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## THE ROLE OF LIVESTOCK MARKETING IN IMPROVING THE LIVELIHOODS OF PASTORALISTS. A CRITICAL LITERATURE REVIEW

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### Abstract

**Purpose:** The pastoralists who are majority of inhabitants of ASALs in Kenya depend mainly on the livestock resource for their livelihoods. This study examined how the livelihoods of pastoralists would change if identified constraints are addressed and if there is effective participation of the relevant stakeholders in marketing of the livestock and livestock products.

**Methodology:** The paper used a desk study review methodology where relevant empirical literature was reviewed to identify main themes and to extract knowledge gaps.

**Findings:** The study confirmed that livestock keeping is very important and is the mainstay of 80% of pastoralists who depend on it for productive capital. All aspects of pastoral social and economic life are ordered in relation to livestock and the environment in which they live. There are many challenges ranging from climatic, geo-physical, economic, political and social that impedes effective trade of livestock and livestock products.

**Unique Contribution to Theory and Practice:** Key stakeholders including the government, political leaders, civil society, and livestock marketing associations amongst others should come up with a way forward to address the constraints preventing the livestock industry to contribute its potential role of poverty alleviation in ASALs. Indeed, an ASAL Marshall Plan is required to transform the area from being a perpetual poverty-stricken area to a prosperous and self-sufficient region.

**Keywords:** *Livestock marketing system, pastoralism, poverty, livelihood*

## 1.0 INTRODUCTION

A large part of Kenya is found in dry areas that experience inadequate rainfall hence, unsuitable for arable farming. These lands are referred to as Arid and Semi-Arid Lands (ASALs) and cover 75% of Kenya's land surface. A large part to the Northern and Eastern part of the country is designated as ASALs (Ongoma, 2018). The annual median rainfall figures range from as low as 120 mm in North Horn. < 250mm in Samburu and Wajir 311mm in Isiolo and 700 mm in Marsabit (Otieno, 2015) The ASALs carry 50% of the livestock and are home to 25% of Kenya's human population (Government of Kenya, 2015). The area has the bulk of indigenous species of livestock and this contributes a big portion to the beef industry in Kenya. The important livestock species in ASALs are beef cattle, camel, goats and sheep. The main livestock products are milk, meat, hides and skins.

Most inhabitants of this vast region are pastoralists and mainly depend on livestock as their source of livelihood. Pastoralist production systems are defined as those in which 50% or more of household gross revenue comes from livestock or related livestock related activities (Watete, 2016). The pastoralist livelihood system is adapted to low, erratic rainfall. Pastoralists use dry-land-natural resources sustainably where no other land-use systems can thrive (GoK, 2015). Hence, their way of life is best suited to utilize this environment. Furthermore, pastoralism is believed to be a dynamic production system. The pastoral communities are largely nomadic (SNV2, 2015). Hence, most pastoralists migrate from one region to another in search of pastures and water. This migration extends to the neighboring countries such as Ethiopia and Somalia. This is due to the harsh climatic conditions prevalent in these areas.

Kenya's pastoralist communities constitute seven of the country's forty-two main ethnic groups. They are mainly the Maasai, Samburu, Pokot, Turkana, Oromo. Somali and Orma. The other two, Keiyo and the Marakwet are considered semi-pastoralists. The total population for pastoralist and semi pastoralists in Kenya is estimated to be about 4.2 million covering an area of 423,661 square kilometers. These communities comprise only 6.6% of the country's total population (SNV, 2015).

Despite the availability of many resources especially livestock in the ASALs, the region is generally characterized by high poverty levels and this raises a lot of concern to the inhabitants, the government, politicians, development partners and other stakeholders. While the main resource base in ASALs is livestock, the livestock keepers are quite poor with over 60% living below the poverty line of one dollar per day (GoK, 2015). Recent statistics show that poverty incidence in North Eastern province is 64% ranging from 59% in Dujis Constituency (in Garissa District) to 70% in Wajir North Constituency (GoK, 2015). Similarly, this scenario is portrayed in most other pastoralist areas in the country.

## 1.2 Statement of the Problem

The pastoralists who are majority of inhabitants of ASALs in Kenya depend mainly on the livestock resource for their livelihoods. Despite their huge livestock resource, they have lagged behind in development and have not benefited adequately it (ILRL, 2015). Though the region holds half of Kenya's livestock population, the poverty levels are extremely high. According

to UNDP (2015), poverty means the denial of opportunities and choices to lead a long, healthy and creative life and also to enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others.

This state of affairs is prevalent all over the region and is alluded to in many documents. Hence, the ASALs have lagged behind in developmental matters that cut across a wide spectrum like education, health and general infrastructural development. Therefore, there is a need to examine whether livestock marketing has played its expected role of translating the livestock resource into cash which can be used to meet various needs.

Among many possible reasons, one may attribute the poverty situation in ASALs to poorly developed livestock marketing system as this limit effective trading. A marketing system is comprised of a number of elements; the particular products and their characteristics being transferred from producer to consumer; the characteristics of participants (e.g., the producer, the trader, the consumer); the functions or roles that each participant performs in the market; and the locations, stages, timetable and physical infrastructures involved (ILRI. undated). The immediate causes of poverty may be lack of access to assets and to free markets (IFAD, 2002:23).

The main market structures required to facilitate livestock marketing are either in poor condition or do not exist at all. These include slaughterhouses, processing facilities, stock routes, holding grounds, quarantine grounds. Disease Free Zones, and water facilities. In Kenya, most facilities have become run down over the years after a policy shift in the mid-80s where the Livestock Marketing Division of the Ministry of Livestock Development (MoLD) stopped being involved directly in management and direct purchase of livestock. No wonder the incidence of poverty tends to be high with poor physical market access (IFAD4; 2002:13). IFAD adds that the underlying cause of poverty has been lack of reflection of the interests of the rural poor in key political, economic and institutional processes.

The ASAL region faces a myriad of other problems and to large extent, these constraints impede improvement of livelihoods of the pastoralist communities. The constraints can only be addressed if most of the bottlenecks are addressed through the concerted efforts by the government, development partners, private sector and the beneficiaries. It is only then that one can expect the economy of the area will boom and hopefully this will result in improved socio-economic development of the people.

Marketing is an important aspect of any livestock system (Steinfeld, 2015). It provides the mechanism whereby producers exchange their livestock and livestock products for cash. The cash is used for acquiring goods and services which they do not produce themselves, in order to satisfy a variety of needs such as food, clothing, medication and schooling. As livestock raising is the core economic activity in most arid and semi-arid areas, improved livestock marketing is seen as one of the ways to improve performance of this core economic activity and reduce poverty rates. Hence, functional livestock marketing is crucial if the poverty situation in Kenya's ASAL areas is to be addressed.

This study examined how the livelihoods of pastoralists would change if identified constraints are addressed and if there is effective participation of the relevant stakeholders in marketing of the livestock and livestock products. The study focused on the sociological aspect of pastoralists by looking at the role of livestock marketing in poverty alleviation. It focused on the interventions that should be put in place so as to uplift the pastoralists' socioeconomic status.

### **1.3 Objectives of the Study**

The main objective of this research was to establish how the livelihoods of pastoralist communities living in the ASALs can be improved through an efficient livestock marketing system.

### **1.4 Justification of the Study**

The poverty levels are very high in the ASAL region that is predominantly inhabited by pastoralists. This study highlights the role of livestock marketing in poverty alleviation. It also suggests some ways and means of addressing some of the constraints experienced in livestock marketing by the pastoralist communities. This information is useful to the government, development planners/agents, traders and other stakeholders in formulating appropriate interventions.

In addition, various anthropological studies have been carried out in the area through initiatives such as the Pastoralist Risk Management Project (PARIMA). However, livestock marketing is a poorly studied area and few insights exist into the actual nature of real livestock markets and trading systems in different parts of the continent (Grunert, 2015). For instance, Bennett (2017) indicates that anthropological studies ignore the marketing of livestock in their analysis. This view is supported by Peak and Little (2015) who say that livestock marketing warrants a renewed examination of what to date has been relatively under-researched topic. Livestock marketing studies are essential to provide vital information on the operations and efficiency of the livestock marketing system for effective

## **2.0 LITERATURE REVIEW**

### **2.1 Poverty levels amongst livestock keepers**

According to UNDP (2015), poverty means the denial of opportunities and choices to lead a long, healthy and creative life and also to enjoy a decent standard of living, freedom, dignity, self-respect and the respect of others. Globally, more than 2.8 billion people, close to half the world's population, live on less than US\$2 a day. Approximately one quarter of these poor people, are livestock keepers (Smith, J et al 2015). According to Onyango (2016), most of the rural poor raise livestock and about 41 million are pastoralists mainly located in the arid and semi-arid areas. 22% or 336 million of people were living below the poverty line by year 2015 in Sub-Saharan Africa (SSA). A study conducted by the International Labor Organization (ILO) in Tanzania in 2015, indicates that the pastoral communities are in major crisis today as they are economically, politically and socially marginalized. These concerns are captured in IFAD (2015:18) by the following questions; Why is there such rural poverty alongside such production potential? What has happened? What has to change?

Concerns have been raised by various authors on the current high levels of poverty in Africa including the Eastern and Southern region. This is despite the vast reserves of natural resources found in abundance in various parts of the continent. According to Bhattarai (2015), poverty statistics from ASALs portray a grim picture worldwide. This view is supported by Zahonogo, (2017) who say that the ASALs contain some of the highest poverty rates in Sub Saharan Africa. Perhaps no population suffers more from material deprivation and low incomes than pastoralists (Zahonogo, 2017).

## **2.2 Commercialization among pastoralists**

Barter trade has characterized the pastoralist economy for a long time. An example is the exchange of livestock i.e., goats with donkeys; or livestock with cereals, especially during the very dry spells. It is also a cultural practice for these communities to keep livestock as a safety net for possible future drought periods and this inhibits entrepreneurship (SNV, 2015). Although pastoralists do not mainly rear animals for commercial purposes, their gradual integration into the cash economy and the frequent recurrence of drought are increasingly pushing them to sell more animals than before (Catley, 2016).

The pastoralists fetch very little money from the sale of livestock as they only sell in times of drought as a last resort. Land in most areas is also not enough for grazing. A contributing factor is that it was taken from traditional grazers by government without compensation. This means that the communal grazing lands continue to dwindle and this exacerbates the situation. During drought, which is defined as a significant reduction of forage and or food production due to water deficiency during a rainy season (Gautam, 2015), cereals prices are very high as the production is low while animal prices go down as they lose much weight.

The need for cash exchanges is however on the increase. This is to cater for foodstuffs and school fees among other needs and as such, sale of livestock in cash has become a major practice though it is always done as the last option (SNV, 2015). Commercial livestock is also becoming increasingly important with the breakdown of drought coping mechanisms (AGREF, 2015). This will provide a good opportunity for pastoralists' involvement in livestock marketing as a means of increasing their household incomes.

The motivation behind and stigma associated with livestock marketing in the region has changed drastically since the colonial period. Indeed, it has gone from a situation where the assumed view of livestock producers towards marketing was indifferent or even negative to a realization that intervention to improve pastoral incomes and food security are highly desired (Peak and Little, 2006). Due to a lot of trainings and awareness creation, the pastoralists have started appreciating their livestock as liquidity which can be converted into cash

## **2.3 Theoretical Framework**

According to Podolny (2015), a large number of sociologists have been seeking to demonstrate that the operation of the market can be better understood if it is conceptualized as a social mechanism. Podolny adds that economic sociology draws on sociology's broader corpus of

analytical constructs to rethink the operation of the market. Hence, a number of theories will be used to deepen our understanding of the linkage of marketing and sociology. These include the modernization theory and the social exchange theory.

The modernization theorists explain lack of modernity in third world countries. Modernization theory categorizes societies as either modern or traditional. The modern societies are the rich north while the traditional societies are the poor south. The theory blames the victim for failing to develop and the theorists are therefore referred to as internalist. This theory takes a simplistic approach of underdevelopment in our societies through the dichotomy of comparing a developed society and an underdeveloped one. Modernization theory argues that the problem is internal, and that the only solution is for third world governments to drag their people out of a "traditional" way of life and into a modern, capitalist future. This perspective ignores the problem of damage already done to the supposedly traditional way of life in the third world, as well as demanding that the world's poor ignore the ecological and moral problems attached to capitalism, as have the rich countries. From a modernization perspective, the degree of industrialization, urbanization, and cultural values are the main indicators of change in development in a country.

This is familiar in Kenya where pastoralists' communities are blamed about their lack of development without understanding and appreciating the many challenges encountered in their environment. Manufacturing is equated to modernity yet there are very few if any manufacturing facilities in the ASALs. Hence, one can postulate that the region lacks modernity. If a processing facility such as a modern slaughterhouse is established as is being planned through the government, the pastoralist would be expected to provide their animals as raw materials which would be processed and sold at a higher value by the owners of capital. Patterns of change in Third world countries are largely determined by international political and economic forces, these forces originate from the industrial led nations (Frieden, 2018)

The traditional society is stagnant and unchanging (McFarland, 2018). Its values are spiritual and not values of individual self-betterment. Rhythms of life are circular and not linear and progressive. Traditional world is emotionally comfortable, a world in which each person has a place that is secure. The traditional person identifies with his or her ancestors and emulates them. Routine work is performed to maintain one's place in the society. They lack innovativeness and there is no distinction between daily life and spiritual life. This to a large extent defines the pastoralists' way of life. Citizens with traditional psychological and cultural traits place less value on achievement, hard work, investment, savings and other such characteristics. They emphasize subsistence living and cultural values embraced by local communities and religions. They have traditional economies, characterized by low levels of industrialization, very small middle class, scarcity of food and high rates of unemployment.

As part of modernization process, the peasantry is compelled to surrender its resources to upper class, to the state and the industrial sector (Looney, 2012). In the pastoralists\* context, what comes to mind is the exploitation by middlemen and excessive taxation of livestock traders in livestock marketing. This can be explained by modern exchange theory by George Simmel who talks of tension of relationships arising from actors who try to manipulate a situation thereby increasing

the potential of conflicts. According to Bates (2014), resources from agriculture are appropriated from peasants to meet the needs of businessmen and industrialists.

Another theory relevant to the study is the social exchange theory which was initiated by Homans (1950). It was developed to understand the social behavior of humans in economic undertakings. Exchange theories make use of rewards and costs and resources when discussing the foundation of interpersonal exchange. According to Chernyak-Hai (2018), the key tenet of social exchange theory is that human behavior is in essence an exchange particularly of rewards or resources of primarily material character (wealth). The theory views actors as dealing not with another actor but with the market responding to various market characteristics. It proposes that social behavior is the result of an exchange process. Social ties among market actors are seen as conduits for information, about exchange opportunities and conduits for trust; stronger social relations allow for the sharing of more complex information between the buyer and seller than simply price and quantities (Podolny 2017).

The theory also proposes that human beings always act under constraints but they still compete with one another in seeking to make profits in their transactions. The purpose of this exchange is to maximize benefits and minimize costs. According to this theory, people weigh the potential benefits and risks of social relationships. When the risks outweigh the rewards, people will terminate or abandon that relationship. There are several actors in livestock marketing and their dealings can be explained by this theory. Actors in exchange can be, not only individuals but also groups, and that in-group processes and intergroup relations are more complex than being sets of market transactions (Blau, 2017). In the study, these actors are the traders, producers and the middlemen. This study related to exchange theory and through participatory analysis sought people's solutions on how their livelihoods can be improved by improvements in livestock marketing.

## 2.4 Empirical Review

Mwasi (2020), who conducted a study on the contribution of livestock to the livelihoods of urban and peri-urban households in Embakasi Constituency, Nairobi County. Urban Livestock keeping contributes to food security, income generation, employment creation, insurance and improved social status. A study was conducted to evaluate the contribution of livestock production to the livelihood of urban and peri urban households in Embakasi Constituency in Nairobi County. The objectives of the study were to assess the influence of livestock farming on the livelihood of the respondents, the institutional influence on livestock production and the challenges faced by respondents in Embakasi constituency. The study targeted 780 livestock keeping population in Embakasi constituency. A sample size of 160 respondents was sampled purposefully selecting 40 from each Sub County. Structured questionnaire was used to collect primary and secondary data from respondents. Data was analyzed using SPSS version 20. The results of the study showed that 7.5% of the household heads were aged between 36 and 50 years while 22.5% of livestock keepers had acquired post-secondary education although 87.5% were not in formal employment. 30% of respondents kept chicken, 11% goats and 25% cattle. 45% respondents sold their produce at the farm-gate and roadside stores, while 88% faced challenges in accessing feed thus relied on open



market food left-overs. The age of the farmer and leadership of the household influencing livestock keeping technology adoption reflected a correlation of ( $r=0.74$ ) and ( $r=0.80$ ) respectively. Also, farmers used mobile smart phones ( $\chi^2=28.9$ ), visiting ASK shows ( $\chi^2=41.8$ ) and radio/television presentations at ( $\chi^2=61.6$ ) which influenced marketing of livestock produce by ( $p=0.01$ ,  $p=0.00$ ,  $p=0.00$ ). In conclusion, livestock kept in Embakasi constituency were cattle, poultry, pigs, rabbits and shoats. The high protein sources, contribute to food security and reduced malnutrition.

Abdullahi (2018), who conducted a study on the role of socio-demographic and livelihood strategy diversification on pastoralists' household stability in Mandera County, Kenya. Pastoralism is an important source of livelihood for many people across the world. The people of northern Kenya including those in Mandera West-Sub-County have adopted non-pastoralism activities in order to earn a living. This study therefore sought to investigate the role of livelihood diversification strategies on household stability among pastoralist in Mandera West-Sub-County. The objectives of the study were to; determine socio-demographic characteristics of pastoralist's households, establish different types of livelihood diversification strategies adopted by pastoralist households, establish household assets of pastoralist's households, establish the challenges that influence choice of non-traditional livelihood diversifications strategies of pastoralists' households and establish the relationship between household diversification strategies and household stability in Mandera West-Sub County. A community based cross-sectional analytical study design was used with a sample size of 154 households. Simple random sampling was used to select households. A research questionnaire, Key informant interview schedule and focus group discussion schedule were used to collect both qualitative and quantitative data from all the study participants. Quantitative data was analyzed using the Statistical Package for Social Sciences (SPSS) version 21. Content analysis was used to analyze qualitative data based on thematic areas. Chi-Square statistical test was used to establish the association between categorical variables. Descriptive statistics was done using frequencies. Presentation of data was done through bar charts, pie charts and frequency tables. The results of the study showed that Education was found to have a positive influence on livelihood diversification strategies adopted by households. More than 80% of the households adopted non-traditional activities. Household assets influenced the choice of livelihood diversification strategies though there still disparity in income earning across gender in the study area. Droughts, famine, lack of water were identified as the major challenges to adoption of livelihood diversification strategies. Drought mitigation strategies should be initiated in the study area to reduce threats to household livelihoods in the study area.

Arero (2018), who conducted a study on the factors influencing marketing in Marsabit region: a case of Merille livestock market. 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. 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 results of the study showed 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.

## 2.5 Research Gaps

A knowledge gap occurs when desired research findings provide a different perspective on the issue discussed. For instance, in this study's critical literature review, Arero (2018), conducted a study on the factors influencing marketing in Marsabit region: a case of Merille livestock market. The purpose of the study was to investigate factors influencing livestock marketing in Marsabit region focusing on Merille livestock market. A descriptive research design was used. 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. The results of the study showed 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. On the other hand, our current study focused on the role of livestock marketing in improving the livelihoods of pastoralists.

In addition to that, a methodological gap can be identified as the above researchers for example Arero (2018), applied the descriptive research design. 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; whereas our current study utilized a desktop literature review method.

## 3.0 METHODOLOGY

The study adopted a desktop literature review method (desk study). This involved an in-depth review of studies related to the role of livestock marketing in improving the livelihoods of pastoralists. Three sorting stages were implemented on the subject under study in order to determine the viability of the subject for research. This is the first stage that comprised the initial identification of all articles that were based on the based on the role of livestock marketing in improving the livelihoods of pastoralists. The search was done generally by searching the articles in the article title, abstract, keywords. A second search involved fully available publications on the

subject on the role of livestock marketing in improving the livelihoods of pastoralists. The third step involved the selection of fully accessible publications. Reduction of the literature to only fully accessible publications yielded specificity and allowed the researcher to focus on the articles that related to the role of livestock marketing in improving the livelihoods of pastoralists which was split into top key words. After an in- depth search into the top key words (livestock marketing system, pastoralism, poverty, livelihood), the researcher arrived at 3 articles that were suitable for analysis. These findings are from research articles done by:

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## **4.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **4.1 Conclusion**

The study confirmed that livestock keeping is very important and is the mainstay of 80% of pastoralists who depend on it for productive capital. All aspects of pastoral social and economic

life are ordered in relation to livestock and the environment in which they live. Indeed, livestock is an expression of wealth and one gets respect based on the volume of livestock owned. Livestock boosts an individual's status and provides a social benefit of networking with people along the marketing chain. Livestock serves as insurance for many people in African societies and market becomes the scene of social exchange. There are many benefits to local pastoralists derived from the livestock enterprise such as creation of employment through trading opportunities. There is also contribution to food security through such products as milk and meat. It provides income that can be used for purchasing cereals, clothing, medical and school fees as well as for investing in other areas. In ASALs, livestock also provides transportation especially the camels which carry young children or the whole pastoralist's manyatta during migration. Hence, livestock is central to the pastoralists' livelihoods.

The study established that there are many stakeholders involved in livestock marketing. From the analysis of their roles, most of these players contribute positively in the sector but there is lack of coordination amongst all these players. This includes the government and its various agencies which play a facilitation role and provide crucial services albeit with inefficiencies. The government does not play its role in an optimal way due to shortage of resources. The NGOs, Livestock marketing associations, the Civic authorities, transporters among others all play an important role in facilitation of livestock marketing. Despite the presence of all these institutions, poverty is still prevalent and there is need to re-examine the development strategies applied.

There are many challenges ranging from climatic, geo-physical, economic, political and social that impedes effective trade of livestock and livestock products. These constraints are caused by many factors and contribute to the high poverty levels. The infrastructure is really wanting and most of the roads are generally in very poor conditions. In fact, there has been no tarmac or all-weather roads beyond Garissa town or Isiolo town which are the two major entry points to the ASALs. This affects efficient transportation and increases costs of doing business and providing various services. However, there is renewed government effort to construct tarmac roads beyond the two major towns and some construction work has started. If these constraints are tackled, then the livelihoods of the pastoralists can improve.

Livestock marketing can play a leading role in poverty alleviation in ASALs. Poverty is prevalent in the ASAL region and has negative impacts on the community. The community lags behind a lot in development and therefore major infrastructural development is required. With more involvement of pastoralists in livestock marketing there will be more cash flow. As variously stated, there are many constraints encountered and the costs involved are high.

#### **4.2 Recommendations**

Major investments are required by the public sector in all areas of infrastructural developments in the ASALs as most are dilapidated or non-existent, that is, all weather roads, electricity, communication and export abattoirs. The wealthy indigenous pastoralists should also be encouraged to invest in their region and not only in Nairobi or other towns.

Livestock marketing facilities should be rehabilitated and new ones established by the government together with the livestock marketing associations. The Municipal and County councils should reinvest in the livestock sector by ploughing back resources. They should avail properly equipped markets nearby since these two institutions derive most of their revenue from levying the sector. Further, there is a need for value adding and establishment of cottage industries. The country should focus on potential external markets for livestock and livestock products e.g., in COMESA, Mauritius, Egypt, Middle East and South East Asia. This is in line with the Vision 2030, which is the country's blueprint that talks of implementation of 4-5 Disease Free Zones and livestock processing facilities to enable Kenyan meat, hides and skins to meet international marketing standards. It also talks of more domestic processing of these products for regional and international markets.

Timely and reliable market information should be provided by the government, development partners and marketing associations such as KLMC. Market information is crucial in any marketing activities. Its provision should be intensified by improving the current system through mobile Service providers and the local FM stations to broadcast livestock prices. This is important to empower the livestock keepers and minimize exploitation by middlemen. Established marketing bodies/associations such as DLMC can oversee honest brokerage to minimize exploitation by middlemen and selling through auctions should be adopted. Both traders and producers should organize themselves into groups so as to have more control and minimize exploitation by middlemen. In addition, capacity building in technical aspects and business skills should be intensified so as to increase the pastoralists' awareness and be in a better position to make informed decisions. In addition, HIV/AIDS was recommended strongly as a topic that needs to be included during trainings.

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