and because there were inadequate watering points and holding grounds along the trek routes"¹².

In a similar kind of study done by Miriam and Hillman (1975), they established that there is a linear relationship between live weight and sale price of cattle, goats and sheep. Trekking affects the live weight of animals and their physical appearance which have some psychological pricing effect on the buyer.

2.3.6 Poor quality roads:

Infrastructural development is a pre-requisite to any meaningful development undertakings, and livestock is no exception. In Marsabit District most roads are not all weather roads. In some places in the interior there are actually no roads, only foot-paths. During wet seasons most parts of the district are not accessible. Even the main Isiolo-Marsabit road, which is a major link to the Nairobi market is very poor. The rough ride occasionally causes some deaths due to exhaustion. The animals which survive are in so poor condition when they arrive at the market (Dagoretti) that they fetch low prices. They also cannot be held for long as their conditions deteriorate very quickly.

¹²The World Bank, 1983, Market forces and livestock Development in Africa: Part III Marketing, by Ann Arbar, The Centre for Research on Economic Development, The University of Michigan, pp.16.

2.3.7 Insecurity along the marketing routes:

Banditry has been a major problem for many years in most parts of Northern Kenya. Human lives have been lost and livestock or money stolen from traders. The better watered areas are the favourite areas of banditry. Security problem seriously inhibits marketing of the livestock in this region. In some places security personnel are hired to trek the herds on foot, further raising marketing costs and negatively affecting competitiveness.

The Government provides pastoralists with guns for protection, but the home-guards always have to battle with trained bandits. On being interviewed about the security situation in his location (Korr-one of the location in the district) by the Daily Nation reporter, the Chief commented that:

"It is a big task battling with these people who are better trained and equipped than we were. ... our families have become destitute because their animals have been taken away by bandits".¹³

Political conflict in Somalia, Ethiopia, Sudan and Uganda have intensified banditry activities, escalating into large scale attacks with automatic weapons. This has negatively affected livestock marketing in the region.

2.3.8 Cumbersome Regulations:

Livestock trade is one of the most regulated forms of commerce in Kenya. Despite the acceptance of the need for regulating movement, some regulations did not appear to be aimed at

¹³The Daily Nation. "Rustling brings other problems for pastoralists," 22nd September, 1994.

encouraging trade. for example, in order to take a truck-load of goats to Nairobi, a "No objection" letter from the District Veterinary Officer in Nairobi would have to be obtained. Then a "Movement Permit" would have to be issued at the District headquarters on the strength of the "No objection" letter. The permits are usually valid for one week and do not make allowance for difficulties in obtaining a lorry to carry the animals.

Traders are not permitted to transport livestock at night without an endorsement from the responsible veterinary officer. Transporting animals during the day exposes the animals to considerable heat stress, causing loss of health and sometimes leading to death.

Although it is necessary to have some meaningful check on the trade, this bureaucratic establishment tends to lower the rate at which the traders in the region can reach the terminal market. Given the low literacy levels of the people in this region, it is likely that very few people understand the regulations well, thus intensify the problem. This may have made some people not participate in livestock trade.

2.3.9 Lack of alternative insurance system:

Pastoral life is very risky, because diseases, drought, and theft can easily reduce a rich man to poverty in a matter of days. As a result pastoralists have developed an insurance system which ensures that in case of such an externality they are able to recover. Dahl, (1979) contends that these insurance systems are

based on the giving of livestock to various friends, splitting of herds so that they graze in different areas, having multi-species herds, and keeping very large herds.

To the pastoralists their herds are a form of 'mobile bank'. This makes them keep large number of animals which in turn restrict trade. Walter Goldschmidt (1980) asserted that:

"In order to induce pastoralists to market their animals, one must create conditions that make action meaningful, not only establishing good market conditions, but creating incentives for the pastoralists. One must remember that to the pastoralists, livestock, particularly cattle and camels, are not merely a food resource; they are also capital essential to all kinds of negotiations involving influence and alliance, they are not merely savings but are the only form of investment available to the pastoral nomads."¹⁴

Thus the insurance factor hinges on the fact that the nomads keep large herds as a buffer against any unforeseen contingencies. This practice will, to a certain extent, affect the marketing of the livestock.

2.3.10 Inadequate Camel Market:

Very few camels are sold, mainly due to shortage of outlets. It has been reported that camel population is steadily increasing and probably displacing small stock and cattle in some areas. Creation of commercial outlets for camels, will contribute so much economically to those pastoralists who rear them in large numbers. Further it will improve on the number of other small stocks (goats, sheep and cattle) for which camels compete so much for the limited

¹⁴Cited in Oba, G. Perception of Environment among Kenyan Pastoralists : "Implications for Development" Nomadic People, No. 19, September 1985.

pasture.

Whether camel is of such a high economical potential is not clear. Torry, (1973), argues that:

"Although camels are best suited to live in the arid zone and to provide the herder with milk, camel breeding still entails serious drawbacks. The long gestation period of these animals coupled with a very short breeding season severely limits their productivity for man."¹⁵

2.3.11 Lack of relevant Training:

The educational level of traders in the pastoral areas is quite low. For instance, according to a survey done by UNESCO, IPAL team in 1984 in South-West Marsabit, only 6.1% of the livestock traders interviewed had secondary school education. This implies that the standard of business management may also be very low. Most traders are not in a position to keep books of accounts in order to determine the profitability or otherwise of their business. As a result, the failure rate of the business is quite high.

Although the Government policy on education is geared towards equality in all parts of the country, this is only there in name, but not in practice. For instance, a Presidential Working Party on Education and Manpower Training for the Next Decade and beyond" talked of the Government's commitment to the same goal in this way:

¹⁵Torry, W.I. "Subsistence ecology among the Gabra nomads of Kenya", Columbia University, **Unpublished Ph.D. Dissertation**, 1973.

"The process of bringing equity in social and economic development through education is an important objective of education and training. The Government has embarked on a policy of providing equal education and training opportunities to all areas of Kenya in an attempt to correct imbalances and disparities which existed at independence. This policy should continue"¹⁶

However, the imbalances and disparities in educational development still exist and to a large extent it is this low literacy rate that has slowed down the development efforts of livestock sector in Northern Kenya. A more elaborate and comprehensive educational policy that considers the unique nature of the pastoral communities may contribute significantly to the change in the current status of the region.

2.4. LIVESTOCK MARKETING SYSTEM MODEL

Model Explanations:

The top of fig.2.1 shows the external and internal factors that influence the livestock marketing system. First on the supply side the cash needs of producers, the intensity of demand for livestock, and pastoralists' expectations of climatic conditions influence the volume of the different species of livestock on offer at any time. The higher the cash needs of the pastoralists the greater the volume of livestock on offer.

¹⁶Republic of Kenya 1988, from a Presidential Working party on Education and Manpower Training for the Next Decade and Beyond. Nairobi.

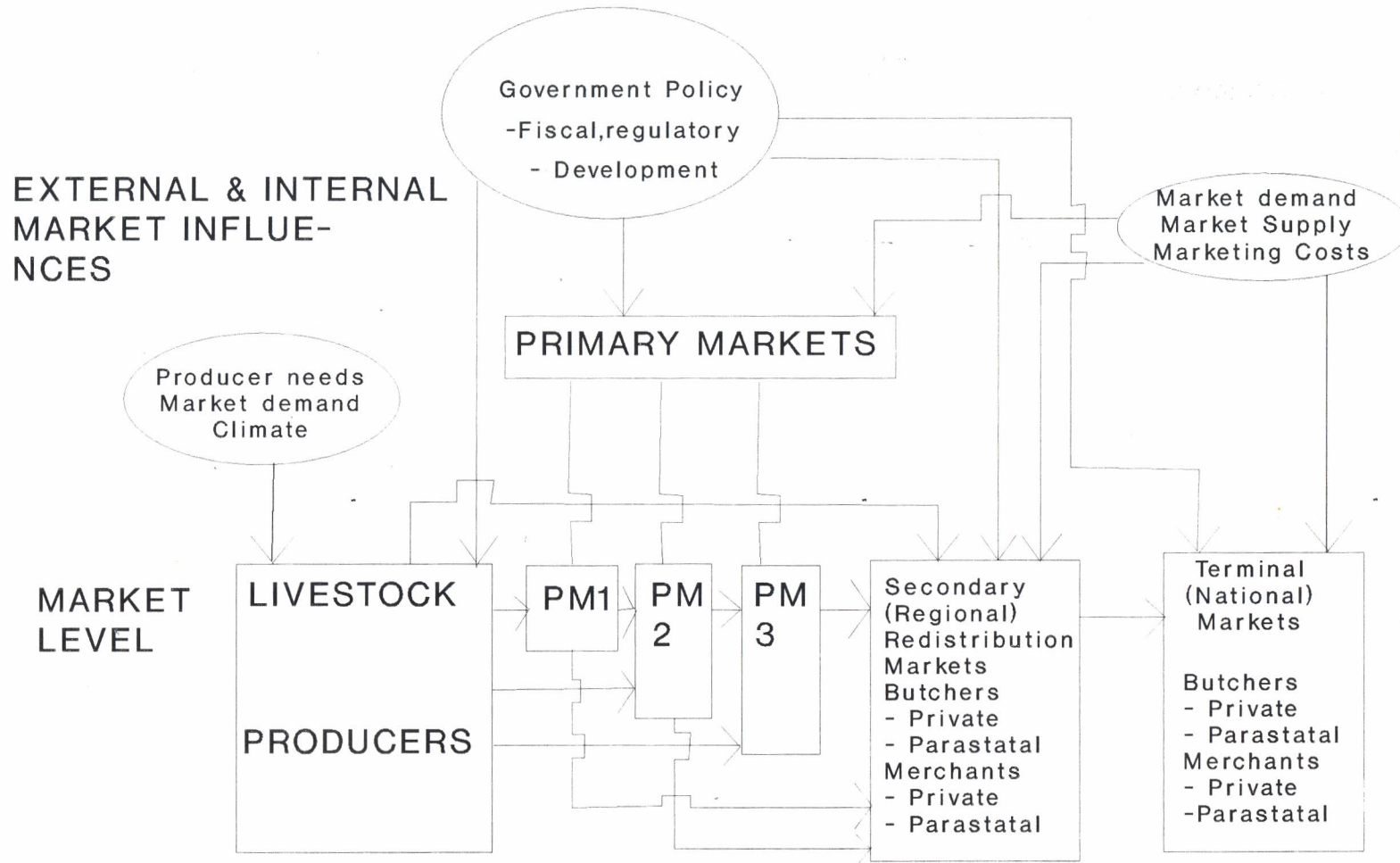
Second, government policy through fiscal, regulatory and development intervention affects the volume, flow and prices of livestock in the marketing system favourable fiscal policies that encourage livestock production and reduce costs to producers increases the supply of livestock, for example, subsidies, and price stabilization policies. On the other hand taxes and levies tend to restrict the volume supplied. The control of epidemic diseases, the proper development of range areas and the development of trek routes and livestock market facilities tend to increase the volume supplied and reduce marketing costs. In general government monopolistic tendencies and the fixing of artificially low prices stifle market supply and demand.

Finally, market demand as expressed by the volume and prices buyers are willing to pay for livestock influences the behaviour of the market at all links in the system. The efficiency of the market as reflected by the marketing costs of the system and the extent to which price changes are transmitted through the marketing system strongly influences the operation of the markets. The less efficient the market, the less responsive will supply be to changes in market demand.

This model developed by Bekure and Tilahun(1983) need to be modified to suit the Kenyan situation. In Kenya, besides those factors indicated as affecting livestock marketing, there are also socio-cultural dimensions. Kenya being a multi-ethnic nation, the cultural background of the various tribes affect their purchasing behaviour. For instance, majority of the down country (urban)

people do not eat camel meat, restricting the market to Northern Kenya. Further, the current Structural Adjustment Programme(SAPs) have significant effect on the livestock market. With the price decontrols, competition has increased drastically, making the prices of the live animals quite high.

2.4: Livestock Marketing System Model:



Source: Pastoral Systems Research in Sub-Saharan pp. 332, August 1983

Fig: 2.1

2.4.1 Characteristics of livestock markets

The table below depicts a general characteristics of livestock markets. It shows the types of markets and the key players (buyers and sellers) in each market. The key players in any market can either be a constraining or facilitators of the market system. Some knowledge on the characteristics of the market can serve as a guide to explain its performance.

Table 2.2.

Type of market	Main Seller	Main Buyer	Purpose of Purchase
1. Primary Collection Markets	Producers	Other producers Local butchers Traders	For stock replacement or fattening. Collection for re-sale in larger regional markets
2. Secondary distribution markets.	Traders	Local butchers Traders	Slaughter For re-sale in terminal markets
3. Terminal markets	Traders	local slaughter-house Traders	Slaughter Export

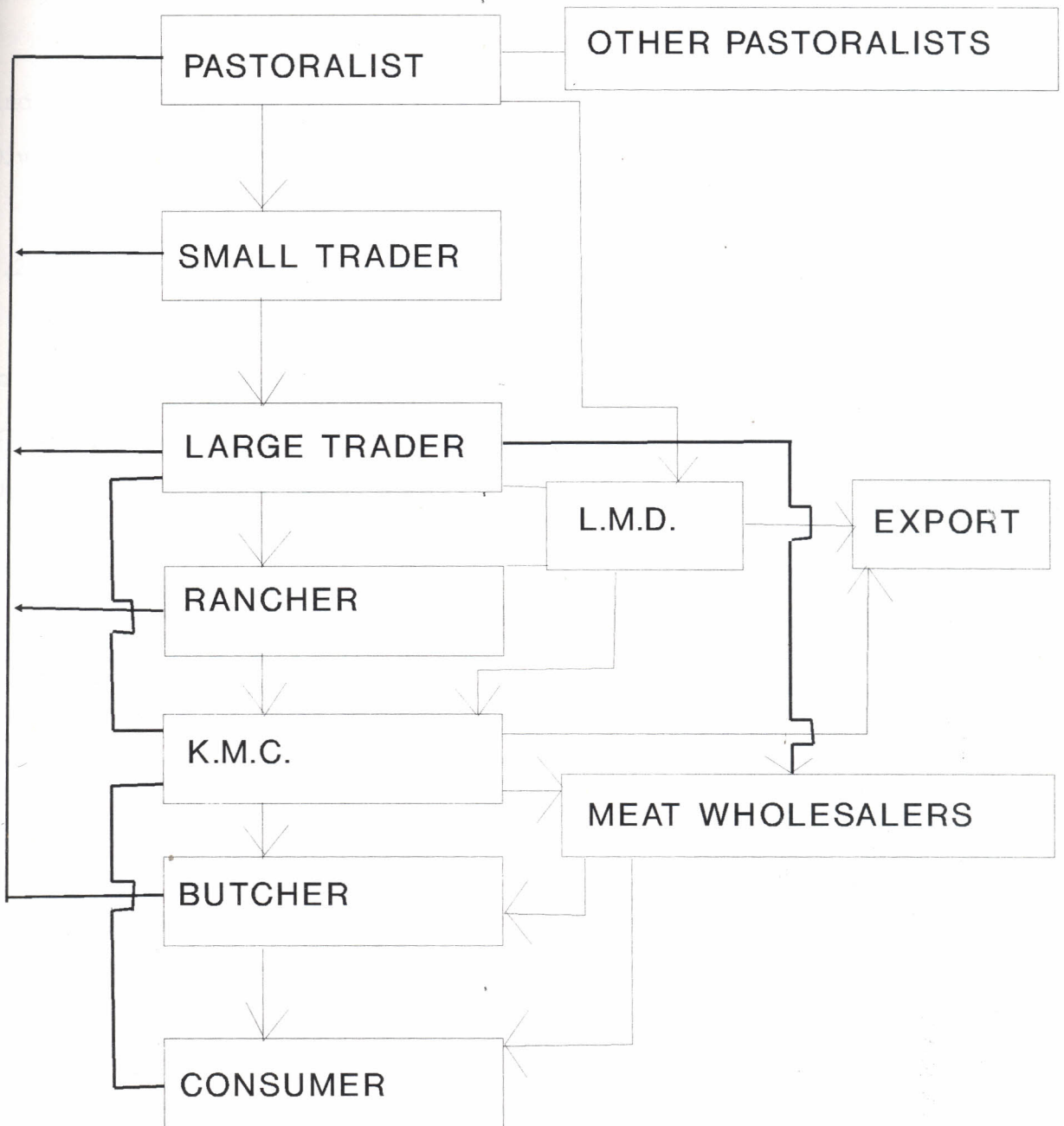
Source: Pastoral systems Research in Sub-Saharan Africa, pp.330,

(Afriza Nino et al, 1980)

Marketing Channels for Cattle and Small Stocks

The figure 2.2 below represents various channels through which cattle and small stock are marketed from Marsabit District. The channel, though lengthy, is not so complicated as to impair livestock marketing. This can explain the reason as to why the respondents were neutral in their assessment of the impact of this factor on livestock marketing.

2.4.2: Marketing Channels for Cattle and Small Stock (1983)



Source: Integrated Project in Arid Lands (IPAL) Technical Report Number A-6.

Fig. 2.2

CHAPTER 3

RESEARCH DESIGN

3.1 THE POPULATION

The population of interest in this study consisted of all those individuals involved in livestock trade in Maikona and North-Horr Divisions of Marsabit district.

3.2 SAMPLE DESIGN

Because of the vastness of the region, the study was conducted in Maikona and North-Horr town. A convenient sample of 60 livestock traders were selected in both towns. The researcher used a lot of judgement so as to include all calibre of traders in the sample.

3.3 DATA COLLECTION METHOD

The pertinent data was collected through personal interviews using a structured questionnaire.

The questionnaire had two parts. Part A of the questionnaire was designed to elicit data on the current nature of livestock marketing. Parts B was mainly concerned with identification of factors important to livestock traders to comfortably undertake this business. A five-point rating scale was used for part B with response categories of very important, somewhat important, neutral, somewhat unimportant, and very unimportant. The scores ranged from 5 to 1. Part B of the questionnaire dealt with the core issue of the study.

3.4. DATA ANALYSIS MODELS

Part A of the questionnaire was analyzed through use of descriptive statistics. Percentages and proportions were used.

Part B of the questionnaire was analyzed through use of Factor Analysis (FA). Factor Analysis was done so as to determine those factors which affect livestock marketing. In several other MBA projects of similar nature, factor analysis have been used, (Kipngetich, J.K. (1991), Kilonzi J.M. (1992), Odera R.A. (1992), Musomba J.N. (1993), and Gatune, J.(1993). To perform factor analysis statgraphic package was used.

The rating scale was used to determine the relative importance of the factors identified as crucial to livestock marketing.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

The results of the study are summarised in tabulations and percentages for section A of the questionnaire. Various aspects of livestock marketing from an individual livestock trader perspective are presented. Factor Analysis is performed on data collected by section B of the questionnaire to identify the critical factors.

A total of sixty livestock traders were interviewed. Thus, the data presented hereunder are empirical findings. The analysis was done in two parts. First, data on personal and market characteristic are presented. Tables 4.1 and 4.2 shown below presents sex and age distribution of the respondents respectively. This reveals the type of sex and age group which dominates the livestock business.

4.1 INDIVIDUAL TRADERS DEMOGRAPHIC CHARACTERISTIC AND CURRENT NATURE OF LIVESTOCK MARKETING:

Table 4.1: SEX DISTRIBUTION OF THE LIVESTOCK TRADERS

SEX	FREQUENCY	PERCENTAGE
MALE	57	95
FEMALE	3	5
TOTAL	60	100

From the above table it can be seen that most of the livestock traders are Male (95%).

Table 4.2: AGE DISTRIBUTION OF THE RESPONDENTS

AGE (YEARS)	FREQUENCY	PERCENTAGE
Under 20	0	0
20-29	14	23.3
30-39	33	55.0
40-49	10	16.7
50 and above	3	5.0
TOTAL	60	100.0

Most of the livestock traders are middle age people, between 30-39 years old. There is no single trader interviewed who is under 20 years of age.

The survey also established marital status of the respondents. This was categorised as single, married without children and married with children. This information is summarised in table 4.3 below.

Table 4.3: MARITAL STATUS OF THE RESPONDENTS:

MARITAL STATUS	FREQUENCY	PERCENTAGE
Single	18	30.0
Married without children	7	11.7
Married with children	35	58.3
TOTAL	60	100.0

A substantial proportion (58.3) of the livestock traders are married people with children.

Table 4.4 below reveals generally the educational level of the respondents. This ranges from no formal schooling to university level education.

Table 4.4: EDUCATIONAL LEVEL OF THE RESPONDENTS:

Educational level	Frequency	Percentage
No formal schooling	30	50.0
Std. 1-4	4	6.7
Std.5-8	17	28.3
Secondary level(form 1-IV)	9	15.0
Professional qualification	0	0.0
University level	0	0.0
TOTAL	60	100.0

Fifty percent of the respondents possess no formal education at all. Another 35% possess primary level education. This low literacy rate may have been a major handicap to most livestock traders.

None of the livestock traders has ever attended any formal business training. Needless to say, it is difficult to impart business knowledge adequately when the participants are largely illiterates. This finding conforms with that of IPAL Technical team, who did their study in South-West Marsabit. According to that study, 45.4% of the traders interviewed had never been to school. This can, to some extent, explain the low business success rate of the livestock traders.

Educational level may not be the only determinant of business performance, ownership type is as important, especially strategic decision making. Table 4.5 below shows the business ownership type of

the livestock traders.

Table 4.5: TYPE OF BUSINESS OF THE RESPONDENTS:

	Frequency	Percentages
Individually owned	36	60.0
Family Business	23	38.3
Non-Family business	1	1.7
TOTAL	60	100.0

From the above table, it is discernible that most of the business undertakings (98.3) are either individually owned or family businesses. Ownership type greatly influences financial capability of any organization, since owners are a major source of finance for any business organization. Thus, table 4.6, summarises the traders capital position.

Table 4.6: CURRENT CAPITAL POSITION OF THE TRADER:

Amount (Kshs).	Frequency	Percentages.
Less than 5,000	13	21.7
5001 - 20,000	15	25.0
20,001 - 35,000	5	8.3
35,001 - 50,000	13	21.7
50,001 - 65,000	2	3.3
65,001 - 80,000	2	3.3
Over 80,000	10	16.7
TOTAL	60	100.0

Some 46.7% of the livestock traders have invested Kshs.20,000 or less in this business. This is quite low for one to comfortably trade in livestock. The low capital setting may be attributed to the fact that there is no external sources of funds and partly to the fact that livestock is not accepted as security for loans. Only a small proportion (16.7%) of the trader respondents have capital exceeding Kshs. 80,000.

According to the findings of the study of the IPAL technical team (1984) most of the traders had less than Kshs.10,000 to start the business. This is obviously a very small amount. The situation seem to have improved comparatively. There are no institutions which offer loans, for instance, the Agricultural Finance Corporation (AFC), a government development agency, and the Kenya Commercial Bank have branches in the region, but they do not lend money to livestock traders. KCB for instance, requires securities like land, building or chattel, that few of the traders have. Livestock is regarded as unacceptable security as they could die, or be quarantined and unavailable for liquidation. The AFC considers livestock trade to be outside its mandate.

Thus, lack of capital could be a significant constraint. Availability of capital is very dependent on the number of sources which can offer loans or grants. Table 4.7 presents the respondents sources of capital.

Table 4.7: SOURCES OF CAPITAL:

Source	Frequency	Percentages.
Family members	21	35.0
Personal Savings	34	56.7
Loan	5	8.3
TOTAL	60	100.0

From the above table it can be concluded that the major source of fund (capital) for traders is personal savings. A Very small percentage (8.3%) of the traders acquired a loan to start their business. The main sources of loans are; Marsabit Teachers Co-operative Society and the Christian Children Fund (CCF-Maikona). The traders capital position largely depend on the livestock type that they trade in. The table below reveals the most popular type of livestock which the respondent trade in

Table 4.8: LIVESTOCK TYPE COMMONLY TRADED IN:

Livestock Type	Frequency	Percentages
Goats	59	98.3
Sheep	59	98.3
Cattle	20	33.3
Camel	2	3.3
Poultry	1	1.7

Goats and Sheep are the livestock type mainly traded in. This is because of their availability. Further these stocks are suited to the harsh climatic conditions of the region. Despite the large number of camels available in the area, only a very few (3.3%) of respondents who trade in camels. Concerning the various markets where this animals are sold, table 4.9 reveals the most popular of all.

Table 4.9: MARKETS WHERE ANIMALS ARE NORMALLY SOLD:

Market	Frequency	Percentage
Marsabit	21	35.0
Nairobi	35	58.3
Maikona	1	1.7
Isiolo	3	5.0
TOTAL	60	100.0

From table 4.9 it is evident that Nairobi stands out to be where most of the livestock are sold. Despite the long distance from Marsabit, Nairobi stands out to be the most promising of all the markets in the country.

In reference to Q12 (Part A), of the questionnaire, the survey revealed that most of the respondents have very little knowledge about operations of LMD and KMC. Three out of the sixty respondents have ever sold livestock to KMC. Two of the sixty respondents indicated selling to LMD. Even for those who have ever traded with these organisations, none could accurately remember the date (year) of transaction. They mainly indicate the period to be around 1980.

4.1 Factor Analysis

The idea of factor analysis is to look for groups of variables in a more efficient and precise way than can ever be achieved by "eyeball" (Alt, M. 1990). Section B of the questionnaire was analysed using factor analysis with the aid of stat-graphic computer package. This section of the analysis is primarily done to achieve objectives of the study. The factors (variables) included in the survey are

listed in the table below.

TABLE 4.10: FACTORS (VARIABLES) IN THE QUESTIONNAIRE:

FACTORS

(VARIABLES)

STATEMENTS

1. Lack of adequate capital to do the trade comfortably.
2. Lack of credit facilities to support the traders.
3. High interest rates on loans.
4. Lack of acceptable securities.
5. Marketing channel complexity.
6. Lack of trucks to carry the livestock to various markets.
7. High transport costs.
8. Poor quality roads.
9. Lack of adequate facilities at the market place e.g. holding place for unsold livestock.
10. Cumbersome regulations involved in undertaking the trade e.g. acquiring permits.
11. Lack of reliable market information.
12. Lack of market research.
13. Insecurity along the marketing routes (Banditry).
14. Illegal police charges in almost all police barriers.
15. Long distance to the market place e.g. Nairobi.
16. Lack of water points to facilitate year round flow of livestock.
17. Restriction on ferrying of the livestock at night.

18. Persistent drought.
19. Frequently imposed quaranties.
20. High risk in the livestock trade.
21. Poor organisation of the livestock marketing institutions e.g. LMD.
22. Inadequate promotion of the trade both locally and abroad.
23. Language (communication) Barrier in the market place e.g. Nairobi.
24. Low prices offered in market place.
25. High prices charged by the producers (pastrolists).
26. Unwillingness of the pastrolists to sell the livestock.
27. Cultural practices that inhibiting selling in some instances.
28. Lack of adequate market.
29. Stiff competition from others in the same business.
30. Inadequate camel market.
31. High inflationary situation in the recent past.
32. Shortages of goods (food stuffs) to be used in trade.
33. Low quality of the livestock.
34. Loss of weight due to trekking.
35. Disease outbreak.
36. Lack of formal education.
37. Lack of formal business training.

Table 4.11 presents the summary statistics of the variables (factors). The table reveals the factors to be selected (based on the standard deviation) so as to suit the stat-graphic package.

Table 4.11 : Summary Statistics of traders response

(Factor) Variable	Mean	Standard Deviation	Variable Number
1	4.50	1.02	1
2	3.87	0.95	2
3	2.27	0.97	3
4	3.43	1.21	
5	3.05	1.10	4
6	4.22	1.11	5
7	4.57	0.70	6
8	4.01	1.07	7
9	3.60	1.21	
10	3.40	1.26	
11	4.30	1.06	8
12	3.67	0.93	9
13	3.45	1.11	
14	4.01	1.10	10
15	4.12	0.94	11
16	3.73	0.97	12
17	3.77	1.06	13
18	4.30	1.05	14
19	3.38	1.30	
20	2.60	1.34	
21	3.13	1.38	
22	3.73	1.10	15
23	3.28	1.47	
24	3.77	1.05	16
25	3.33	1.22	
26	2.87	1.17	
27	2.17	1.29	

(Factor) Variable	Mean	Standard Deviation	Variable Number
28	3.50	1.40	
29	3.52	1.31	
30	3.55	1.37	
31	3.17	1.29	
32	2.65	1.26	
33	2.90	1.55	
34	3.80	1.02	17
35	3.77	1.14	
36	4.07	1.12	
37	4.22	0.76	18

From the table it is clear that lack of adequate capital, lack of trucks to carry the livestock to various markets, high transportation costs, poor quality roads, lack of reliable information, illegal police charges in almost all police barriers, long distance to the market place, persistent drought, lack of formal education and lack of formal business training are the major factors that affect livestock marketing in Marsabit district.

On the other hand, in general high interest rate on loans, high risk in the livestock trade, unwillingness of the pastoralists to sell the livestock, shortages of goods to be used in trade and low quality of the livestock are not crucial factors in livestock marketing.

The respondents were neutral in their assessment of the impact of lack of acceptable securities, marketing channel complexity, frequently imposed quarantines, language barrier in the market place, high prices charged by the pastrolists, and high inflationary situation on livestock marketing.

The statistical package used for analysis was limited to 18 x 18 matrix. To eliminate the other 21 factors (variables), the standard deviation was used. A lower standard deviation indicates that the traders were consistent in their response to that factor (variable).

The selected factors (variables) are presented in table 4.12.

Table 4.12 SELECTED FACTORS:

Variables	Factors
1	Inadequate capital to do business comfortably
2	Lack of credit facilities to support traders
3	High interest rates on loans
5	Marketing channel complexity
6	Lack of transport for livestock to various markets.
7	High transportation cost.
8	Poor quality roads
11	Lack of reliable market information
12	Lack of market research
14	Illegal police charges in all police barriers
15	Long distance to markets
16	Lack of water profit
17	Restriction on ferrying of livestock at night
18	Persistent drought
22	Inadequate promotion of trade both locally and abroad.
24	Low prices offered in the market place
34	Loss of weight due to trekking
37	Lack of formal business training.

FACTOR ANALYSIS OUTPUT OF VARIABLE AND COMMUNALITY:

A communality is a measure of the amount of a variable's variance

that is explained by the extracted factors and is obtained by adding the squares of factor loadings. The higher the variable's communality, the more is explained by the common factors than any unique factor (Srivastava, shenoy and Sharma, 1989)

Table 4.13: FACTOR ANALYSIS OUTPUT OF VARIABLES AND COMMUNALITY

Variable (Factor)	Communality
1	0.82576
2	0.77322
3	0.70933
5	0.65822
6	0.67006
7	0.74681
8	0.61627
11	0.70540
12	0.63945
14	0.70040
15	0.75636
16	0.72301
17	0.78693
18	0.60422
22	0.76037
24	0.64794
34	0.66318
37	0.61072

As the factor loadings are very high on factor 1, it reveals that all variables are clubbed on factor 1. This hence implies that 83% of factor 1 is involved in the factors. Since the aim of factor analysis is to discover common factors, mathematically, therefore, if the communality of a factor is too low, say 0.3 or less, it may be assumed that it does not contribute enough to warrant inclusion in the factor analysis. However, for this study, none of the communalities of the variables fall below 0.61.

THE VARIABLES (FACTORS) AND ASSOCIATED EIGEN VALUES:

The Eigen values is the average of the squares in the column of the principal component analysis. This percentage variance is a useful statistic because it gives a clear idea of the contribution of the factors to the total variance.

Table 4.14: FACTORS AND ASSOCIATED EIGEN VALUES

VARIABLE	EIGEN VALUE	% OF VARIABLE	CUMMULATIVE %
1	2.32922	12.9	12.9
2	2.01885	11.2	24.2
3	1.90984	10.6	34.8
5	1.55033	8.6	43.4
6	1.37244	7.6	51.0
7	1.23745	6.9	57.9
8	1.13811	6.3	64.2
11	1.04162	5.8	70.0
12	0.85130	4.7	74.7
14	0.77081	4.3	79.0
15	0.70424	3.9	82.9
16	0.61560	3.4	86.3
17	0.58772	3.3	89.6
18	0.54208	3.0	92.6
22	0.43207	2.4	95.0
24	0.37304	2.1	97.1
34	0.31913	1.8	98.8
37	0.20795	1.2	100.0

For instance, factor 1 explains 12.9% variability, factor 2 explains 11.2%, factor 3 explains 10.6% variability and so on. Those factors with Eigen values greater than 1 were chosen to be the basic factors for initial and final varimax rotation. These factors account for 70% of the observed variation.

INITIAL FACTOR MATRIX:

Table 4.15 shows the correlations between the factors. A rule of thumb used in factor analysis, is that, factor loadings should be greater than 0.5 for the correlation to be significant.

Table 4.15

Factors

Variable	1	2	3	4	5	6	7	8
1	0.33	0.46	0.37	0.42	-0.08	-0.24	-0.33	-0.11
2	-0.07	<u>0.82</u>	0.21	0.17	0.05	-0.05	-0.08	0.10
3	<u>0.67</u>	0.15	0.27	0.11	0.01	0.39	0.03	0.02
5	<u>0.51</u>	-0.42	0.04	0.37	-0.03	0.23	-0.12	0.11
6	0.32	-0.05	0.13	-0.46	<u>0.54</u>	0.19	-0.02	-0.11
7	0.14	-0.15	0.40	-0.22	0.04	<u>-0.50</u>	0.31	-0.37
8	-0.02	-0.11	<u>0.52</u>	0.34	-0.04	0.14	0.23	0.38
11	0.06	-0.13	0.41	-0.17	<u>0.61</u>	-0.09	0.22	0.24
12	-0.04	-0.40	0.21	<u>0.56</u>	0.07	-0.34	-0.05	0.03
14	-0.28	0.14	<u>0.61</u>	0.10	0.18	0.16	-0.04	-0.40
15	<u>-0.59</u>	-0.27	0.18	0.09	-0.18	<u>0.50</u>	0.13	0.03
16	0.33	0.14	0.27	-0.42	-0.06	-0.01	<u>-0.52</u>	0.31
17	-0.16	-0.09	<u>0.56</u>	-0.24	-0.51	0.15	0.01	-0.30
18	-0.49	-0.22	0.31	-0.14	0.18	0.13	-0.35	0.17
22	-0.10	-0.09	0.29	-0.37	-0.45	-0.39	-0.01	0.41
24	<u>0.58</u>	-0.41	0.10	0.03	-0.17	-0.05	0.31	0.03
34	0.35	0.47	0.02	-0.24	-0.24	0.26	0.34	0.06
37	-0.33	0.42	0.06	0.09	0.14	-0.08	0.43	0.31

The interpretation of the initial matrix can be summarised as below. The variables that loads heavily on each factor are grouped together.

Table 4.16 INITIAL MATRIX FACTOR INTERPRETATION.

Factors	Variables	Factor Loadings
1	3 High interest rates on loans 5 Marketing channel complexity 15 Long distance to market place 24 Low prices offered in the market	0.67 0.51 0.59 0.58
2	2 Lack of credit facilities	0.82
3	8 Poor quality roads 14 Illegal police charges 17 Restriction on the ferrying of the livestock at night	0.52 0.61 0.56
4	12 Lack of market research	0.56
5	6 Lack of trucks to carry livestock 11 Lack of reliable market information 17 Restriction on ferrying of livestock at night	0.54 0.61 0.51
6	7 High transportation costs 15 Long distance to the market	0.50 0.50
7	16 Lack of Water points	-0.52

There is however need to rotate the factors so as to make the results more interpretable and to form a cluster of factors. The rotated factor matrix gives the revised initial factor matrix after it had been orthogonally rotated using varimax. The matrix (final varimax rotated factor matrix - Table 4.17) represents the final solution of the factor analysis.

Table 4.17: FINAL VARIMAX ROTATED FACTOR MATRIX

Variable	Factors							
	1	2	3	4	5	6	7	8
1	0.16	<u>0.88</u>	0.01	-0.06	-0.11	0.35	-0.03	0.09
2	-0.32	<u>0.70</u>	0.01	0.25	-0.02	-0.02	0.30	-0.15
3	<u>0.62</u>	0.33	0.06	0.39	0.24	-0.06	-0.01	-0.07
5	<u>0.77</u>	0.00	-0.07	-0.18	0.01	-0.05	-0.11	-0.14
6	0.06	-0.07	-0.02	0.18	<u>0.76</u>	-0.05	-0.20	0.06
7	-0.02	0.03	0.12	-0.07	0.17	0.08	-0.02	<u>0.83</u>
8	0.38	0.09	0.28	-0.14	0.02	0.13	<u>0.59</u>	-0.05
11	0.05	-0.04	-0.01	-0.17	<u>0.70</u>	0.07	0.38	0.18
12	0.28	0.11	-0.01	<u>-0.68</u>	-0.15	-0.05	0.17	0.17
14	-0.14	0.32	<u>0.67</u>	-0.13	0.23	-0.21	0.07	0.13
15	-0.05	-0.40	<u>0.64</u>	-0.10	-0.17	-0.09	0.25	-0.29
16	0.14	0.21	-0.01	0.09	0.33	<u>0.66</u>	-0.28	-0.17
17	0.03	-0.01	<u>0.75</u>	0.17	-0.16	0.28	-0.12	0.27
18	-0.23	-0.12	0.41	-0.39	0.25	0.25	0.04	-0.30
22	-0.09	-0.09	0.05	0.01	-0.16	<u>0.80</u>	0.16	0.22
24	<u>0.66</u>	-0.18	-0.13	0.10	0.01	0.09	0.00	0.38
34	0.11	-0.12	-0.03	<u>0.78</u>	-0.34	0.05	0.14	0.05
37	-0.35	0.07	-0.07	0.13	-0.01	-0.08	<u>0.68</u>	-0.01

In the final varimax rotated matrix (Table 4.17), variable 3, variable 5, and variable 24 load heavily on factor 1. Variable 1, and Variable 2 load highly on factor 2. Variable 14, variable 15 and variable 17 load on factor 3. variable 12 and variable 34 loads

heavily on factor 4, while variable 6, and variable 11 load on factor 5. Variable 16, and variable 22 loads heavily on factor 6. Variable 8 and variable 37 loads heavily on factor 7 while variable 7 loads heavily on factor 8. The implication of this are shown in table 4.18

Table 4.18: **THE MAJOR FACTORS:**

This means that the following statements comprises	
Factor 1	High interest rates on loans Marketing channel complexity Low prices offered in the market place.
Factor 2	is composed of the following statements: .Inadequate capital to do business comfortably .Lack of credit facilities to support traders.
Factor 3	comprises the following statements: .Illegal police charges in all police barriers .Long distance to the market place .Restriction on ferrying of livestock at night.
Factor 4	consists of the following statements: .Lack of market research .Loss of weight due to trekking
Factor 5	arises out of the following statements .Lack of trucks to carry livestock to various markets .Lack of reliable market information.
Factor 6	comprises the following statements: .Lack of water points .Inadequate promotion of trade both locally and abroad
Factor 7	consists of the following statements: .Poor quality roads. .Lack of formal business training.
Factor 8	consists of the statements: .High transportation cost.

Thus the final varimax rotated factor matrix shows categories of eight significant factors in livestock marketing under various sub-headings (statements). It is equally important to rank the factors

on the basis of the mean score of the various variables.

From table 4.18 (factor rankings) it can be deduced that factors 8(transportation costs), 5(market information reliability), 2(availability of capital), and 7(formal business training), are the most important based on their aggregate mean score.

Table 4.19 FACTOR RANKINGS:

Factor 8	Mean Scores	Aggregate Average	Rank
V7	4.57	4.57	1
Factor 5			
V6	4.22		
V11	4.30	4.26	2
Factor 2			
V1	4.5		
V2	3.87	4.19	3
Factor 7			
V8	4.07		
V37	4.22	4.15	4
Factor 3			
V14	4.07		
V15	4.12		
V17	3.77	3.99	5
Factor 4			
V12	3.67		
V34	3.80	3.74	6
Factor 6			
V16	3.73		
V22	3.73	3.73	7
Factor 1			
V3	2.27		
V5	3.05		
V24	3.77	3.03	8

4.3 RELIABILITY COEFFICIENT

A Reliability Coefficient, designated by theta , was calculated on the scores to determine the effectiveness of components as independent variable. The reliability is a special case of Cronbach' Alpha Coefficient. The equation for calculating the Reliability Coefficient was as follows:

$$\theta = \left(\frac{N}{N-1} \right) \left(1 - \frac{1}{\lambda} \right)$$

Where θ represents theta

N equals the number of items or variables, and λ is the largest unrotated eigen value.

For this survey;

$$N=18$$

$$\lambda = 2.329$$

Therefore

$$\theta = \left(\frac{18}{18-1} \right) \left(1 - \frac{1}{2.329} \right)$$

$$= (1.0588)(0.5706) = 0.6042$$

The reliability coefficient resulting from the scaled scoring was 0.6042 or 60.42 percent. The score is fairly high and generally acceptable even though a higher percentage of at least 70 percent is preferred.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS: 70

The main objective of this study was to identify the major factors that affect livestock marketing as perceived by the livestock traders. The study also sought to assess the relative importance of the identified factors.

5.1 CONCLUSIONS

From the research findings presented in chapter 4 several conclusions may be drawn.

5.1.1 CONCLUSIONS ON THE CHARACTERISTICS OF THE TRADERS AND THE LIVESTOCK MARKET:

It can be concluded that a large proportion of the livestock traders are men (95%). Considering the age distribution of the traders, a majority of them are middle-aged people of between 30 and 39 years old.

As far as their educational level is concerned, half of the respondents do not have any formal schooling. This may be a major handicap for most traders. A substantial proportion (58%) of the traders are married with children. The livestock business is therefore the mainstay of most people in Marsabit district.

Slightly more than half (56.7%) of the traders, indicated that major sources of capital for them are personal savings, and the businesses are primarily individually owned.

Most of the business people trade mainly in small stocks (goats and sheep). This could be attributed to the large numbers of goats and sheep in this region.

Despite the long distance, Nairobi is the most lucrative market for some 58.3% of the traders.

5.1.2 CONCLUSION ON THE RELATIVE IMPORTANCE OF THE FACTORS:

According to the summary statistics, in general, most of the traders considered, lack of adequate capital, lack of trucks to carry the livestock to various markets, high transportation costs, poor quality roads, lack of reliable market information, illegal police charges in almost all police barriers, long distance to the market place, persistent drought, lack of formal education and lack of formal business training as important factors that affect livestock marketing. They however indicated high interest rate on loans, high risk in the livestock trade, unwillingness of the pastoralists to sell the livestock, shortage of goods to be used in trade and low quality of livestock as unimportant.

The most important factor that affects livestock marketing is the high transportation costs. The high costs negatively influence the profits earned by the traders. The costs are high not only because of the long distance to the market (Nairobi), but also because of the rough road which make maintenance of the trucks quite expensive.

The next important factors comprises , lack of reliable market information and lack of trucks to carry livestock to various markets. Owing to lack of adequate and well established communications link it is very difficult to verify reliability of any information. This makes decision making quite problematic for the traders. Few individuals own trucks and there are equally competing uses for them, which make them occasionally unavailable for livestock transportation.

The third crucial factor comprises, inadequate capital to do business and lack of credit facilities. These two are highly correlated. Most traders also lack acceptable securities against which to borrow, even where loanable funds are available.

The fourth important factor consists of lack of formal business training and poor quality roads. Since most traders are illiterate, it may not be possible to conduct any viable training. This problem complicates their book-keeping. The poor quality roads contribute significantly to the high transport costs and deaths of some animals.

In summary the rankings of the factors that affect livestock marketing are:

- a) Transportation cost.
- b) Reliability of market information.
- c) Availability of trucks to carry livestock to various markets.
- d) Availability of capital to do business.
- e) Credit facilities to support traders.
- f) Lack of formal business training.
- g) Poor quality roads.

5.2 RECOMMENDATIONS:

From the conclusions made, the following recommendations can be made.

The government should take a leading role in the improvement of roads so as to enhance commercial off-take of the herds. This measure will also go a long way in reducing transportation costs.

Development of price monitoring and information dissemination services. The department of Livestock Marketing Division (LMD) in conjunction with Marsabit District Livestock Office (MDLO) and Nongovernmental Organisations (NGOs) in the district should develop a price monitoring and information dissemination system. An integrated data bank of prices in various markets and other market information should be collected daily. This information can be disseminated

through Kenya Broadcasting Corporation (KBC) radio in both Kiswahili and other vernacular languages. This will greatly assist decision making as to when, what and where to sell. Newsletters on livestock marketing activities are also a good source of information for traders.

To overcome the capital constraints, the government should expand the loan facilities of the Agricultural Finance Corporation (AFC) to include the livestock traders. Livestock rearing being a major economic activity, provision should be made so as to allow livestock as securities for loans. Expansion of banking facilities, for instance, mobile banks in this region can be of much help to the livestock traders to provide financial assistance.

Literacy is a key factor in achieving meaningful development in any region. Thus it is imperative that the government and the residents of this region ensure that education system is well established. Adult literacy education schemes with special emphasis on record keeping should be put in place to enhance skills of the traders.

The operations of national livestock marketing institutions such as the KMC and LMD activities should be expanded to cover all pastoral areas. An awareness programme as concerns the role of these institutions should be launched. A properly organized annual activities schedules of these institutions will be of help to traders in decision making.

Although necessary checks should be put in place to curb illegal trade, this should not be a barrier. For instance, illegal police charges in almost all police barriers featured as one of the significant factors, considering its mean score of 4.07. A loop-hole in trade procedure that has provided a lieu way to this corrupt

practises, is the fact that the permit for ferrying livestock is valid only for twelve hours (6a.m-6p.m). As a measure to stop this police nuisance, the permit should be extended to twenty four hours for livestock trade. Also, police checking should be done only at the point of origin (Marsabit) and on arrival (Nairobi). This will reduce death of animals due to heat stress, if night travels are allowed. Also, the high marketing cost can be reduced with removal of the 'good' police charges.

5.3 LIMITATIONS OF THE STUDY

Since most of the respondents had no formal schooling or only primary level education (85%-refer table 4.4) some of the questions or in some cases all had to be explained in the Vernacular (GABRA). In this process, some of the original meanings could have been distorted. Actually some English words do not have vernacular equivalents.

Owing to financial and time constraints, only the individual livestock traders were interviewed. Inclusion of the District Livestock Officer and NGOs Officers involved in livestock development would have enriched the study.

5.4 SUGGESTIONS FOR FURTHER RESEARCH:

The current study was based mainly in Maikona and North-Horr divisions. Since livestock rearing is a major economic activity in Kenya, future research should be extended to other livestock traders in other parts of the District.

Another study can also be conducted with a view to getting the opinions and attitudes of individuals engaged in promoting livestock

activities. The target respondents may hence, be the government and Non-governmental organisations' officers. Their perception may be quite different from those of the livestock traders.

This study has mainly dealt with the marketing of livestock, another related study concerning marketing of livestock products, such as milk, meat, hides, and skin can also be conducted. The findings of the two study, if integrated would enhance the sector's contribution to the national economy.

APPENDIX I

University of Nairobi
Department of Business
Administration
P.O Box 30197, NAIROBI.

Dear Respondent,

I am a postgraduate student in the Faculty of Commerce, University of Nairobi. In fulfilment of the requirements for the degree of Master of Business and Administration (MBA), I am undertaking a management research project that seeks to identify factors that affect livestock marketing.

I am therefore requesting for your assistance in completing the attached questionnaire to the best of your knowledge and ability. The information that you provide will be treated in strict confidence.

Your co-operation in completing the questionnaire is greatly appreciated.

Yours faithfully,

DULACHA G. BARAKO

MBA STUDENT.

SUPERVISOR:

Prof. F.N. KIBERA.

APPENDIX II:

QUESTIONNAIRE FOR THE LIVESTOCK TRADER:

SECTION A

Below are questions related to the current nature of livestock marketing in Maikona and North-Horr Divisions of Marsabit District. Please provide an appropriate response to each question.

1. What is your view of livestock trade (marketing) as a business?

.....
.....
.....

2. For how long have you been in the business?

Month/year.....

3. Are you a full-time livestock trader?

Yes ()

No ()

4. For what purpose do you rear livestock ?

Commercial ()

Subsistence ()

5. Which of the livestock type do you trade in?

Goats ()

Sheep ()

Cattle ()

Camel ()

Other (specify) ()

6. What is the nature of your business?

Individually owned ()

Family business ()

Non-Family business ()

Any other (specify)

7. What class did you reach in formal education?

No formal schooling at all ()

std 1-5 ()

std 6-8 ()

Secondary level (form 1-IV) ()

University level ()

Professional qualification ()

8. Have you ever attended any formal business training?

Yes ()

No ()

9. Where do you normally sell your livestock?

Marsabit Market ()

Nairobi Market ()

Any other (specify).....

10. How many times in a year do you sell the livestock in the market stated in Q9 above?

Number of Times	Once	2	3	4	other
Types of Livestock					
Cattle					
Goats					
Sheep					
Camel					
Other (specify)					

Q11. What is the average number of each livestock type traded in that you sell per trip to the market place?

Average Number	Upto (specify NO.)	31-50	51-70	71-90	Over 90
Types of Livestock					
Cattle					
Goats					
Sheep					
Camel					
Other (specify)					

Q12. Do you sell your livestock to the Kenya Meat Commission (KMC) and the livestock Marketing Division (LMD)?

Type of Livestock	LMD		KMC	
	Yes	No	Yes	No
Cattle				
Goats				
Sheep				
Camels				
Other (specify)				

13. What is the amount of capital (money) that you have invested in this business?

their

- less than 5,000/= ()
- 5001 - 20,000 ()
- 20,001 - 35,000 ()
- 35,001 - 50,000 ()
- 50,001 - 65,000 ()
- 65,001 - 80,000 ()
- Over 80,000 ()

14. How did you acquire the initial capital to start the business?

- family members ()
- Friends ()
- Personal savings ()

Loan (specify the organisation that provided the loan)

.....

15. In your view what amount of capital (money) is sufficient for one to comfortably trade in livestock?

.....

SECTION B

Below are a list of factors that affect traders in marketing their livestock. Please indicate importance of the factors according to the degree in which they affect your operations in effectively marketing your livestock.

Very imp. imp. neutral. unimp. very unimp.

- | | | | | | |
|---|-----|-----|-----|-----|-----|
| 1. Lack of adequate capital to do the trade comfortably | () | () | () | () | () |
| 2. Lack of credit facilities to support the traders. | () | () | () | () | () |
| 3. High interest rates on loans | () | () | () | () | () |
| 4. Lack of acceptable securities | () | () | () | () | () |
| 5. Marketing channel complexity. | () | () | () | () | () |

Very imp. imp. neutral. unimp. very unimp.

6. Lack of trucks to
carry the livestock
to various markets. () () () () ()
7. High transport costs () () () () ()
8. Poor quality roads () () () () ()
9. Lack of adequate
facilities at the
market place e.g.
holding place for
unsold livestock () () () () ()
10. Cumbersome regulations
involved in undertaking
the trade e.g. acquiring
permits () () () () ()
11. Lack of reliable market
information. () () () () ()
12. Lack of market
research () () () () ()

13. Insecurity along the
marketing routes
(Banditry) () () () () ()
14. Illegal police charges
in almost all police
barriers. () () () () ()
15. Long distance
to the market place
e.g. Nairobi. () () () () ()
16. Lack of water points
to facilitate year round
flow of livestock () () () () ()
17. Restriction on ferrying
of the livestock at
night () () () () ()
18. Persistent drought () () () () ()
19. Frequently imposed
quarantines () () () () ()

20. High risk in the
livestock trade () () () () ()
21. Poor organisation of
the livestock marketing
institutions e.g. LMD
and KMC. () () () () ()
22. Inadequate promotion
of the trade both
locally and abroad. () () () () ()
23. Language (communication)
Barrier in the market
place e.g. Nairobi () () () () ()
24. Low prices offered in
market place () () () () ()
25. High prices charged by
the producers
(pastrolists) () () () () ()

26. Unwillingness of the
pastoralists to sell the
livestock () () () () ()
27. Cultural practices that
inhibiting selling in
some instances. () () () () ()
28. Lack of adequate
market () () () () ()
29. Stiff competition from
others in the same
business () () () () ()
30. Inadequate camel
market () () () () ()
31. High inflationary
situation in the
recent past () () () () ()
32. Shortages of goods
(food stuffs) to be
used in trade () () () () ()

Very imp. imp. neutral. unimp. very unimp

33. Low quality of the
livestock () () () () ()
34. Loss of weight due
to trekking () () () () ()
35. Disease outbreak () () () () ()
36. Lack of formal
education. () () () () ()
37. Lack of formal
business training () () () () ()

PERSONAL DETAILS

Please tick in the box provided for appropriate response.

1. **SEX**

Male ()

Female ()

2. **AGE(yrs)**

Under 20 ()

20 - 29 ()

30 - 39 ()

40 - 49 ()

50 and above ()

3. **MARITAL STATUS**

Single ()

Married without children ()

Married with children ()

Specify the number of children.....

4. **MONTHLY INCOME EARNINGS**

less than 1000/=

1001 - 2000 ()

2001 - 3000 ()

3001 - 4000 ()

4001 - 5000 ()

Over 5000 ()

5. **OCCUPATION**

Main _____

Others (specify)

i) _____

ii) _____

iii) _____

APPENDIX III

LIST OF ABBREVIATIONS

ALMO	-	African Livestock Marketing Organization
FAO	-	Food and Agriculture Organization
KLDP	-	Kenya Livestock Development Project
KMC	-	Kenya Meat Commission
LMD	-	Livestock Marketing Division
IFPRI	-	International Food Policy Research Institute
ILCA	-	International Livestock Centre for Africa
IPAL	-	Integrated Project in Arid Lands.
UNESCO	-	United Nations Educational, Scientific and Cultural Organization.
WB	-	World Bank
WFP	-	World Food Programme

APPENDIX IV**Income derived from Livestock and Livestock Products (K)**

	1990	1991	1992
Cattle Export	3,463,040	1,220,560	644,443
Hides	370,795	110,356	-
Slaughter	286,300	742,215	718,380
Sheep Export	194,128	500,669	67,185.9
Skins	160,123.25	38,884.31	-
Slaughter	61,258	369,479.20	102,300
Goats Export	291,132	787,569	-
Skins	29,909.55	132,350.27	-
Slaughter	91,889.50	441,685	-
Camels Export	-	863.23	-
Hides	-	-	-
Slaughter	57,530	440,248	364,500
Total	4,906,105.30	4,789.850	2,020,582.7

Source: Marsabit District Development Plan, 1994-1996

APPENDIX V**Actual Agricultural Output (Tonnes) and Value (Kf.000)**

Output (tonnes)	1988	1989	1990	1991	1992
Maize	7,420	8,450	9,900	1,100	1,400
Beans	1,194	1,200	1,890	800	200
Sorghum	4	5	36	200	200
Teff	58	70	110	100	100
Wheat	58	56	61	10	10
Green grams	11	13	24	10	10
Coffee	87	12	12	14	14
Value (K.000)					
Maize	1,115	1,268	1,485	1,925	914
Beans	385	360	567	280	105
Sorghum	2	3	5	100	600
Teff	17	21	33	600	600
Wheat	17	20	18	60	60
Green grams	67	66	18	20	20
Coffee	44	6	6	14	14

Source: Marsabit District Development Plan, 1994-1996.

APPENDIX VI

Total Area of the District by Division

Division	Sq. Km
Central	2,090
Laisamis	15,563
Loiyangalani	10,999
*Maikona	17,761
*North-Horr	23,892
Moyale	3,121
Sololo	5,527
Lake Turkana	4,125

	78,078

* Divisions in which the study was conducted

* Moyale and Sololo divisions constitute the newly created Moyale District.

Source: Marsabit District Development Plan, 1994-1996.

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