Major constraints of livestock marketing in lowland part of Ethiopia

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Abstract: - Ethiopia is believed to have the largest livestock population in Africa. The diverse agro-climatic conditions of Ethiopia make it very suitable for the production of different kinds of livestock. Current knowledge on livestock marketing in lowland part of Ethiopia is poor and inadequate for designing policies and institutions meant to improve the livestock marketing system. In order to bridge this gap, this work is carried out in the major constraints pastoral livestock markets of Ethiopia to empirically investigate formation of livestock marketing in the supply value chain of the meat and live animal export market of the country. Among the major constraints marketing Ethiopia of livestock in lowland part of absence of Market Information System, inadequate infrastructure, absences of veterinary services, contraband and clan conflict. Access to market information enables these producers to seek out and compare the information available for different market outlets to realize the full potential profit by getting the best prices.

Keywords; Livestock, constraint, market, lowland, Ethiopia

1. INTRODUCTION

The diverse agro-climatic conditions of Ethiopia make it very suitable for the production of different kinds of livestock. Ethiopia is believed to have the largest livestock population in Africa (Belachew and Jemberu 2003). The number of livestock owned per household varies from location to location depending on the diverse agro-ecological conditions. livestock population of Ethiopia is 53.99 million heads of cattle, 25.49 million heads of sheep, 24.06 million heads of goats, 50.38 million heads of poultry, 1 million heads of camel and 5.21 million beehives(Mesele et al., 2015). The country's agro-ecological zone is roughly divided into two major parts. The highlands with an altitude of over 1,500 meters above sea level and the lowlands with an altitude of less than 1,500 meters above sea level. In Ethiopia livestock production is undertaken both in highland and lowland areas (Seid, 2012).

The highlands in Ethiopia comprise nearly half of the land area of the country and hold more than 85% of the total human population and about two thirds of the livestock population, which are dominantly crop-livestock systems areas and are recognized to be under stress because of shrinking cultivated areas per household, land degradation and reduced feed availability (Seid, 2012).

The lowlands (<1500 m.a.s.l) cover 50-60% of the total land area, and support 12% of the human and 26% of the livestock population. Ethiopia is a tropical African country in which mobile

pastoralism is dominant in the arid and semi-arid areas in the eastern, northeastern and southeastern parts of the country, while agro-pastoralism represents an increasing practice in the semi-arid areas in the northwestern, southern and eastern parts of the country (Amaha, 2006). Among the total livestock number of the country 20% of cattle, 25% of sheep, 73% of goats and 100% of camels are found in the lowland pastoral areas (Alemayehu, 2007). Most of the livestock and livestock product were sold to cover family expenses for food grains and other essential consumer goods (Hailemariam et al., 2009). Milk is the major livestock product in the lowlands. However, availability of milk is dictated by the shortage and erratic nature of the rainfall and fluctuations in availability of feed (Ketema and Tsehay, 2004; Seid, 2012).

Livestock are closely linked with the economic, social and cultural lives of millions of poor farmers. Livestock and livestock product markets and marketing situations were crucial for enhancing incomes and livelihood of the smallholder livestock keepers (Solomon et al., 2003). It is prominent that livestock products and by-products in the form of meat, milk, honey, eggs, cheese, and butter supply etc. provide the needed animal protein that contributes to the improvement of the nutritional status of the people. Livestock also plays an important role in providing export commodities, such as live animals, hides, and skins to earn foreign exchanges to the country due to surplus output and preferably of the breeds in the Middle East Countries (CSA, 2011).

In pastoral areas, livestock are usually sold to meet family needs for cash income, which is used to buy food grains and industrial products such as clothing. Occasionally, seasonal shortage of rainfall through its impact on feed availability forces higher supply to market. The pastoralists' forced supply is constrained by their inability to plan sales in accordance with market need (time and quality) (Belachew and Jemberu, 2003). Livestock and livestock products are the major foreign exchange earners after coffee. The share of animal export earning is generally small and has declined in recent years due to decreased live animal exports, and an overall increase in the value of all exports (FAO, 1993). Therefore, the objective of this paper is to review on major constraints livestock marketing in lowland part of Ethiopia.

2. Livestock Marketing System in Ethiopia

Marketing involves all activities involved in the production, flow of goods and services from point of production to consumers. Marketing includes all activities of exchange conducted by producers and middlemen in commerce for the purpose of satisfying consumer demand. All business activities facilitating the exchange are included in marketing (Lemma et al., 2005). Livestock marketing involves the sale, purchase or exchange of products such as live animals, and livestock products of milk, meat, skins, wool and hides for cash or goods in kind (ILCA, 1990).

3. Livestock Market Structure

Different studies conducted in highland of Ethiopia showed that livestock account for 37–87% of total farm cash income of farmers. Despite the contribution of livestock to the economy and to smallholders' livelihood, the production system is not adequately market-oriented. There is little evidence of strategic production of livestock for marketing except some sales targeted to traditional Ethiopian festivals. The primary reason for selling livestock is to generate income to meet unforeseen expenses. Sales of live animals are taken as a last resort and large ruminants are generally sold when they are old, culled, or barren. In the highlands, large numbers of cattle are kept to supply draft power for crop production whereas prestige and social security are the predominant factors in the lowland pastoral (Eyob and Zewdu, 2016).

The export market is relatively old but highly variable depending on production condition of the country, change in consumer preferences and greater demand for high quality products with adequate guarantees of food safety. The livestock market is structured so that the marketable livestock from the major producing areas reaches to the final consumer or end user passing through complex channels along the supply chains involving various actors in livestock product marketing, broadly classified as: livestock producers, traders, processors, retailers, food service providers, and consumers. Private and public livestock inputs and service providers are other important market actors (Zewdu and Sintayoh, 1987).

Livestock marketing operations are generally small-scale family businesses. The live animals are either transported in trucks or herded over long distances to feedlot operators, export abattoirs, or major markets. These final market destinations are far away from supply sources, and the transportation costs associated with getting live animals to markets can result in significant weight loss and even death; stock routes are characterized by lack of adequate feed, water, and resting places. It can be argued that the long supply channels lead to high costs and reduce the competitiveness of live animal or meat exports (Eyob and Zewdu, 2016).

4. Major constraints of livestock marketing in lowland part of Ethiopia

4.1. Contraband Trade:

In Ethiopia, both legal and illegal marketing systems are operating at different magnitudes. Small scale exporters and traders are the major actors in the illegal livestock marketing system while medium to larger scales licensed exporters are dominantly operating in the system. The pastoralists are situated in peripheral areas bordering neighboring countries. Thus, they are in the vicinity of neighboring countries' markets for livestock. Annual outflow of livestock through borders (illegally) at 325,800 cattle, 1.15 million shoats and 16,000 camels. This is significantly higher than the annual official exports of cattle (12,934head), sheep (13,554 head) and goats (1,247 head) between 1998 and 2007 [16]. The sources of this illegal export are Afar and Somali Regions, Borena and East Hararghe Zones in Oromia South Omo, SNNP and northwestern Tigray and Amhara region. The immediate destinations for such exports are Djibouti, Somalia and Kenya. The neighboring countries bordering these areas either consume locally or re-export to the Middle East countries (Belachew and Jemberu, 2003)

Contraband trade that have major impact on the livestock marketing system through loss of foreign exchange; income taxes and its impact on legal livestock trade (Eyob and Zewdu, 2016). Also had impact by price fluctuation, there are no predictable spatial price differences (price ratios) that can be linked to this trade pattern and there is no market integration, making it difficult to prescribe policy interventions to combat this trade (Teka et al., 1999).

4.2. Clan conflicts

The Ethiopian pastoralist community is composed of several clans and ethnic groups. These groups compete for limited land and water resources. Conflicts arise as a result of competition for resources and some other reasons. The problems in such pastoralist areas are directly manifested in the livestock markets. Whenever there is clan conflict in the area, the market is disrupted and the number of animals brought to markets decreases (Adina and Elizabeth, 2006).

4.3. Weakness in understanding the existing social structure of Pastoralists

Pastoralist communities are composed of clan-based social organization. Most of the activities of these communities are linked to their clan structure. For example, the Somali pastoralists that are available all along the eastern lowland areas of the country have a clearly visible clan-based marketing behavior. They take their livestock to the market collectively in groups (whose members are from one clan) and hand over the animals to a broker that belongs to their clan. This broker is the one who has better market information relative to individual producers and he is also a price maker. No other broker (non-member of the clan) can mediate the transaction of their livestock in the market. Brokers in this case act as representatives of their clan in the market. Understanding this sort of social structures and their marketing behavior is imperative in the effort made to boost livestock supply to the market (Getachew et al., 2008).

4.4. Absence of Market Information System

Market information system needed to disseminate current market information to keep all livestock market participants at the same level of access for market information (price, time specific demands, quality information etc). This enables all market participants to make wellinformed decision in making transactions. Since the market information system is not well developed in pastoral areas, information kept as secret in order to make use of the ignorance of competitors and sellers as an advantage. Of the total shoat and cattle transactions, 66% and 80% respectively were transacted by those who have access to domestic market information. Along this the result indicated that traders who have access to information about the domestic market paid significantly lower prices in both shoat and cattle markets than those who don't have any (Gezahegne et al., 2006; Hailemariam et al., 2009). Access to domestic market information about livestock is very important for setting prices. However, no reliable source of information on the country are livestock number, export demand, annual off-take, productivity, and consumption levels to producers, traders, exporters and support giving institutions. This creates problems in planning and designing of policies to enhance the sector's development (Belachew and Jemberu, 2003).

4.5. Inadequacy of Infrastructure

Road is one of a very important infrastructure in the livestock marketing system. The type of road connecting an area determines the type of buyers that can get access to its market. It also affects the profitability of most of the participants in the livestock market. The sources of livestock for export are pastoral areas that are far from the center. The Afar and Somali Regions, parts of Borena in Oromiya are lowland areas forming internal boundary to neighboring countries. The Borena area is connected to the centre/terminal markets with asphalt road passing from Addis Ababa to Moyale. The most important livestock markets like Dubuluq, Mega, and Harobeke are located on this asphalt road. There are also a number of primary and secondary markets located in 25 km radius from this road. This enables exporters to easily transport animals to their quarantines stations or abattoirs at relatively lower cost of transportation and very minimum level of weight loss and mortality rates relative to inaccessible areas. Still there are potential areas considered as sources of shoat but remained unexploited due to lack of road network. In most lowlands areas very rough gravel road which is very difficult to frequently penetrate and transport livestock for the export market. Shoats collected from extreme lowland markets such as Telltale have to reach the abattoirs in few days time and get slaughtered before they are affected by the environmental change which otherwise can lead them either to emaciate or die (Adina and Elizabeth, 2006; Getachew et al., 2008).

4.6. Absence of Market centers

Market centers and their associated infrastructures are important factors that have to be considered in the move to increase the supply of livestock for both domestic and export markets. Due to the wider geographical location of pastoralists, some important sources of livestock are very far from market centers. Pastoralists from the border areas need to travel for a week or more

to reach these market areas. This influences the marketing behavior of pastoralists that they either have to keep their animals unsold or they have to go to nearby informal markets in the neighboring countries (Gezahegne et al., 2006).

4.7. Lack of coordination among market participants.

Market is an institution involving different actors (agents) at several levels with different roles. Every market agent has its important role that justifies its presence in the system. Coordinated and smooth functioning of the market enhances the volume of trade and the benefit that different participants and the economy can drive from the market. In a market where there is high level of mistrust among the participants, i.e. where everybody wants to make excessive profit at the expense of others, producers will never be encouraged to produce more since they will be the ones worst affected. Unstable and non-ethical market environment will prevent an effort to increase supply of exportable animals from the source areas. Thus, in livestock market where different actors including pastoralists interact, there is a need to create forums of consultation and establishing a team work to bring together producers, traders, abattoirs, and the public sector, so that everybody in the domain would have a clear understanding and contribute to the smooth functioning of the supply chains (Belachew and Jemberu, 2003; Getachew et al., 2008).

4.8. Lack of standardized unit of transaction in livestock markets

There are two ways of assessing the weight of livestock purchased in the market: using the weighing scale as in the case of Borena and Bale markets and visual assessment of body condition as in the case of Metehara, Miesso, Babile, and Wello markets. However, abattoirs and their representatives hand over livestock using weighing scales in all markets. This shows, there is non-uniform system of transaction in livestock supply chain. In a system where animals are collected from the market using visual estimation and sold to the abattoirs by weight scale, traders who collect the animal and supply to the exporters are not certain about their profit margin. They have to negotiate and cut down price in the source market in order to ensure their profit. Collectors operating in such uncertain system always try to keep their risk to the minimum level by operating at smaller scale which is eventually manifested as a supply shortage in the destination market. Producers would be the final losers since every trader wants to avert risk. Such system does not encourage pastoralists to supply more animals to the export targeted markets (Getachew et al., 2008).

4.9. Traditional Production System

Pastoralists consider their livestock as means of saving or capital accumulation. Livestock are sold when need arises for cash income or when shortage of feed and water occurs. There is no effort to strategically produce for the market by adjusting and planning production to market needs. Production planning in terms of time, type and quality of supply to maximize income is nonexistent due to lack of entrepreneurial awareness (traditional handling system) (MoA,2000; Jabbar and Benin, 2004).

4.10. Absences of veterinary services.

An absence of veterinary services is one of the major constraints of livestock development in pastoral area of Ethiopia, which caused poor performance across the production system. Many of the problems result from the interaction among the technical and nontechnical constraints. For instance, poorly fed animals have low disease resistance, fertility problems, partly because the animal health care system relays heavily on veterinary measures. Moreover, poor grazing management systems continue to cause high mortality and morbidity (e.g. internal parasites). many of the diseases constraints which effect supply are also a consequence of the non-technical constraints, for example, insufficient money to purchase drugs or vaccines. Contact of livestock brought from various localities through the use of communal pastures and watering as well as marketing places play an important role in the transmission of economically significant infectious and parasite diseases. Such livestock movements could be the cause of direct or indirect transmission of various economically important livestock diseases (Seid, 2012).

In Ethiopia, there are many livestock diseases that create frequent livestock mortalities. The presence of livestock diseases that affects the efficiency of livestock production (Belachew and Jemberu, 2003). Importing countries frequently ban imports of meat and livestock from the horn of Africa as a result of outbreaks of livestock diseases. Over the past few years, the country has lost a substantial market share and foreign exchange earnings due to frequent bans by the Middle East countries due to the Rift Valley and FMD outbreaks respectively in the Republic of Yemen and U.K (Jabbar and Gezahegn, 2003).

4.11. Whether condition of pastoral land

Seasonality in feed availability and lack of knowledge on feed conservation has created feed shortage in the lowland ecologies of Ethiopia. The seasonal patterns in availability of livestock significantly affect the local prices. The wet season corresponds to the rainy season having relatively enough supply of feed to the livestock; the dry season to the contrary is the situation where there is shortage of feed and water and the time where producers are forced to take their livestock to the market. During dry season, both shoat and cattle prices are significantly lower. These price differences might be due to supply feature where shortage of feed and water force producer to sell their livestock in dry seasons. This might increase the supply of livestock in the market (Hailemariam et al., 2009).

4.12. Problems Related to Development Initiatives

Most pastoralists move between seasonal grazing areas, taking strategic advantage of different forage and water sources as they become available. Pastoral adaptation to arid and semi-arid areas is based on a wealth of comprehensive and deep indigenous knowledge about the environment in which they live and the various risks it involves. They know the phases of the moon and its relation to rainfall, the quality and capacity of the watering points, pasturelands and the nutritional value of different grasses (UNDP, 2002). For instance, about 99% of the cattle population in Ethiopia are indigenous that are adapted to feed and water shortages, disease challenges and harsh climates. The productivity of indigenous cattle is poor (CSA, 2009). Therefore, there is a need to develop effective and sustainable genetic improvement schemes for

indigenous cattle breeds of Ethiopia (Aynalem et al., 2011). However, in the lowland area had reluctance to accept different livestock development initiatives such as adoption crossed breed, feed conservation method and prevention strategy of infectious disease due to lack public awareness about livestock development initiatives (UNDP, 2002; Belachew and Jemberu, 2003; Aynalem *et al.*, 2011).

4.13. Absences of credit services

Facilitating credit services targeted to improve livesock production and marketing should be considered. Improving both feed and animal health management leads to reduce mortalities of young animals and to increase weight gain of animals. These improvements lead to more rapid herd and animal growth, both central to profitability of farmers and pastoral societies. In either case, public investment in adaptive research, sustained organizations, and infrastructure will be required to deliver increased knowledge and capacity to small farmers, particularly in improved genetics and animal health and improved organization and management are needed to achieve these improvements (Herrero et al., 2010).

5. CONCLUSION AND RECOMMENDATION

Currently, almost all meat and live animal exporters are complaining about shortage of livestock especially shoat supply for export market. Some of them were even unable to meet the already requested quantity by their customers. Among the major complaining sources for livestock marketing in lowland are contraband, clan conflict, inadequate infrastructures, absences of livestock market information, lack credit services, lack of awareness about livestock development initiatives by pastoralist and misunderstanding about the social structures of pastoralist by trader.

To improve the competitiveness of live animals and meat export from Ethiopia, tremendous interventions in the coordination of livestock marketing activities and in the provision of market support services are needed. To attain efficient use of the sector, to ensure food security and to improve export performance, cost-effective marketing channels and coordinated supply chains, which reduce non-value adding transaction costs among different actors along the supply chain, are crucial.

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