

Review on the Role of Dairy Cooperative in Market Oriented Development in Ethiopia

Matawork Milkias Gobena

Jimma University College of Agriculture and Veterinary Medicine Department of Animal Production

Abstract

The review is initiated with the objective of assessing the role of dairy cooperatives in market oriented smallholders' development. For an agriculturally dependent country like Ethiopia, this review is important to know the role of dairy cooperatives in market oriented smallholders' development. Dairy development has enormous scope for rural development and national prosperity. Dairy cooperatives are needed to consolidate the efforts of small producers to provide processing and transport facilities on a large scale. Organizing farmers through dairy co-operatives can have many advantages over individual farming. First, co-operatives can improve or facilitate access to market information, reduce costs of marketing and can increase producers' access to technology, extension and related services, and thereby enhance efficiency in the process of production and marketing of dairy products. Second, dairy marketing co-operatives can help to decrease transaction costs and price risks, and enhance bargaining power of dairy producers. And explore the role of dairy cooperatives in market oriented smallholders' development. It entails the specific objectives of investigating the role of the cooperative in promoting linkages for access to services and marketing and enhancing knowledge and information sharing. The cooperative had many activities include: provision of dairy inputs, marketing, creating employment opportunities, having well designed organizational and financial systems and addressing development issues. Organizationally there was weak interaction among members and board members of the cooperative. The cooperative is performing good in promoting market oriented dairy development through creating market link to the urban and per-urban subsystems, collaborating with other dairy associations, public organizations, NGOs, projects and donors affiliated on MODD.

Keywords: Dairy cooperatives, marketing, small holders, Ethiopia

1. INTRODUCTION

1.1 Background

Ethiopia has the largest livestock population in Africa, estimated at 45.05 million cattle, 20.5 million sheep, 20.2 million goats (MoARD, 2007) and 2.4 million camels (FAOSTAT, 2009). Recent figures indicate that the livestock sector contributes about 12-16% of national GDP, 30-35% of agricultural GDP (MoARD, 2007), 15% of export earnings and 30% of agricultural employment (SNV, 2008). Livestock contributes to the livelihoods of 60-70% of the population (Aklilu, 2002).

Ethiopia has the largest livestock production in Africa; the total cattle population of the country in 2013 was estimated to be about 55.03 million. Out of this total cattle population, the female cattle constitute about 55.38% and the remaining 44.62% were male cattle, from this 6.67 million and 10.7 million were dairy and milking cows, respectively (CSA, 2014).

Agriculture is the basis of Ethiopia's economy and is the most important economic sector in terms of generation of foreign currency. The sector is the primary sources of livelihood for more than 85 % of Ethiopian rural households who practice subsistence crop and livestock production. The current Ethiopian agricultural policy, which advocates ADLI, has led the Ministry of Agriculture to spearhead the intensification of activities in support of agricultural development. One concern is the overall improvement and development of the livestock sector (MoARD, 2007). Livestock sector contributes about 12-16% of national GDP, 30-35% of agricultural GDP (MoARD, 2007), 15% of export earnings and 30% of agricultural employment (SNV, 2008).

Livestock is the source of income, which can be used by rural population to meet basic needs and purchase agricultural inputs. Livestock comes second to coffee in foreign exchange earnings in Ethiopia. Its contribution can equally well be expressed at household level by its role in enhancing income, food security and social status. Ethiopia holds large potential for dairy development, the country currently manages the largest livestock population, estimated at 29 million cattle, 24 million sheep and goats, 18 million camels, 1 million equines and 53 million poultry (Ahmed *et al.*, 2004).

According to Federal cooperative agency June (2006) indicates that 112 dairy cooperatives in Ethiopia out of that 3,048 are males and 1,087 are females, total member of cooperatives 4,135 and capital 3.3 million birr. According to Eshetu Tefera (2008), the largest and biggest dairies cooperative in Ethiopia are, Lume, Ada, Selale, Sebata and Akaki Dairy cooperatives. However, the dairy sector is largely subsistence oriented with low milk production (4 billion liters of milk per annum) and low consumption (26.6 kg/year/person). Since the 1940s, there have been efforts to increase productivity and market orientation of the sector. The first attempt to introduce modern dairy production was made in 1947, when the United Nation Relief and Rehabilitation Administration donated 300 Friesian and Brown Swiss dairy cows to the imperial government (Feleke, 2003; Staal *et al.*, 2008).

According to (LOL, 2010), here are 23 dairy processing in Ethiopia, and 4 new ones are under construction. The Velocity Dairy, a Dutch investment, will have a capacity of 150,000 liters per day seven dairy processors participated in a 2010 LOL: Lame, Sebeta, MB PLC, Adaa, Genesis, Lema and Bora. 159 these companies had a daily processing capacity of 107,500 liters per day but only operated at 60% capacity, or 64,000 liters per day. In 2008, the three largest processing companies produced 14 million liters of milk, 120,000 kg of butter, 20,000 kg of hard cheese and 90,000 kg of soft cheese.

According to Beekman (2007) organizing farmers through dairy co-operatives can have many advantages over individual farming. First, co-operatives can improve or facilitate access to market information, reduce costs of marketing and can increase producers' access to technology, extension and related services, and thereby enhance efficiency in the process of production and marketing of dairy. Second, dairy marketing co-operatives can help to decrease transaction costs and price risks, and enhance bargaining power of dairy producers

The Ethiopian dairy production and market systems face severe constraints. The average milk production per cow is 1.5 liters per day, well below international benchmarks. Poor genetics, insufficient access to proper animal feed and poor management practices all contribute to the low productivity levels. Similarly, dairy producers and cooperatives face many challenges in getting milk to market. For the most part, milk collection, chilling and transport are not well organized and there are few economies of scale. Transaction costs are high and up 20-35% of milk is spoiled or otherwise lost. Dairy cooperatives and some private processors seek to provide improved services and scale economies. This review is important to know the role of dairy cooperatives in market oriented smallholders' development. The review enables us how to organize and summarize ideas from different sources, and also putting this seminar paper as a source for anybody that needs information and knowledge about role of dairy cooperatives in market oriented smallholders' development in Ethiopia. The main objective of this assessment is to review the role of dairy cooperative in market oriented smallholders' development with the following specific objectives.

- ❖ To review the performance of dairy cooperative in promoting linkages for access to services and marketing,
- ❖ To review the role of dairy cooperative in enhancing knowledge and information sharing
- ❖ To review the Opportunities and Constraints to small holder farmers in dairy cooperatives

2. REVIEW

2.1. Theoretical Review

2.1.1 General Concept and Definition of Cooperatives

According to ICA (1995), a cooperative can be defined as 'an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically controlled enterprise. 'Center for Cooperatives (2004) defined cooperative as a private business organization that is owned and controlled by the people who use its products, supplies or services. Although cooperatives vary in type and membership size, all were formed to meet the specific objectives of members, and are structured to adapt to members changing needs.

Koopmans (2006) also defined a cooperative as a member-controlled association for producing goods and services in which the participating members, individual farmers or households, share the risks and profits of a jointly established and owned economic enterprise. According to this definition a cooperative is established by farmers in response to unfavorable market conditions, which is a shared problem. This could be a problem related to the marketing of produce resulting in low farm-gate prices, to the supply of good-quality and reasonably priced farm inputs, such as seed and fertilizer, or to the supply of sufficient and heap credit.

2.1.2 Marketing Cooperatives

A marketing cooperative is an organization owned and operated by a group of farmers who produce similar products. Farmers join a marketing cooperative to gain more control in marketing their products so they can: increase the price they receive for their products, reduce the costs of marketing for their produce and for obtaining agricultural inputs such as seed and fertilizer; and make the market for their goods more secure (Tsehay, 1998). The marketing cooperative accomplishes these objectives by: performing certain functions such as processing, packing, storing, cooling, shipping, promoting, and selling; negotiating for better market terms because of volume and variety offered by their members; and buying production supplies (seeds, fertilizer, feed, containers, etc.) in large volumes at lower prices.

2.1.3 Actors

The term actor refers to an individual or to a group, organization or network. All interact, taking and implementing decisions on the basis of their own perceptions, interests, agendas, understandings and the opportunities that they are able to see (Solomon and Engel, 1997).

Actors are all those people who have a stake or share in a particular issue or system. Actors can be at any level or position in a society, from the international to the national, regional, household or intra-household level. Actors include all those who affect and are affected by policies, decisions or actions within a particular system.

2.1.4 Knowledge and Information

According to Solomon and Engel (1997), knowledge can be defined as the set of concepts, meanings, skills, and routines developed over time by individuals or groups as they process information. Knowledge is in people, 'between the ears'. It is intrinsically related to social practice. Actors generate, transform, integrate, exchange, disseminate and utilize knowledge while going about their daily business.

According to De Silva *et al* (2005), knowledge consists of facts, concepts, theories, heuristic methods, procedures and relationships. It is information organized and analyzed for understanding and for application in problem solving or decision making.

2.1.5. Principles of cooperatives

According to ICA (1995), any cooperative should pass through the following guiding principles:

1st Principle: Voluntarily and Open Membership.

Co-operative societies are voluntary organizations open to all persons able to use their services and willing to accept the responsibilities of membership without gender, social, racial, political or religious discrimination.

2nd Principle: Democratic Member Control.

Co-operative societies are democratic organizations controlled by their members who actively participate in setting their policies and making decisions. Every member has equal voting rights and accordingly one member shall have one vote.

3rd Principle: Member Economic Participation.

Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes: developing their cooperative, possibly by setting up reserves, part of which at least would be indivisible; benefiting members in proportion to their transactions with the cooperative; and supporting other activities approved by the membership.

4th principle: Autonomy and Independence.

Cooperatives are autonomous, self-help organizations controlled by their members. If they enter into agreements with other organizations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.

5th principle: Education, Training, and Information.

Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their cooperatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of cooperation.

6th principle: Cooperation among Cooperatives.

Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional, and international structures.

7th principle: Concern for Community.

Cooperatives work for the sustainable development of their communities through policies approved by their members.

2.2. Empirical Review

2.2.1 Market Participation by Smallholders and Dairy Cooperatives

According to (CSA, 2000) many potential liquid milk-marketing households are hours distant away from any milk group. Setting up new groups would clearly reduce the travel time to group, and the actual number of households that would benefit depends on local population densities. It is also important to keep newly emerging milk groups small and geographically limited to ensure proximity and avoid large groups that would tend to increase average travel times (Holloway *et al.*, 2000). Another study showed that the creation of new market outlet for fluid milk brought major improvements in the production, marketing and consumption behavior of smallholder households. The new marketing outlet may also promote involvement in more intensive dairying (Nicholson *et al.*, 2000). Co-operatives, by providing bulking and bargaining services, increase outlet market access and help farmers avoid the hazard of being encumbered with a perishable product with no rural demand. In short, participatory co-operatives are very helpful in overcoming access barriers to assets, information, services, and the markets with in which small-holders wish to produce high value items (Delgado, 1999). Effective participation of members enables producer co-operatives to offer processors/marketers the advantage of an assured supply of the commodity at known intervals at a fixed price and controlled quality (Delgado, 1999). As (MoFED, 2010) indicated that Smallholder commercialization is considered an effective strategy for encouraging high-value commodity production, increasing farm income and reducing poverty in developing countries. It is seen as the major pathway from a subsistence agrarian economy towards a more diversified economy, and in Ethiopia it is a crucial feature of the growth and transformation plan. As (MoFED, 2010, also indicated that Linking smallholder dairy farmers to the milk market and creating dairy value chains is a major development goal of the Ethiopian government that is

expected to lead to a substantial increase in smallholders' dairy income.

According to (Lenjiso, 2013 and Chagwiza, 2014) previous studies in Ethiopia (have shown that changes towards market-oriented dairying indeed increased smallholders' cash income at the household level. According to (Lenjiso, 2013). In Ethiopia, dairy is a semi-subsistence commodity that traditionally has been under women's control. Women performed almost all the dairy activities, including managing livestock, cleaning barns, milking cows, processing milk into butter and cheese, and selling these products in the local

According to (Kaaria and Ashby, 2001; Njuki et al, 2011), the income generated with these activities has also traditionally been under women's control. However, there is evidence that when changing to a market-oriented production system, men take over the traditional women's commodities and their roles in production and Dairy development along the cooperative lines was considered to be the most effective 14 strategy for helping the rural poor without altering the village social structure and providing guaranteed market for milk at fixed prices, supply of cattle feed at a reasonable cost and efficient veterinary and extension services (Bavikar, 1988).

2.3. Major Benefits of the Cooperation

The theory of cooperative organization provides several reasons why farmers join the cooperatives. According to Schroeder (1992), cooperatives provide quality supplies and service to the farmers at a reasonable cost. By purchasing supplies as a group, the farmers offset the market power advantage of other private firms providing those supplies. The farmers can gain access to volume discounts and negotiate from a position of greater strength for better delivery terms, credit terms, and other arrangements. Suppliers will also be more willing to discuss customizing products and services to meet farmers' specifications if the cooperative provides them sufficient volume to justify the extra time and expense. Increased farmers bargaining power in the market places is the other advantage of the cooperative. Marketing on a cooperative basis permits farmers to combine their strength and gain more income. The farmers can lower distribution costs, conduct joint product promotion, and develop the ability to deliver their products in the amounts and types that will attract better offers from purchasers.

According to Parliament *et al* (1990), a cooperative gives farmers a means to organize for effective political action. Farmers can meet to develop priorities and strategies. They can send representatives to meet with legislators and regulators. These persons will have more influence because they will be speaking for many, not just for themselves.

According to Folsom (2002), having a businesses owned and controlled on a cooperative basis helps farmers' entire community. Cooperatives generate jobs and business earnings for local residents. They pay taxes that help to finance schools, hospitals, and other community services.

According to Koopmans (2006), farmers may have several specific reasons for starting an agricultural cooperative: to mobilize more resources than they can individually supply, to create attractive alternatives for purchasing goods and services, to operate a business more efficiently than can be done on an individual basis, because they recognize that the benefits outweigh the duties of membership and because they recognize that as members of a cooperative they are part owners and not only clients. By becoming a member of a cooperative, each farmer can make use of the advantages of the cooperative: a good market price for their product and access to other goods, services, markets and credit.

According to Prakash (2000), Agricultural cooperatives can help farmers get a better deal at various stages of production and distribution Through membership in a cooperative, farmers are collectively able to negotiate better prices for inputs, transport and storage facilities. According to (Nimble, 2005) indicated that Cooperatives also enable their members to leverage finance at softer interest rates and attract international development agencies to even provide grants for societal infrastructural development and investment in other livelihood opportunities

2.3.1 The Origin of Farmers Milk Marketing Groups/ Cooperatives

The farmers' milk marketing groups are conceptualized and framed to operate as profitable milk units where small holders organize themselves in collecting, processing and marketing of milk and value-added milk products. This approach aims at maintaining and enhancing the groups so that they become independent entities at the community level (Tsehay, 1998).

According to Tsehay (2002), a milk-marketing group can be defined as a group of smallholder farmers who individually produce at least one liter of saleable milk and are willing to form a group with the objective of collectively processing and marketing milk. According to Berhane and Workneh (2003), in their review, indicated the very useful involvement of the government of India at every step of the development for expansion of dairy cooperatives in the country for the successes of dairying and suggested that the and pattern of dairy development (India) can be emulated at least around the major milk sheds in Ethiopia, for instance around Nazareth, Dire Dawa, Harar, Bahir Dar, Jimma and Assela.

According to Tsehay (1998), a milk marketing group can be viewed as a group of smallholder farmers who individually produce at least one liter of saleable milk/day, and are willing to form a group in order to collectively process and market their milk. The milk marketing groups are named following their locality's or peasant association's name. According to her, the idea of group work and formation of a group is not new to

Ethiopia. Different traditional local groups can be identified. For example women in West Harerghe zone organize themselves voluntarily into groups known as ‘milk equib’ and ‘butter equib’. Under these arrangements, individuals gather either their milk or butter and contribute it to other members in turn. Edir is another kind of grouping in rural and urban communities where individuals organize themselves and build up common savings through periodic contribution. Moreover, there is also debo where, seasonally, groups of farmers combine their labor for farm work support and as a group focus on each member’s individual plot in turn.

As reported by many authors, farmers’ milk marketing groups and dairy Cooperatives play role for milk marketing outlets, which as a result encourages farmers to produce more (Zegeye, 2003)

4. Role of Dairy Cooperatives in Facilitating Marketing

The Ethiopian cooperative establishment proclamation No.147/98 defines that “a cooperative is a society established by individuals on voluntary basis to collectively solve their economic and social problems and democratically managed”. It is a body organize to ensure self-help through mutual help, it is an association of persons who have joined together to fulfill individual needs in a democratic decision making organization in which all members participate and have a proportion of gain and losses. According to Tsehay (2001), milk and milk products marketing cooperatives are a group of dairy farmers who individually produce at least one liter of saleable milk and are willing to collectively process and market products. A number of such cooperatives are grouped in *Salale*, *Holetta*, *Sheno*, *Debrezeit*, *Sebeta*, *Shashemane*, *Hawassa*, *Debreberhan*, *Dilla*, among others to add values on milk. There are 24 milk marketing cooperatives in *Arsizone* with average service year of 4 and 67% of them are legally licensed (Asfaw, 2009). The main roles of these cooperatives are bulking raw milk (from members and non -members), processing and marketing of processed products.

Berhane and Workneh (2003), in their review, indicated the very useful involvement of the government of India at every step of the development for expansion of dairy cooperatives in the country for the successes of dairying and suggested that the and pattern of dairy development (India) can be emulated at least around the major milk sheds in Ethiopia, for instance around Nazareth, Dire Dawa, Harar, Bahir Dar, Gondar, Awassa (one of the present study areas), Jimma and Assela. According to (Berhane and Workneh 2003). Dairy cooperatives are supposed to help to trigger a series of positive developments in the subsector; hence strengthening the existing group marketing activities and formation of new cooperatives in different parts of the country. As (MO Dairy Cooperatives, RBS Research Reports that dairy farmers choose to market through a dairy cooperative include: - to be guaranteed a market outlet, to bargain for the best price terms possible in the marketplace, including over-order premiums in federal milk marketing orders, to have milk marketed efficiently, i.e., balancing plant needs, diverting milk surpluses, and assembling producer milk, to have the highest quality producer milk possible shipped in the market and to be effectively represented in legislative, regulatory and public relations.

4.1 Milk Marketing Systems in Ethiopia

According to CSA (2010), only 6.8 percent of the total milk produced is marketed and milk and milk products are distributed both informally and formally. In the informal system, milk is distributed from producers to consumers (neighbors and/or in local markets) and milk products mainly in local markets. In the formal system milk is distributed by milk cooperatives and unions and the private sector. Milk collected at milk collection centers is supplied directly to consumers in the urban towns and the surplus is collected by large dairy enterprises such as *Lame* (Sholla), *Sebeta Agro Industry* (Mama) and *Family Milk* and transported by bulk tankers to the respective processing plants. These dairy enterprises process and pack the fresh milk collected for distribution to consumers in urban areas through agents and retailers. Homogenized, pasteurized and standardized (2.7–2.8 percent milk fat) milk packaged in half litre capacity plastic packets are distributed.

According to (Zelalem.Y, 2011) has explained several factors that affect the production as well as distribution of milk and milk products. Among other factors, the unstable and low consumption levels of milk and milk products can be considered as one important factor to hamper dairy development in the country. According to (Holloway et al., 2000). Until 1991, the formal market of cold chain, pasteurized milk was exclusively dominated by the DDE (Dairy Development Enterprises) which supplied 12 % of the total fresh milk in the Addis Ababa area

Unlike the early phases, the formal market appears to be expanding during the last decade with the private sector 24 entering the dairy processing industry. Recently, private businesses have begun collecting, processing, packing, and distributing milk and other dairy products. However, the proportion of total production being marketed through the formal markets remain small (Muriuki and Thorpe, 2001).

4. 1.1 Current Situation of dairy production in Ethiopia

Ethiopia has the largest livestock production in Africa; CSA (2014) stated that the total cattle population of the country in 2013 was estimated to be about 55.03 million. Out of this total cattle population, the female cattle constitute about 55.38% and the remaining 44.62% were male cattle, from this 6,675,466 and 10,731,656 were dairy and milking cows, respectively

Table-1. Milk Production and Productivity by Region

Geographic Area	Number of Milking Cows	Average Daily Milk Prod.	Average Lactation Period (Months)	Total Milk Production (Lt)	Percentage Share of Milk Production
Ethiopia	10,577,781	1.543	6	3,329,854,796	100
Tigray	654948	1.526	6	184,361,998	5.5
Amhara	2244552	1.505	6	740,347,957	22
Oromiya	4,650,990	1.423	6	1,320,007,337	40
SNNPR	2,484,993	1.755	6	884,109,110	27

Sources: FAOSTAT, 2011, *Livestock and Livestock Characteristics, 2012*, Felleke et al, 2010, *Land O'Lakes, Inc. 2010*

3. Discussion on Review of the Dairy Cooperatives in Ethiopia

A dairy cooperative is a business, which is owned and controlled by the dairy farmers who produce the milk used by the cooperative. At Foremost Farms, we use our member-owners' milk – more than 5 billion pounds a year – to manufacture cheese, dairy ingredients, butter and fluid products for various markets and applications. As (MoARD, 2008) indicated, Cooperatives have been important in helping dairy smallholders to market their milk and lower their operating costs, providing scale economies. A (MoARD, 2006) analysis concluded that dairy cooperatives could reduce a farmer's transaction costs by 45%. As (Land O'Lakes 2010) explained that, a great deal of variability in cooperatives' performance and ability to effectively serve their membership. Many cooperatives lack technical, managerial and marketing skills, and are severely undercapitalized in terms of their working capital, investment capital and startup assets (which are often not properly maintained). Many cooperatives struggle to find reliable markets. Governance is weak in some cases. Membership may have stagnated or declined.

Farmers' organization on dairy production can be considered recent intervention in Ethiopia. There had been establishment of Producers Dairy Cooperatives during the Derg Regime, These were short lived as they were owned and operated communally, the efficiency of which was very low and lack responsibility and accountability. As their primary objective was to deal with production, knowledge on market development (market accesses) was limited, and were not operating cost effectively. Since the early 1990's dairy cooperative formation followed two different modes to suit their need. In urban areas dairy farmers were organized with primary objective of solving input supply, specially concentrate and feed ingredients for their cattle. The Addis Abeba Dairy Producer's needs. These groupings later transformed to use of small scale processing technology, introduced as an object to add value to the milk with production of butter (ghee) and Ayib, which help to reduce wastage and increase dairy income. These were operating in peri- urban areas with exception of Selale and Arsi areas, where mostly known as User Groups involved in milk collection, dairy processing and marketing.

There are also progresses on organizing cooperatives. As a result of efforts made on dairy development there are a number of milk producers and marketing cooperatives and small scale milk processing and marketing user groups organized in the different regions mainly in Amhara, Oromiya, Addis Ababa and Southern Nations and Nationalities. There are also large numbers of small scale individual processors who are operational especially in Addis Ababa milk shed area which produce/collect and process milk. There are three dairy producer cooperatives and three small scale milk processing Cooperative in theSNNP region. In Oromiya the Selale milk marketing cooperative Union encompasses the eleven-small-scale milk processing cooperative and the Chancho milk producers and Marketingcooperative. Adaa Milk Marketing Cooperative with main aim to collect milk from its member's andother farms to sell whole milk to the commercial dairy processors and to urban consumers inDebrezeit and Addis Ababa. The cooperative has established milk processing plant recently(2008). In addition there are 20 milk cooperatives established by SDDP and by the Regionthrough NLDP.

The Addis Ababa Dairy Producers and Marketing Cooperative, established in 1991 has 252members of small-scale intra-urban dairy farms of which 104 (42%) are female.

In Tigray seven small scale milk processing units are present. In the absence of major improvements in milk collection, processing and distribution marketing activities may remain stagnant unless; milk processing industry enters the market, aggressive demand creation promotion, and diversification different dairy products of better shelf life; (Getachew, 2003) and organizing them into producer and marketing will be the driving force for dairy development. Cooperatives and unions are known for their limited organizational capacities mainly in the following are: they are lacking managerial and marketing skills and exposures because of their low level of educational background, as many of the members and executive committees are busy with their own private issues, absenteeism and delay in committee meetings are common. Because of this, decisions are slow, and some functions

of the committee are left undone, they are shy away from employing of paid manpower when the size of their operation increases because, they often worried on the amount of salary they are paying than looking at the potential increase in the volume of sales (or return) as they employees staffs to fill in their gaps, and limited capital base is a limiting factor for many of the cooperatives not to expand their volume of transactions and extension of their services to their members.

Table -2 No of cooperatives by Region and capital

Region	No of unions	No of Primaries	Membership			Capital in Mil, Birr
			Male	female	Total	
Tigray	20	160	86514	30159	116673	5.11
Beneshangul	1	8	21157	273	2430	0.13
Addis Ababa	3	165	0	-	8012	1.72
Oromia	43	1163	462807	50854	513661	37.73
SNNP	13	273	183163	14243	197406	15.35
Amhara	26	483	430726	45435	476161	24.22
Total	106	2252	1165367	140964	1314343	84.28

Source: Federal Cooperatives Agency, 2005

According to Eman (2009) reported that there are 180 cooperatives engaged in milk production and marketing operating in different parts of the country. However, this number makes only 0.74percent of the total number of agricultural and non-agricultural cooperatives (24 167) and 2 percent of agri-based cooperatives (8 985) in the country.

According to the same author, there are a total of four (two each in Amhara and Oromia Regions) milk production and marketing cooperative unions that are formed by cooperatives for better marketing capability and bargaining power. Ada'a Dairy Cooperative is the most successful, while Selale and Asella Dairy Cooperative Unions are currently performing fairly well.

According to the Netherlands Development Organization (SNV) study in 2006, there were approximately 100 cooperatives according to the SNV study. In2010, with the work of Land O'Lakes there are approximately 114 cooperatives with7534members. Most of the milk sold to the cooperatives is processed into butter and ayib and sold locally or to traders.

According to Almaz Mesfin Tirfe (, 2008) the major activity or Member's participation in dairy cooperative include: - attending the meetings of dairy cooperative, attending the planning activities of dairy coop, attending in the implementation of activities of dairy coop, attending fund raising activities of the coop, decision making of the dairy coop, provision of dairy inputs, marketing, creating employment opportunities, having well designed organizational and financial systems and addressing development issues.

3.1 The performance of dairy cooperative in promoting linkages for access to services and marketing,

3.1.2 Promoting Linkages for access to services and marketing

According to Solomon and Engel (1997), linkages enable actors to exchange resources such as information, money, labor and other materials; or immaterial assets, such as power, status and goodwill. Interactions between actors and organizations are central to an effective innovation system. The purpose of this subsection is to list all actors who are working with the cooperative and its members, to provide information on how these actors are functioning in collaboration with the cooperative for bringing social or economic change and the strength and weakness of the interaction. The detailed analysis is presented into two subsections.

3.2.2 Actors and their roles in marketing and dairy service delivery

Dairy cooperative has different types of relation (such as technical, financial assistance, experience sharing, banking service, input supply, marketing etc) with a multitude of actors. The cooperative is performing good in promoting market oriented dairy development through creating market link between the urban and per-urban sub systems, collaborating with other dairy associations, public organizations, NGOs, projects and donors affiliated on Market Oriented Dairy Development (MODD) nationally, regionally and internationally to enhance dairy development. With this regard, the cooperative have had strong linkage with researchers from ILRI-DZ station, who have been advising the cooperative since its start and giving various capacity building supports.

Moreover, the cooperative is member of the national and East and South Africa dairy associations. The cooperative has strong linkages with DzARC, IPMS, VOCA, SNV, LAND O'LAKES, and Genesis Farm, all envisaged MODD through partnership building strategy. These linkages are sustaining the cooperative effort to promote MODD through financial and capacity building supports.

3.3.2 Linkage of dairy cooperative with the public sector

According to Eshetu Tefera (2008).dairy cooperative has strong linkage with the cooperative offices established at Federal, Regional and District levels, which may include: the federal cooperative commission together with the government of Ethiopia created an enabling environment for the cooperative to achieve its objectives through preparing a cooperative rules, regulations and guidelines, which are consistent with the international cooperative

principles; which in turn helped the cooperative in preparing its own by law and internal laws, the regional and district cooperative offices provided an auditing services to the cooperative, the regional and district cooperative offices provided technical support through giving advisory services especially for the cooperative management bodies, the regional and district cooperative offices provided training for selected members of the cooperative and the management committee and link the cooperative with other training providers such as VOCA.

3.4.1 Linkage of dairy cooperative with Research Organizations

Debrezeit Agricultural Research, Cooperative relation with ILRI/IPMS project, Cooperative relation with LAND O'LAKES, Cooperative relation with SNV-BOAM, Cooperative relation with VOCA Ethiopia, Linkage with Milk customers, Linkage with Credit Organization, Linkage with Private dairy input suppliers and Linkage with Professional Associations.

Financial Ratios

Financial ratios are useful indicators of a firm's performance and financial situation. Most ratios can be calculated from information provided by the financial statements. Financial ratios can be used to analyze trends and to compare the firm's financials to those of other firms. In some cases, ratio analysis can predict future bankruptcy. Financial ratios can be classified according to the information they provide. The following types of ratios frequently are used: Liquidity ratios, Asset turnover ratios, Financial leverage ratios, Profitability ratios and Dividend policy ratios.

Financial Leverage Ratios

Financial leverage ratios provide an indication of the long-term solvency of the firm. Unlike liquidity ratios that are concerned with short-term assets and liabilities, financial leverage ratios measure the extent to which the firm is using long term debt. The debt ratio is defined as total debt divided by total assets:

Profitability Ratios

Profitability ratios offer several different measures of the success of the firm at generating profits. The gross profit margin is a measure of the gross profit earned on sales. The gross profit margin considers the firm's cost of goods sold, but does not include other costs. It is defined as follows:

Table -3. Performance of primary cooperatives in milk sheds in Ethiopia, 2008and2009

Performance of Primary Cooperatives in Milk Sheds in Ethiopia,2008and2009												
Milk Shed	Average Cost of all milk bought by coops		Average Value of Milk Sold by coops		Average Revenue per coop		Average Expenses per coop		Average profit per coop		Average dividend per coop	
Year	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Coops(#)	42	42	12	13	32	33	31	32	32	32	21	22
Fitche(Birr) - GA	129401	155063	46059	540339	524706	778479	482321	405786	31967	54248	72831	116911
DebreBirhan(B) - GA	521511	367562	55511	643083	18692	572896	72492	423591	25697	41067	25491	39905
BahirDar(Birr) - LT	110999	174489	NA	NA	57627	181557	6571	31022	16369	48174	11500	33641
DebreMarkos - LT	155285	204154	NA	NA	133197	178579	109174	104263	24024	34112	9815	12040
Asella(Birr) - GA	139063	194781	74961	13818	23667	27322	25146	25313	4509	28460	27231	18497
AddisAbaba(B) - GA	159322	1618090	NA	NA	9214	50511	6422	12025	76152	92619	66446	47757
Average(Birr)	635685	684948	181780	220270	191394	339210	154736	204965	36548	92483	35552	44792
Avg%chgYr'08 - 09		8%		21%		77%		32%		153%		26%

Note: NA = data was not available. Data is for cooperatives in two milk sheds – Greater Addis milk shed (GA) and the Lake Tana milk shed (LT)

The average value of milk purchased in 2009 by cooperatives was highest in Addis Ababa milk and lowest in Bahir Dar milk catchment areas. The value of the milk purchased increased 8% from2008 to 2009

The average value of the milk sold by the cooperatives reporting information from the milk shed increased 21% from 2008 to 2009. Average revenues for 33 cooperatives reporting data indicate an increase of 77% with an average value of milk of Birr 339,000 per year per cooperative.

Annual revenues exceeded expenses so that the average profit for coops reporting was Birr92, 000 with an increase of 120% over 2008 profits. The cooperatives paid annual dividends to its members totaling Birr 45,000 in 2009, which was an increase of 26%over the amount paid out in 2008.

The general financial performance of the cooperatives was positive with smallholdersable to sell fluid milk at a price that exceeded the price if the milk were processed into butter or ayib. In August, 2010, the average purchase price by cooperatives of milk from their members was Birr3.89/ltr and the average selling priceby cooperatives was Birr 4.93/lt. The highest price paid for producers' milk was in Bahir Dar (Birr 5.70/ltr) and the lowest was in Fitche and Asela at Birr 4.10/lt.

4.4 The role of dairy cooperative in enhancing knowledge and information sharing

4.4.1 The role of the cooperative in knowledge and information sharing

Linkages among actors and the related linkage mechanisms are a quite significant part of a knowledge and information system: they show how actors communicate and work together (Solomon and Engel, 1997).

The cooperative has been giving continuous training on improved dairy husbandry (milk processing, hygiene, handling and quality in milk processing, feeding and feed formulation, on farm forage, animals waste management, small scale silage making, breed improvement and animal health care) in collaboration with ILRI DZ, DZ-ARC, SNV, LAND O'LAKES, district agricultural office, Moreover, training was organized in collaboration with VOCA-Ethiopia on cooperative management and recordkeeping. Together with the training the cooperative is giving advisory services especially using technical staff working at the milk collection center and by facilitating member to member extension. The cooperative was used training and provision of advisory services as a means to share knowledge and information in dairy innovation

4.4.1 The role of the cooperative in providing market oriented training to members

According to Tarefa eshetu (2008) the cooperative played a significant role to share dairy related information to its members. Dairy cooperative, Debrezeit research center, IPMS project, SNV-BOAM, LAND O'LAKES and center were playing a significant role to provide the training

5. Opportunities and constraints of Dairy Farmers cooperatives in Ethiopia

5.1 Challenges

Many Authors are put dairy production and marketing in the milk shed is found to be constrained by a number of factors related to production and marketing. Because of the scarcity of land, cattle are maintained under confined systems where feed is provided directly to cattle. A large portion of this feed is purchased feed, and the economics of these operations are therefore heavily affected by increases in the prices of feed. Urban smallholders mainly supply to households or other customers (such as cafes and restaurants) though direct delivery. Delivery is often on a monthly contractual basis with minimum delivery size of half liter (Felleke et al, 2010). Poor collection equipment and collection center, High post-harvest loss in transportation (absence of cold transport system, Lack of educated man power, Poor infrastructure and distance of milk collection centers (MCCS), lack of quality standard and monitoring body in the sector, critical scarcity of cross breed animals, very poor AI system in the cooperatives, lack of access to finance, poor feed and feeding system of the producer, insignificance breed improvement program, informal market structure of dairy and dairy product, low demand during fasting season, absence of basic infrastructure such as chilling center, recommendable transportation and un reasonable price of milk that desecrated the producer.

According to (Tefera, et al,2012), in spite of the enormous livestock resource and great potential for increased livestock production, the productivity is disproportional lower due to a number of dynamic economic, technical, policy and institutional challenges. (Yilma, 2011) One of the major constraints that the urban milk producers encountered is lack of access to land for establishment of a dairy farm and for forage production.

Also as (Geleti et al., 2014 and Yilma,2011) indicated, this problem occurs mainly due to bureaucracy to get land for investment, failure to appreciate the positive contribution of a viable dairy industry to the national economy by regional decision makers, and also due to the low attention given to the dairy industry.

Another important problem reported by (Yilma, 2011) is (100%) feed shortage, i.e., low supply and high cost especially of agro-industrial by-products. Most dairy farmers of Dire Dawa purchase feed for their dairy animals from Addis Ababa which is located at a distance of 515 km and transport it all the way to Dire Dawa. The transportation cost is specially adapted to Dire Dawa climate could be one possible solution to overcome the limited supply of hay in the area.

5.2 Opportunities

According to Azage.T (2013), the potential of indigenous genotypes as dairy animals have not been fully explored. There are indications that milk yield among the indigenous animals is variable implying that there are opportunities for improvement in the availability of: Access to services and inputs, Agricultural extension service and technologies, Demand for and consumption of milk, Income generation and employment opportunity, Service providers, Research institutes and technologies and Indigenous knowledge exists in the preservation of milk in the agro-pastoral dairy system and milk products in the rural highland dairy system using various sources of herbs

According to Tadesse ketema and hailu Tadesse.et.al, (2010) explained that, the major opportunities available to invigorate the transformation of the dairy sector include: Conducive environment for the dairying, The growing demand for dairy and dairy product, Well organized cooperatives and collection system of dairy product to the market, The ownership of the members gradually increased and better management system in place, Bargaining power of the cooperative and its member is significantly improved from the previous one.

According to (IFAD, 2001), the dairy groups can help members overcome the fundamental market disadvantages faced by them due to small size, limited resources and marginalization. The national marketing and

trade policies will directly impact the smallholder dairy farmers' groups' access to market with regard to pricing, taxes and export and import control measures (dHotel et al. 2011). According to Giovannucci, (2001) addressed the use of improved communication and technologies may also reduce information asymmetries, increasing dairy groups' bargaining power, and reduce transaction costs and risks and at the same time enforce accountability on both the partners.

6. Conclusion and Recommendation

6.1 Conclusion

Agriculture is the basis of Ethiopia's economy and is the most important economic sector in terms of generation of foreign currency. The sector is the primary sources of livelihood for more than 85 % of Ethiopian rural households who practice subsistence crop and livestock production. The current Ethiopian agricultural policy, which advocates ADLI, has led the Ministry of Agriculture to spearhead the intensification of activities in support of agricultural development. One concern is the overall improvement and development of the livestock sector.

Although Ethiopians largely subsistence oriented with low milk production (4 billion liters of milk per annum) and low consumption (26.6 kg/year/person). Since the 1940s, there have been efforts to increase productivity and market orientation of the sector. The first attempt to introduce modern dairy production was made in 1947, when the United Nation Relief and Rehabilitation Administration donated 300 Friesian and Brown Swiss dairy cows to the imperial government.

There are 112 dairy cooperatives in Ethiopia out of which 3048 and 1087 are female total member of cooperatives 4135 and capital mil, birr 3.3. The largest and biggest dairy cooperative in Ethiopia are, Lume Dairy coop, Ada, a dairy coop, Selale Dairy coop, Sebata Dairy coop and Akaki Dairy cooperatives

Market oriented milk production is centered in the highlands where rainfall, temperature, and soil types are conducive to forage production. There are three main milk producing areas in the highlands; Greater Addis, Lake Tana, and Mekele / Humera.

In Ethiopia the total milk produced is marketed and milk and milk products are distributed both informally and formally. In the informal system, milk is distributed from producers to consumers (neighbors and/or in local markets) and milk products mainly in local markets

6.2. Recommendation

- Dairy is one of the commodities that believed to bring food security in Ethiopia, so that the government has given the due attention for the sector. For the better achievement and health friends of the dairy product for the society there should be a quality standard and regulatory body in the sector
- Government policy provides major opportunities for dairy cooperatives to add value to dairy farmers, and also provide value to its customers. As a result, it is very possible that dairy farmers will develop closer contractual relationships with dairy cooperatives, and dairy cooperatives will develop closer coordinating relationships with its customers in the food system.
- Provide Regulated market information, genuine and quality measure for the supplied milk, establish additional mobile and permanent milk collection centers for reasonable quantities and improved field level technical support services vis-à-vis organizing intermittent dairy farm management training to members.
- Cooperative offices established at different levels (Federal, Regional and District) have to provide equal services to all cooperatives in terms of monitoring their activities, evaluating their performance, in giving up to date market information and in the provision of technical support with respect to cooperative marketing and management.

7. References

- ACDI/VOCA. (2005). Agricultural Cooperatives in Ethiopia. USAID, Ethiopia.
- Ahmed, et al (2003). Economic and nutritional impacts of market-oriented dairy production in the Ethiopian highlands. Socioeconomics and Policy Research Working Paper 51. ILRI (International Livestock Research Institute), Nairobi, Kenya
- Alemayehu, et al, (2012). Smallholder dairy value chain development: The case of Ada'aworeda, Oromia Region, Ethiopia, Nairobi.
- Almaz Mesfin Tirfe, (2008). Comparative Analysis on the Performance of Dairy Input and Output Marketing in Atsbie Womberta, Alamata and Enderta Woredas, Tigray Region, Ethiopia"
- Attwood and B.S. Bavikar Eds. (1988). Who Shares? Cooperatives and Rural Development, Oxford University Press, Delhi
- Azage, al. et, (2013). Smallholder dairy production and marketing systems in Ethiopia: (IPMS)—International Livestock Research Institute (ILRI) Addis Ababa, Ethiopia IPMS experiences and opportunities for market-oriented development:

- Bavikar, B. S. (1988). Dairy Cooperatives and Rural Development in Gujarat, in D.W.
- Beekman, G. (2007). The Role of Dairy Cooperatives in the Ethiopian Dairy Innovation System: the case of Alamata and Fogera Dairy Cooperatives. Unpublished Report, Addis Ababa: (Improving Productivity and Market Success of Ethiopian Farmers). Center for Cooperatives, 2004. W
- Berhanu kuma (2012), Market Access and Value Chain Analysis of Dairy Industry in Ethiopia: The Case of Wolaita Zone
- De Silva, et al. (2005). August 18-22. "Role of knowledge sharing in enabling innovation systems through improved research learning, out-scaling and upscaling." Paper Presented at the Innovation Africa Symposium, International Water Management Institute, Colombo.
- Emana, B. (2009) Cooperatives: a path to economic and social empowerment in Ethiopia. Coop Africa Working Paper No. 9. International Labour Office. (ILO) Dares Salaam, Tanzania.
- Eshetu Tefera., (2008). the role of dairy cooperatives in stimulating innovation and market oriented smallholder's development: the case of ada'a dairy cooperative, central Ethiopia
- Felleke, G. and G. Geda, (2001). The Ethiopian dairy development policy: a draft policy document. Addis Ababa, Ethiopia: Ministry of Agriculture/AFRDRD/AFRDT Food and Agriculture Organization/SSFF
- Felleke, et al. (2010). Inventory of Dairy Policy. Rep.: Target Business Consultants Plc.
- Girma, D. (2014). Analysis of milk value chain: the case of Ada'a dairy cooperative in Ada'a district, East Shawa zone of Oromia regional state, Ethiopia: Adami Tulu agricultural research Center Ziway, Ethiopia. Wudpecker Journal of Agricultural Research ISSN
- Mesfin Mengistu. (2007). Opportunities, performance and constraints of Farmers' cooperative Unions in Ethiopia: M.A thesis, Addis Ababa University.
- Ministry of Agriculture and Rural Development. (2010). Ethiopian Agriculture Sector Policy and Investment Framework 2010-2020. Addis Ababa.
- Owango, et al (1998). Dairy cooperatives and policy reform in Kenya: effects of livestock services and milk market liberalization.
- Tadesse ketema and Hailu Tadesse. (2010). Experience of cooperative in dairy Development in Ethiopia the case of selale Dairy cooperatives
- Tigray Cooperative Promotion Office (TCPO), (2005). Annual Report submitted to Federal Cooperative Agency, Mekelle, and Tigray, Ethiopia.
- Tsehay Redda, 1998, April 22-24. "Prospects of Ethiopian dairy development." Proceeding of the Role of Village Dairy Cooperatives in Dairy Development: Prospects for Improving Dairying Ethiopia, Addis Ababa.
- Tsehay Redda, 2001, March 12-16. "Small scale milk marketing and processing in Ethiopia." In Proceedings of the South - South Workshop on Smallholder Dairy Production and Marketing-Constraints and Opportunities
- Yilma, et al. (2011). A Review of the Ethiopian Dairy Sector. Ed. Rudolf Fombad, Food and Agriculture Organization of the United Nations, Sub Regional Office for Eastern Africa (FAO/SFE), Addis Ababa, Ethiopia,