

Van Hall Larenstein University of Applied Sciences

## Evaluation of Hamaruomba smallholder dairy cooperative for improved dairy value chain

A case study of Mushagashe area in Masvingo district,  
Zimbabwe



Research project submitted to Van Hall Larenstein University of Applied  
Sciences

In partial fulfilment of the requirements for the awards of master degree in  
Agricultural Production Chain Management: Livestock Production Chains.

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## **Dedication**

This work is dedicated to my mother Esnath Kufakunesu.

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**Cover page:** shows the picture of Hamaruomba Dairy Cooperative

## Abbreviations

<b>ADA</b>	<b>Agricultural Development Authority</b>
<b>AGRITEX</b>	Agricultural Technical and Extension Services
<b>AGM</b>	Annual General Meeting
<b>DDP</b>	Dairy Development Programme
<b>DLPD</b>	Department of Livestock Production and Development
<b>D.O.M</b>	Date of Manufacturing
<b>DR&amp;SS</b>	Department of Research and Specialist Services
<b>FAO</b>	Food and Agriculture Organisation
<b>GDP</b>	Gross Domestic Product
<b>GMO</b>	Genetically Modified Organisms
<b>ICA</b>	International Cooperative Alliance
<b>MoAMID</b>	Ministry of Agriculture Mechanization and irrigation Development
<b>MT</b>	Metric Tonnes
<b>MSEDCO</b>	Ministry of Small Enterprise Development Cooperation
<b>NADF</b>	National Association of Dairy Farmers
<b>NGO'S</b>	Non Governmental Organisations
<b>USAID</b>	United States Agency for International Development
<b>VET SVS</b>	Veterinary Services
<b>ZFU</b>	Zimbabwe Farmers' Union

**Currency used:** Unites States Dollars

## **Abstract**

In 1983 the government introduced Dairy Development Programme (DDP) which established smallholder dairy development programmes to encourage small scale sector to play a large role in milk production thus improving the livelihoods of smallholder farmers. Despite of this, Hamaruomba dairy cooperative is suffering from stiff competition of cheap milk imports and local products thereby causing the cooperative to lower down their prices. This study was done to evaluate Hamaruomba smallholder dairy cooperative for improved dairy value chain in Mushagashe area of Masvingo district, Zimbabwe in July to August 2013.

Research data was obtained from both secondary and primary sources. Detailed information about dairy value chain and farmer cooperative concept was obtained from desk study before going to the field for data collection. Case study held with Masvingo district Ministry of Agriculture heads and other stakeholders gave an overview of dairy chain. Information about processing, internal organisation and marketing performance of the dairy cooperative was obtained from another case study held with cooperative board members. Questionnaires were administered to 38 cooperative members and 10 cooperative board members in the area to self assess the performance of the cooperative.

The study revealed that Hamaruomba dairy cooperative is vertically integrated and is the only milk processor in the district which sells the product to supermarkets, institutional consumers and local community, although other cooperative members are side selling to traders. High prices offered by traders promote cooperative members to do side marketing because traders are paying price which cover all costs they encountered during production. Traders are paying more money to farmers to get raw milk rather than going for cheap milk imports because consumers prefer local milk than milk imports and if traders sell import milk it will be more expensive than the supermarket price due to high transportation and refrigeration costs encountered by traders so consumers will not buy from traders. The study revealed that level of milk production in Masvingo district is very low and the cooperative is operating below capacity because cooperative members are producing low volumes of milk which is further worsened by side selling. Inadequate entrepreneurial skills and costs and marketing are the main challenges hindering efficient performance of dairy cooperative. These challenges are barriers to improve the market competitiveness of the dairy cooperative for increased income generation to farmers.

In order to improve the market competitiveness of the dairy cooperative for increased income generation to farmers this study recommends the cooperative board members and cooperative members to improve entrepreneurial skills and costs and marketing by getting trainings on entrepreneurial skills and costs and marketing from recognised institutions.



## CHAPTER 1: INTRODUCTION

### 1.1 Background:

Zimbabwe is a landlocked country located in the Southern region of Africa. It is bordered by Botswana on the West, Zambia on the North, Mozambique on the East and South Africa on the South. The map of Zimbabwe and neighbouring countries are clearly shown in figure 1. The total land area is over 39.6 million hectares, with 33.3 million hectares being used for agricultural purposes. National parks, state forests and urban areas cover the remaining land (Mpande and Madziwa, 2011). The population of Zimbabwe has increased by 1.1% per year from 11.6 million in 2002 to 12 973 808 in 2012 (Census 2012).



Figure 1: Map of Zimbabwe

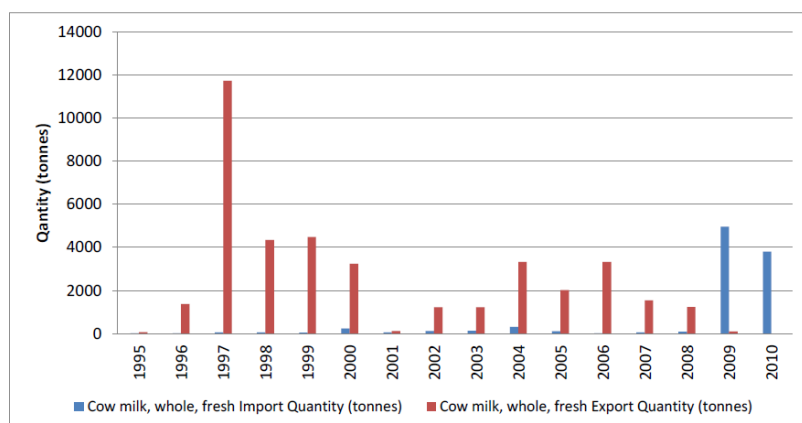
Source: Google maps

The economy of Zimbabwe mainly relies on agriculture sector, which contributes about 18% of the GDP. The livelihoods of the majority of Zimbabweans about 70% of the population depend on agriculture. The sector provides about 60% the raw materials that are required by processing industry and contribute between 40-45% of total exports (Mpande and Madziwa, 2011).

The dairy sector in Zimbabwe was dominated by large scale commercial farmers who produced large volumes of milk for export before the land reform programme in 2000. Soon after the land reform programme there was a sharp decline in the number of large scale commercial farmers, national dairy herd and volumes of milk produced nationwide which was coupled by hyperinflation. The number of producers dropped from 514 in 1990 to 278 in 2007, the dairy herd dropped from 191 000 in 1990 to just over 33 000 in 2007 and milk production dropped from 256 million litres a year in 1990 to about 90 million litres (Dairibord Zimbabwe Private Limited, 2007). The decrease in large scale commercial farmers gave birth to more small scale farmers who can likely meet the long term needs of dairy industry but is currently underperforming due to high production costs. Small scale farmers are encountering high production costs because they mainly buy small quantities of feed from local feed companies at high prices while large scale farmers buy large quantities of feed at reduced prices. Also large scale farmers can buy raw material from neighbouring countries at low cost for making their own feed since they poses infrastructure for manufacturing feed.

The national milk output is expected to improve in 2013 with an output of 70 million litres of milk, up from 64.5 million litres estimated in 2012. However, current milk production level still remains below the national milk requirement of about 120 million litres per year, presenting further opportunities for investment in this sector (Ministry Of Finance, 2012). There is an increasing demand of milk due to increasing population, knowledge of nutritional importance of milk and buying power since the introduction of multiple currencies which include use of USD(\$), South African Rands and Botswana Pulas in 2009.

Zimbabwe was a net exporter of milk, but it then shifted from being a net exporter to a net importer. This was attributed to loss of competitiveness of the local dairy industry (due to high feed costs, and the collapse of commercial dairy sector), coupled with an increasing demand of milk as a major driver of increased imports (FAO, 2013). ITC Trademap, (2013) indicated that most milk imports in 2010 were mainly coming from South Africa (74%), Zambia (19%) and Malawi (7%). Figure 1 highlights Milk trade flows from 1995 to 2010.



**Figure 2: Milk trade flows; 1995 to 2010 (MT)**

Source: FAO (2013)

In 1983 the government introduced Dairy Development Programme (DDP) which established smallholder dairy development programmes to encourage small scale sector to play a large role in milk production thus improving the livelihoods of smallholder farmers. Initially smallholder dairy farming development programmes were mainly concentrated in medium to high rainfall regions of the country. Later in 1998, there were extended to semi arid areas, which were initially described as unsuitable for farming leading to the establishment of Hamaruomba dairy cooperative in Masvingo district. Since 1983 Dairy Development Programme (DDP) which is now under the auspices of Agricultural Development Authority (ADA) has so far worked with 35 projects nationwide helping them set up cooperatives which have a membership of over 5000 farmers (Chinogaramombe, *et al.*, 2008).

The Hamaruomba dairy cooperative is one of the 22 dairy cooperatives in Zimbabwe. Nineteen of these cooperatives are working and three are not working because of shortage of financial resources. Hamaruomba dairy cooperative is a small dairy cooperative which is owned and managed by farmers themselves. The cooperative owns a plant which collect milk from cooperative members and process it for selling to retailers, institutional consumers and local community.

### **1.2 Problem Statement:**

The Hamaruomba dairy cooperative is suffering from stiff competition of cheap milk imports and local products thereby causing the cooperative to lower down their prices. This causes low income and reduced interest in dairy farming. Out of 48 members of the cooperative 18 are supplying milk to the cooperative and 30 are not supplying milk to the cooperative because some are not producing at all and for most of those who are producing volumes are very low such that it's not profitable to transport milk to the cooperative. However some farmers are side selling the milk resulting in shortage of milk for processing. As shown in figure 11 the average milk production of Hamaruomba smallholder dairy cooperative farmers is 80 640L/year but only 60% is sold to the cooperative and the remaining 40% is sold to the traders. Many interventions done to cooperatives in Zimbabwe were production oriented with little emphasis on marketing in smallholder farming systems (Mupeta, 1996 and Chinogaramombe *et al.*, 2008). In order to improve the performance of the cooperative there is need to evaluate Hamaruomba smallholder dairy cooperative for improved dairy value chain and come up with upgrading strategies that can be employed by the cooperative to become competitive on the market.

### **1.3 Research Objective:**

The objective of this research is to improve the market competitiveness of the dairy cooperative for increased income generation to farmers.

### **1.4 Research Questions:**

#### **Main Research Question 1:**

What are the present features of the dairy value chain in Masvingo district?

1. What are the roles of different stakeholders in the chain?
2. Which market channels exist for various dairy products?
3. What are the quantities, prices and value shares of milk traded in the chain?

#### **Main Research Question 2:**

What is the governance of Hamaruomba smallholder dairy cooperative?

1. What is the performance of cooperative when focusing on processing, internal organisation and marketing?
2. To what level are the members of the dairy cooperative satisfied with their cooperatives' performance?
3. What are the challenges and opportunities for improving the performance of dairy cooperative?



## **1.5 Methodology**

To collect data the following methods were used.

### **Desk research**

This is the literature review done before going to the field for data collection to get detailed information about dairy value chain and farmer cooperative concept. This literature was accessed from libraries, books, internet, journals and reports.

### **Case study**

This is a detailed study conducted with Masvingo district heads of the Ministry of Agriculture and other stakeholders to get an overview of dairy chain and with board members of the Hamaruomba dairy cooperative to get an overview of the performance of dairy cooperative.

### **Survey**

This is the completion of structured questionnaire by 38 Hamaruomba cooperative members and 10 Hamaruomba cooperative board members to self assess the performance of dairy cooperative which is the only dairy cooperative in Masvingo district. The Likert-style rating scale was used to assess if the respondent agreed or disagreed with the statement and if they are satisfied with the performance. Two to Tango was used to compare the self assessment results of the cooperative members and cooperative board members. This study alone cannot be a representative of all smallholder cooperatives in the country since other cooperatives are not processing milk and they are located in different geographical and climatic conditions which might have a bearing on cooperative's performance.

## 1.6 Definition of terms

**Value chain:** is a chain of activities that a firm operating in a specific industry performs in order to deliver a valuable product for the market.

**Value chain development:** is strategies used to improve smallholder dairy farmers' participation in chain activities and their involvement in management of the chain.

**Value shares:** the percentage of the final, retail price that the actor earns.

**Formal chain:** the channel through which farmers deliver milk directly to the milk collection and processing centre.

**Informal chain:** the illegal channel through which farmers direct deliver raw milk to the consumers or through traders by passing the processor.

**Profitability:** It is the return to investment given by profit divided by cost price expressed as a percentage.

**Smallholder dairy farmer:** is a farmer who regularly earns cash throughout the year rather than normally accessing cash once a season after the sole harvested crops resulting in improved living standards.

**Stakeholders:** these are people who are directly involved in the dairy value chain in Masvingo district. These include actors, chain supporters and chain influencers.

**Cooperative:** The International Cooperative Alliance (ICA, 1995) defines a cooperative 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”.

**Wards:** these are subdivisions of districts or local authority areas which are made up of villages and each ward is represented by a councillor.

## CHAPTER 2: VALUE CHAIN AND COOPERATIVE FORMATION

This chapter presents detailed background information obtained from literature study. The information provides an in depth understanding of value chain concept and farmer cooperatives. The first section focus on value chain and chain development concept and the last section focus on cooperative development and entrepreneurship concept.

### 2.1 Value chains

This part of the conceptual framework provide information about value chains, stakeholders, market channels, values shares and value chain empowerment. This information provides more detailed understanding of research.

#### 2.1.1 Value chains

Value chain is a specific type of supply chain where the actors know each other well and form stable, long-term relationships. In this chain they support each other so that they can increase their efficiency and competitiveness and they invest time, effort and money to reach a common goal of satisfying consumer needs that enable them to increase their profits (KIT and IIRR, 2008).

Roduner, 2007 defined value chain as an analytical and operational model where the product is hardly ever consumed at the place of production before transformed. In this scenario raw materials, intermediate products and final products are owned by various actors who are linked by trade and services, and each add value to the product.

Value chain is a complete variety of activities which are done to convey a product or services from conception, through different phases of production, delivery to final consumers and final disposal after use (Kaplinsky and Morris 2001).

Many agricultural food chains in Africa, Zimbabwe in particular are very short because of rampant informal market which limits value addition in the chain.

#### 2.1.2 Stakeholders

These are people who are directly involved in the dairy value chain in Masvingo district. These include actors, chain supporters and chain influencers. These stakeholders are clearly shown in figure 3.

**Chain actors:** these are individuals or groups who directly deal with the products, that is produce, process, trade and own them as it moves along the chain. They include input suppliers, producers, collectors and processors, traders, retailers and consumers.

**Chain supporters:** these are private or public companies who provide services to actors in the chain and not directly deal with the product, but whose services add value to the product. These include extensionists, researchers and donor agencies.

**Chain influencers:** these are regulatory framework, policies, infrastructure at local, national and international level (Roduner, 2007). These include Government departments and civil society.

**Chain map:** this is a graphical representation of the processes by which something of value is created or modified. Usually the left side of the map represents the chain functions, the middle of the map represents the chain actors and the right side of the map represents the chain supporters and influencers. Flow through the process steps is represented by arrows. A typical chain map of Masvingo district smallholder dairy value chain is shown in figure 3. The roles of these stakeholders are explained in detail in section 4.1.

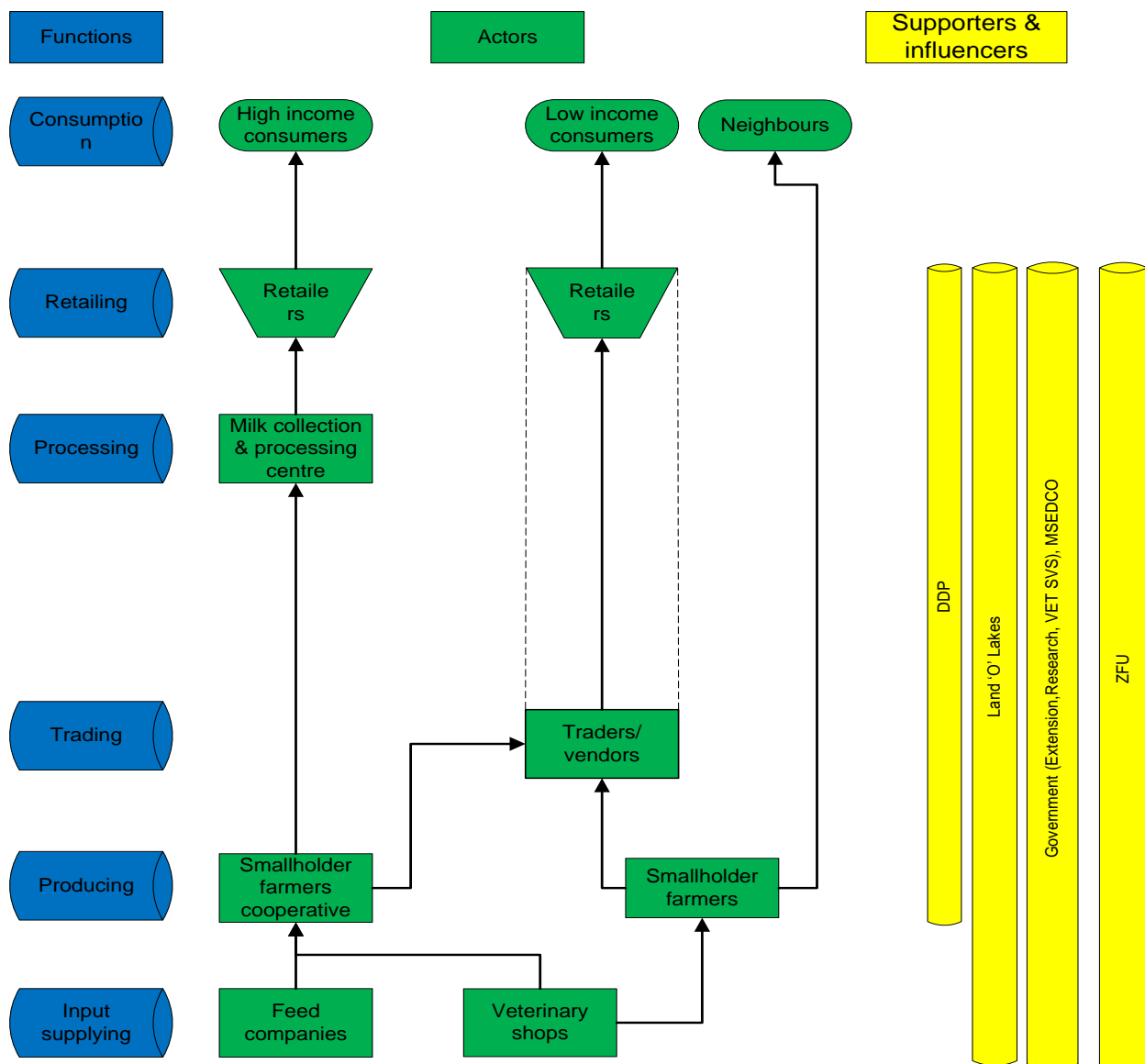


Figure 3: Smallholder dairy value chain for Masvingo district

### 2.1.3 Market channels (distribution channels)

These are a set of practices that are implemented by companies to ensure that their product reaches the customer in the least possible time (Auluck, 2013). Inefficient marketing translates into poor sales and profit figures. Market channels are shown in figure 3, for example product move from smallholder farmer to milk collection and processing centre retailers and finally to retailers. Another channel is from smallholder farmers to traders.

**Consumer segmentation:** this is the process of dividing a market into groups (segments) of customers with similar needs (characteristics), who are likely to exhibit similar purchasing behaviour. Market segment unlike mass marketing acknowledges that different types of buyers may require different products or marketing approaches or mixes. Consumer segments include high income, low income and neighbours. These consumer segments are illustrated figure 3.

### 2.1.4 Value shares

This is the percentage of the final, retail price that the actor earns (KIT and IIRR, 2008). It is calculated as follows:

$$\text{Value share} = \frac{\text{Added value}}{\text{Final retail price}} \times 100\%$$

In ideal markets, the size of value shares also reflects the amount of costs and risks an actor has put in a chain. If the actor added more value into the product the value share should be high. The value shares of each actor in the chain can be presented using pie charts. The areas of the pies are proportional to the product's end prices: the bigger the pie, the higher the end price. The value shares per litre of milk in Masvingo district are shown in figure 12 and 13.

### 2.1.5 Value chain Empowerment

According to KIT *et al.*, (2006) there are four main strategies of empowering the performance of farmers' cooperatives. The strategies are explained briefly as follows:

- **Upgrading chain actors:** the strategy is to empower the cooperative members by making them specialists in their relevant fields. Improving the knowledge and skills of cooperative members will enhance cooperative organisational skills, management skills with regard to production, planning, record keeping, financial management and develop understanding of markets, chains, competition, consumer demands and contracts. This can improve cooperative's market competitiveness by identifying and developing markets and products which are required by the consumers.
- **Adding value through vertical integration:** the strategy calls for the cooperative to invest in facilities for processing, marketing and distribution and professional staff capable of processing milk products required by the market. The cooperative require to employ competitive strategies of adding value to raw milk to meet the consumer requirements and avoid side selling of raw milk to traders safeguarding the cooperative

investments. The cooperative need to build key competencies in quality grading, market outlet development, logistics management and organisational discipline.

- **Developing chain partnership:** the strategy improves cooperative affiliation with other stakeholders getting more knowledge and skills resulting in better technical and managerial skills. Partnership promotes continuous learning and innovation through farmer schools and exchange of best practice promoting constant advancement; empower the farmers organisationally including information systems for improved bargaining and smooth the progress of chain cooperation with the buyer with regard to exchange of information, bargaining and joint action plans based on common interests.
- **Developing ownership over the chain:** the strategy encourages the cooperative to build direct linkages with the consumers by entering into joint ventures downstream in the chain for the development of new consumer product lines, developing and marketing branded consumer products. This enables the cooperative to penetrate existing markets and develop profitable markets. Developing chain ownership leads to independency, but for the cooperative to have full control of the product it needs to be well organised and coordinated; posses' adequate entrepreneurial and marketing skills and need to be able to produce an attractive product. The chain empowerment strategies of farmers are clearly shown in figure 4. These chain empowerment strategies were included in some of the recommendations made for this study in chapter 8.

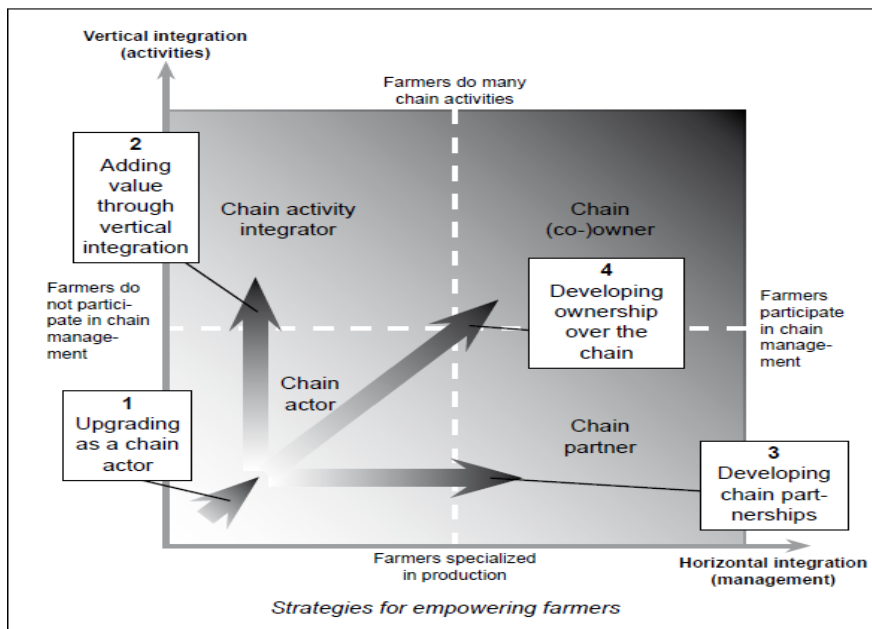


Figure 4: Chain empowerment strategies of farmers

Source: KIT *et al.*, (2006)

## **2.2 Cooperatives**

This part of chapter two provides background information derived from literature study. This provides information about farmer cooperatives, principles of cooperative formation and possible challenges encountered by cooperatives.

A cooperative is an enterprise collectively owned by many independent farmers as input suppliers in a production chain where the members jointly own resource where they either further process or market their produce (Feng and Hendrikse, 2011). Cooperatives sign contracts with members, specifying for instance delivery requirements. In Hamaruomba dairy cooperative there is no signed contract between farmers and cooperative. The constitution is the one which is governing the operations of the cooperative. The vertical linkages between the members and the processor therefore consist of a transaction element and an ownership element.

In most cases a cooperative is formed by farmers in response to unbearable market conditions, among the farmers. The formation of cooperative could be due to problems such as marketing of produce resulting in low farm gate prices, poor supply of good-quality and reasonably priced farm inputs, such as seed and fertiliser, or limited access to sufficient and cheap credit. Through formation of a cooperative enterprise, farmers expect to solve this problem, increase their farm income and strengthen the economic position of their farm. The farmers are the ones who own and manage the cooperative and they actively participate in the provision of resources for the cooperative sharing benefits and risks (Koopmans, 2006).

### **2.2.1 Cooperative principles**

International Cooperative Alliance (ICA, 1995) has defined the following seven internationally recognised cooperative principles:

#### **Principle one: Cooperative membership is open and voluntary to everyone**

Cooperatives are voluntary organisations open to all people who are capable of using their services and willing to accept the responsibilities of the membership, without social, gender, racial or religious discrimination.

#### **Principle two: Cooperative are democratically controlled**

Cooperatives are democratic organisations controlled by cooperative members, who are in charge of setting the policy of the economic enterprise and decisions making.

#### **Principle three: Member financial contribution**

Cooperative members contribute equitably to the capital of the cooperative. Members share potential benefits and risks on an equitable basis, which means proportionately to the use made by the members of the cooperative services.

**Principle four: Cooperative independence**

Cooperatives independent organisations which are democratically controlled by the members and not by government or any private company, the government is only there to facilitate formation of cooperatives, for instance by creating an adequate legal framework. Cooperatives must safeguard their independence status when they enter into agreements with other organizations including governments or when they raise capital from external sources they do so on terms ensuring democratic control by their members.

**Principle five: Cooperatives offer information, education and training**

Members, elected representatives, managers and employees are provided with education and training to strengthen their managerial and operational capabilities contributing to the development of cooperative.

**Principle six: collaboration with similar cooperatives**

Collaboration of cooperatives at local, regional or national level strengthens the effectiveness of the cooperative.

**Principle seven: Cooperatives develop communities**

Cooperatives work for sustainable development of the community by promoting economic, ecological and equity enabling members to share local or regional problems. Cooperatives are not expected to solve all these problems, but they can contribute significantly to their resolution (ICA, 1995).

The internationally recognised cooperative principles obeyed by Hamaruomba dairy cooperative are presented in section 5.1.2.

**2.2.2 Cooperatives membership base**

Penrose-Buckley (2007) indicated that cooperative members should be in charge of cooperative and avoid being controlled by external owners or avoid joint ownership by private companies and NGOs for them to be successful. Small-scale farmers should be the main owners of a cooperative although they may be a fundamental reason of having shareholders either during the first years of their development or even as a long-term arrangement. This uncommon important scenario is not bad as long there are very good reasons that are in the long-term interest of the farmers. FAO (2010) also supported that farmer cooperatives should work towards developing greater independence and self reliance especially in human resources and finance.

The ability of leadership to secure enough member confidence and dedication to reverse negative trends and set realistic targets determines the success and sustainability of the cooperative over the long term. Members should fully participate in decision making that reflect their own needs rather than the government's for the cooperative to succeed. The long term success of the cooperative relies on the capability of members to lead, plan and clarify



objectives (Koopmans, 2006). Figure 17 highlights membership base performances of the cooperative.

### 2.2.3 Cooperative governance

Kimberly and Cropp (2004) indicated there need of sound by laws for the cooperative to be successful and sustainable. These by laws are internal documents which govern the cooperatives in terms of how members are voted into office; member expectations and restrictions; how decisions are made by board members; procedure of changing by laws and cooperative plan; stock requirements and patronage allocations and distribution.

According to Penrose-Buckley (2007) most cooperatives have two-level governing structure but in small and newly formed cooperatives almost every member will be involved in the management of business operations and this kind of management does not apply to a large cooperation with many members.

#### Two-level governing structure:

First level- this level comprise of all cooperative members with all the authority vested in decisions approved at the general meeting which is usually conducted at least once a year, and hence often called the Annual General Meeting (AGM). Decisions are made at AGM by voting and in most cooperatives including traditional once, each member has an equal vote and votes are proportional to each member's level of investment in the cooperative.

Second level- this level comprise of the leaders also called board of directors elected at the AGM to manage a cooperative for a limited term. Each group elects its own leaders to represent it at the next level in multi-level cooperatives. Other than providing leadership and governing the cooperative's affairs cooperative boards may also invite external people to work with and advise the board. The external experts do not vote they are only there to advise board members in aspects such as marketing and business. Although figure 5 highlights two-level cooperative governance structure Hamaruomba dairy cooperative has first level only. Governance, leadership and internal democracy performances of the cooperative are shown in figure 18.

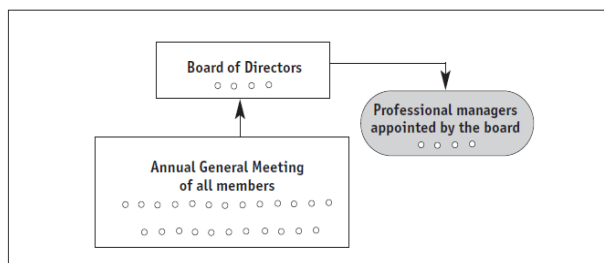


Figure 5: Cooperative governance structure

Source: Penrose-Buckley (2007)

#### **2.2.4 Cooperative financial resources management**

For a cooperative to be sustainable Koopmans, (2006) indicated that members finance is the most essential source, especially when starting a cooperative. However, finance can be sourced from net surpluses generated by the cooperative and external sources such as financial institutions. To reduce reliance on external funding the cooperative members should strive to make use of their own funds and contribute to the cooperative as much as possible by paying their membership fee. Cooperatives can raise their capital by selling preferred and common shares to members. It is recommended to sell preferred shares to external members since common shares are generally fixed to voting rights.

Kimberly and Cropp (2004) encourage board members of the cooperative and managers to attend training sessions on financial management to get more knowledge of this field. Sound decisions with regard to finance rely on the competence of board members or managers of cooperative. Financial transparency between cooperative members and board members is important to for the success of the cooperative. Banco Central Do Brasil, (2008) indicated that the principle of transparency defines, in governance practices, the interest of board members in making members, have full knowledge of information and results, in a way to further their opinion. If members have access to financial information that is records they will be able to participate in decision making. Figure 19 shows management of financial resources performances of the cooperative.

#### **2.2.5 Cooperative service provision to members and collaboration and networking**

According to Penrose-Buckley (2007) business oriented activities and services offered by the cooperative include input supply; production service such as access equipment; financial services like access to loans; trainings; quality control; coordination production; output marketing; processing, trading and retailing. Service provision to members performances of cooperative are highlighted in figure 21. The cooperative also provide social cooperative responsibilities to members and non members. A successful cooperative is characterised by strong collaboration and networking within cooperative members, stakeholders and other cooperatives. Rinehart *et al.*, (2001) mentioned that collaboration occurs when agencies and individuals make a commitment to work together and contribute resources to achieve a common, long-term goal. Figure 20 shows collaboration and networks performances of the cooperative. They indicated that effective collaborations encourage enthusiasm, a sense of ownership, team building and an atmosphere that maximizes the opportunity of collaborative partnerships succeeding. Collaboration partnership is clearly shown in figure 6.

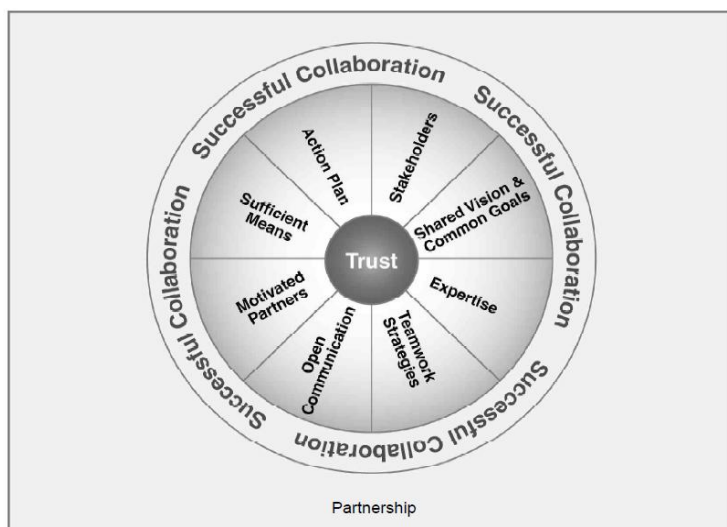


Figure 6: Cooperative partnership

Source: Rinehart *et al.*, (2001)

### 2.2.6 Cooperative entrepreneurship and marketing

According to McDonnell *et al.*, (2012) a co-operative entrepreneurship is a form of joint entrepreneurship where there is an establishment of a co-operative enterprise. Cooperative entrepreneurship usually succeeds because participating members will be sharing their expertise. For the business venture to be successful the co-operative members should have common interests and capacity to be innovative. Figure 24 shows entrepreneurial skills performances of the cooperative. McDonnell *et al.*, (2012) further recommend co-op entrepreneurs to possess a few specific traits and attributes to be able to establish these types of businesses:

- Dedicate to democratically work for the benefit of cooperative not for individual benefits,
- Eagerness to share risks and benefits with other members;
- Understanding and obligation to the co-operative values and principles;
- Versed with how co-operation adds value to the business.

Koopmans, (2006) reported that the success or failure of the cooperative is influenced by current and future market conditions. Studies on these conditions need to be conducted to improve the market competitiveness of the cooperative leading to success of the cooperative. Economies of scale can be achieved by efficient utilisation of resources and through sharing the financial burden or managing risk. The cooperative need to be strategically positioned in the market in order to compete with suppliers of similar products and services. KIT and IIRR, (2008) reported volatility as one of the main challenge in agricultural marketing in Africa. This is due to variation of market conditions over time and from place to place. They further pointed out that large variation in product quality is due the fact that agriculture is not industrialised like in Europe and United States of America.

Penrose-Buckley (2007) defined cooperatives as rural businesses engaged in collective marketing activities. He mentioned low production as the main hindrance of rural producers from benefiting from collective output marketing activities of cooperative since they cannot produce surplus for marketing. Cost and marketing performances of the cooperative are highlighted in figure 25.

### **2.2.7 Possible challenges encountered by cooperatives**

There are many potential problems which disrupt the function of cooperatives. Koopmans, (2006) pointed the following as the potential pitfalls of the cooperative:

- Lack of clearly identified objectives and strategy
- Inadequate planning
- Failure to use experienced advisers
- Lack of leadership
- Lack of member commitment
- Lack of competent management
- Failure to identify and minimise risks
- Poor assumptions
- Lack of financing
- Inadequate communication and lack of transparency

Some potential pitfalls of the Hamaruomba dairy cooperative are mentioned in table 18.

## CHAPTER 3: METHODOLOGY

The research methodology focus on research area, research framework, data collection and the way the collected data was analysed and interpreted. The type of this research was both quantitative and qualitative based on empirical data collected from survey and case study and secondary data obtained from desk study.

### 3.1 Research area

The study was carried out in Mushagashe area of Masvingo district shown in figure 7. Out of seven districts in the province, the study was conducted in the above mentioned area because it is the only area in the province with dairy cooperative. This milk collection and processing firm was established by Dairy Development Programme (DDP) in 1998 after the facilitation of formation of farmer group in 1992 by AGRITEX department. Hamaruomba dairy cooperative is the only dairy collection and processing firm in the province and there are no large scale dairy farmers in the district. Therefore there is need to carry out a study in Mushagashe area to improve the performance of the dairy cooperative.

Masvingo district cover a total area of 696 406 hectares with a total population of 211 732, total household of 47 297 and average household size of 4-5 people (Census 2012). The district has 35 wards and Mushagashe area is in ward 3. Average Annual Rainfall for the district ranges from 500mm to 550mm. Masvingo district has three regions which have the following hectareage region III-97 307 hectares, region IV-556 039 hectares and region V-43 060. Mushagashe is located in both region III and IV being on the North West of the district map.



Figure 7: Map of Zimbabwe showing Mushagashe area

Source: Google maps

The main economic activities for the majority of people are market gardening, crop production, livestock production and some petty trading.

### 3.2 Research Framework

The research strategy involves desk research, survey and case study to obtain information about dairy value chain and cooperative's performance. The research collected both quantitative and qualitative data which was analysed to produce conclusions and recommendations. Figure 8 highlights the research framework.

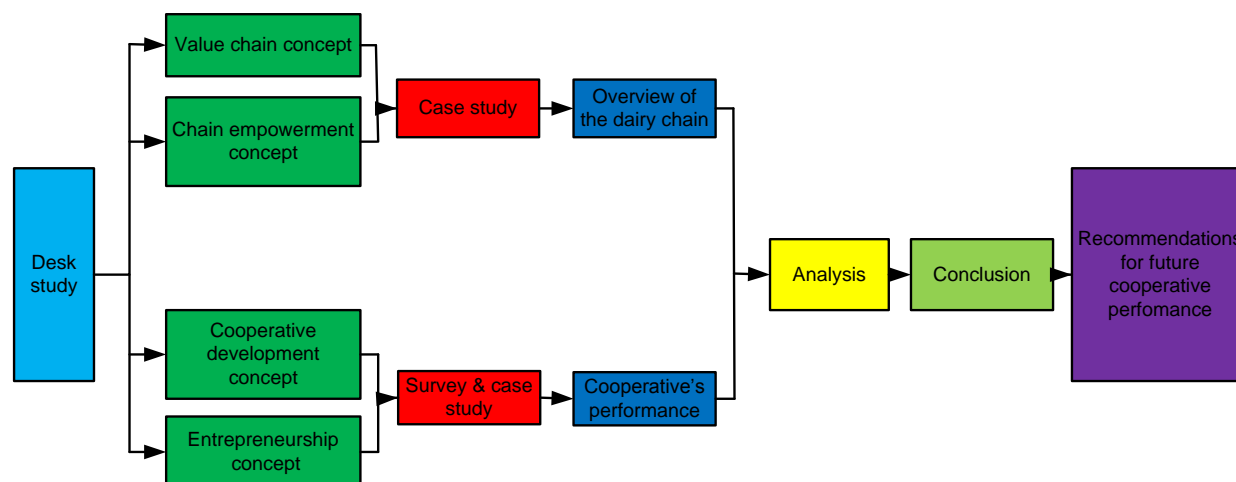


Figure 8: Research framework

#### 3.2.1 Desk research

Desk study involves literature review done before going to the field for data collection to get detailed information about dairy value chain and farmer cooperative concept. This literature was accessed from libraries, books, internet, journals and reports.

#### 3.2.2 Case study

Case study was conducted with Masvingo district Ministry of Agriculture heads and other stakeholders to get an overview of dairy chain. Another case study was conducted with board members of the cooperative to get information about processing, internal organisation and marketing performance of the dairy cooperative as shown in questionnaire in Annex B.

#### 3.2.3 Survey

To collect data, surveys were conducted with cooperative members and cooperative board members. This involves the completion of structured questionnaire shown in Annex A, by all 38 cooperative members and 10 cooperative board members in the area. This method was also used by Modderman, (2010) in research to explore future prospects for three dairy cooperatives in Musanze district Rwanda. The structure of questionnaire to be used in this survey is similar to that of Modderman, (2010) but it is different from that of Modderman, (2010) with regard to types of questions asked, questions were designed to meet the objectives of this study. Just like Modderman, (2010) the questionnaire used in this study consisted of two sections: section one contained questions about general information of the respondents. Section two has statements

about the cooperative's performance divided into nine classes allowing members to self-assess their cooperative. The classes were as follows Membership base; Governance, leadership and internal democracy; Management of financial resources; Collaboration and networks; Service provision to members; Animal management and production; Stakeholder collaboration; Entrepreneurial skills and Cost and marketing. The questionnaire asked for the opinion about statements. The Likert-style rating scale was used to assess if the respondent agreed or disagreed with the statement and if they are satisfied with the performance. The respondent rated the statement, ranging from one (1) to four (4) where one (1) was: I totally disagree with this statement, and four (4): I totally agree with this statement. In order to make sure the respondent clearly indicated negative and positive position with regard to the statement, even number of possibilities was considered against statement (Saunders *et al* 2007). The Likert-style used in this study was also used by Modderman, (2010). Schrader, (2009) also used the Likert-style rating scale in coastal province of Kenya to assess smallholder farmers' organisational capacity and entrepreneurship skills. Two to Tango was used to compare the self assessment results of the cooperative members and cooperative board members. In this scenario a follow up discussion was held to confront both parties with the outcomes after calculating the median scores of cooperative members and cooperative board members. The two to tango framework was used by (Schrader, 2011) as a participatory tool for assessing firm to farmer relations in Centre of Development Innovations.

### 3.2.4 Data analysis

The data collected from board members of the cooperative was scored in a spider web shown in figure 14 and then converted into percentages enabling interpretation of results. The data collected from the cooperative members and cooperative board members were entered into the computer and analysed using Microsoft Office Excel concerning respondents statements score from (1) totally disagree to (4) fully agree. These scores were converted into median and average median enabling the analysis and interpretation of results. Modderman, (2010) also used this analysis but calculated total, average score and percentages.

### 3.2.5 Data interpretation

The idea of interpreting data was obtained from Modderman, (2010) but the interpretation is different because they are median values. A median can only have values 1, 1.5, 2, 2.5, 3, 3.5 or 4 so that the following interpretation was used. Modderman, (2010) used averages but medians were used in this study because they better fit for likert-style rating scale.

**Median score 2 or lower:** a very low score, caused by the disagreement of the respondents with the statements. Meaning that the aspect of the cooperatives performance was unsatisfactory and there is an urge for improvement or change.

**Median score 2.5:** a low score, dissatisfaction of the respondents is present; therefore improvement is necessary to meet the needs and wishes of the respondents.

**Median score 3:** a positive score. The satisfaction of respondents is not optimal. Improvement of the cooperatives performance is not obligatory, but advisable in order to increase satisfaction among members.

**Median score 3.5:** The respondents are satisfied with the cooperatives performance. Adjustments could be made to lift the level of satisfaction to the final stage.

**Median score 4:** A very high score, the average respondent fully agrees with the statement and indicates a high level of satisfaction. Change or improvement is not needed.

Modderman, (2010) method of interpretation was used to interpret the average median of classes of questions but its different in the sense that Modderman, (2010) interpret in terms of percentages and scores while in this survey it is interpreted in terms of scores only.

**Average median score lower than 2:** a very low score, caused by the disagreement of the respondents with the statements. Meaning that the aspect of the cooperatives" performance was unsatisfactory and there is an urge for improvement or change.

**Average median score (between score 2 and 2.5):** a low score, dissatisfaction of the respondents is present, therefore improvement is necessary to meet the needs and wishes of the respondents.



**Average median score (between score 2.6 and 3):** a positive score. The satisfaction of respondents is not optimal. Improvement of the cooperative is not obligatory, but advisable in order to increase satisfaction among members.

**Average median score (between 3.1 and 3.5):** the respondents are satisfied with the cooperative's performance. Adjustments could be made to lift the level of satisfaction to the final stage.

**Average median score (3.6 or more):** A very high score, the average respondent fully agrees with the statement and indicates a high level of satisfaction. Change or improvement is not needed.

List of statements were tabulated, where median score of cooperative members were lower than of cooperative board members (table 15) and where median score of cooperative board members were lower than of cooperative members (table 16). Table 17 show list of statements where median score of all members were low. Focus group discussion was held with both parties to discuss the outcomes of Two to Tango results. The outcomes of group discussion were included in chapter 6.

Table 1: Summary of research questions/ operationalisation/ data sources

Main question 1 sub questions	Operationalisation	How	Source of information/ data
<b>1. What are the roles of different stakeholders in the chain?</b>	Chain actors, supporters, facilitators, functions or roles	Desk study and case study.	Stakeholders, journals and reports
<b>2. Which market channels exist for various dairy products?</b>	Consumer segments	Desk study and survey.	Stakeholders, journals, publications and reports
<b>3. What are the quantities, prices and value shares of milk traded in the chain?</b>	Products, quantities, prices, value shares of actors	Survey	Stakeholders
Main question 2			
Sub questions			
<b>1. What is the performance of cooperative when focussing on processing, internal organisation and marketing</b>	Processing, internal organisation and marketing	Case study	Board members of the cooperative
<b>2. To what level are the members of the dairy cooperatives satisfied with their cooperatives" performance?</b>	Membership, governance, management of financial resources, collaboration and networking, service provision, production management, stakeholder collaboration, entrepreneurial skills and cost and marketing	Survey	Cooperative members and cooperative board members
<b>3. What are the challenges and opportunities for improving the performance of dairy cooperative?</b>	Policies, price, quantity and quality of milk imports	Desk study and case study.	Board members of cooperative, district heads of ministries of Agriculture, journals and reports.

## **CHAPTER 4: DAIRY SUB SECTOR IN MASVINGO DISTRICT AT MUSHAGASHE AREA**

This chapter contains results obtained from case study, desk study and survey which present information about Masvingo dairy sector at Mushagashe area and dairy value chain.

### **4.1 Roles of different stakeholders in the chain**

The dairy value chain of Masvingo district comprised of Actors and Supporters which are shown in figure 11 and their functions are as follows.

#### **4.1.1 Chain actors**

##### **Input suppliers:**

There are four input suppliers which supply inputs to the farmers and these are Agri foods and National foods which sell feed to farmers. Farm supply sell feed, fertilisers, veterinarian drugs, and implements to farmers. The cooperative supply cooperative members with feed and veterinary drugs were payments are mainly done by deducting money from milk supplied by farmers to the cooperative.

##### **Producers:**

The producers are the cooperative members of Hamaruomba Dairy Cooperative. The cooperative constitution is recommending farmers to supply milk to the cooperative but some farmers are side marketing to traders because of high transport costs of transporting milk to the cooperative especially those farmers who live far from the cooperative, low prices paid by the cooperative, quality restrictions set by the cooperative and the need for imminent cash. All the excess milk milked in the afternoon is sold to traders because the cooperative does not collect milk in the afternoon. Farmers also sell low quality milk condemned by the cooperative to traders. The study revealed that 60% of the milk produced by cooperative members is sold to the cooperative and 40% is sold to the traders. Smallholder farmers own an average of 1-2 dairy cows with each cow producing an average of 3 litres per day in winter when not feeding with dairy feed and 10 litres per day when feeding with dairy feed. In summer the production is very high with each cow producing an average of 12 litres per day. Producers usually supply milk of dairy breeds to the cooperative. One member who benefited a dairy heifer from loan scheme is producing large quantities of milk but is not supplying to the cooperative at all.

##### **Traders**

These are middle man who buy raw milk from cooperative members and smallholder farmers in the district at a better price as compared to the one offered by the cooperative promoting farmers to do side selling. These traders will then sell the milk direct to low income consumers in urban areas without processing it. They sell fresh milk and naturally fermented milk to low income urban consumers. The selling of raw milk direct to the consumers without processing it is not allowed by the Government of Zimbabwe since it poses a risk of transmitting diseases.

### **Transporters:**

Farmers use different modes of transport to ferry milk to the cooperative. The cooperative has a scotchart which transports milk of farmers from specific locations to the cooperative. Farmers who use the scotch organise themselves to pay for this service. Some farmers use bicycles to transport milk to the processing centre. Figure 9 and 10 show pictures of farmers transporting milk to the cooperative. The milk is transported in the aluminium cans in the early hours of the morning and all the milk is expected to be at the cooperative between 9:30am and 10:30am. The cooperative also hire private vehicle to transport Amasi to some supermarkets and institutional consumers. Hired vehicle is also used to transport fresh milk from a nearby farmer in Gutu district to the collection centre, if the farmer did not provide own transport.



Figure 9: A cooperative scotchart transporting milk



Figure 10: A farmer arriving at the processing centre to deliver milk

### **Collectors:**

The cooperative is responsible for bulking all the milk from the cooperative members before processing. The cooperative also buy large volumes of milk about 200L-1000L/month from a nearby farmer in Gutu district for processing when volumes supplied by cooperative members are very low. The cooperative buy milk from this farmer at \$0.50/L a price which is being offered to cooperative members. The farmer provide vehicle if the cooperative purchase 500L and above, but if less the cooperative has to hire a private vehicle.

### **Processors:**

Hamaruomba Dairy Cooperative's job is to add value to all the milk that the members of the cooperative supply. The cooperative used to process milk into pasteurised fresh milk, delite yoghurt and whey. Sometimes natural sour is processed by the cooperative when there is excess milk and when there is no water and electricity to process Amasi. Currently the cooperative is processing Amasi only which is processed without removing cream.

### **Retailers:**

Supermarkets buy Amasi from the cooperative and sell it to different types of consumers.

## **Consumers:**

These are medium and high income consumers who buy Amasi from the supermarkets. Institutional consumers (schools) buy their products direct from Hamaruomba Dairy Cooperative. Local community also buy Amasi direct from the cooperative shop. The local community also buy natural sour milk direct from the cooperative shop. Low income consumers and neighbours buy raw milk from traders and farmers respectively.

### **4.1.2 Chain supporters:**

#### **Government**

Ministry of Agriculture, Mechanization and Irrigation Development (MoAMID) has extension agency and researchers who work hand in hand with farmers. The extension officers from AGRITEX and DLPD help to train farmers on issues of crop and livestock management. The Department of Veterinary Services (VET SVS) is mainly concerned with animal health. The DR&SS is involved with research of crop and livestock issues. MSED CO oversee the function of cooperatives.

#### **AGRITEX**

- The formation of farmer groups was facilitated by AGRITEX in 1992 and the centre was constructed in 1998.
- Offer extension services like other Government departments.

#### **Dairy Services**

- It gives licences to the cooperative if it meets the required standards and the licence is renewed every year. Failure to meet the required standards the licence will not be renewed and the plant will be closed until the plant meet the standards set by Dairy Services. The Dairy Services in Harare collect milk samples from the collection centre every month for testing and give recommendations to the cooperative. The recommendations are not given to individual farmers because the cooperative send samples of milk for the whole cooperative not individual farmers. If Dairy Services did not come to collect the samples the cooperative will send the samples to Dairy Services in Harare for testing.

#### **MSED CO**

- Train cooperative members on how to run the cooperative.
- Train cooperative members on forming constitution.
- Register cooperatives.

#### **Dairy Development Programme (DDP)**

- Seek donors who later sponsored the construction of milk collection and processing centre.
- Monitor operations of smallholder dairy cooperatives.

- Establish demonstration unit for service, extension, artificial insemination and bull services, for milk collection, forage seeds and planting materials of napier grasses (Mapunga and Dube, 2012).

### **Land 'O' Lakes**

- Provide dairy heifers to farmers on loan and cash, 20 Friesland heifers were given to farmers 19 on loan and one on cash. The heifers were given to selected farmers with parlours and enough feed to practise zero grazing.
- Provide training on business, production, processing and leadership.
- Responsible for monitoring farmers and inseminating dairy heifers and cows.
- It trained four paravets and provided them with bicycles for improved mobility.
- It equip the milk collection centres to better budget their business and provide their members with increased returns.
- In order to improve the levels of financial management at the milk collection centres and cascading down to the general membership, Land 'O' Lakes in partnership with National Association of Dairy Farmers (NADF) have set up an Accounting Bureau System (Land 'O' lakes, 2012).

### **Heifer International**

- Provide dairy cows and bulls to the smallholder farmers so that the recipients will pass on the female calf to another farmer. If the calf is a male it has to be exchanged with a female calf in order to be passed on to another farmer, resulting in some farmers getting local dairy cows since exotic dairy breeds were not easily available when exchanging with male calves. The pass on was successful to first recipients since the inception of programme in 2008, because they were passing on the cross breeds of Red Den with local breeds, which were diluted from generation to generation.
- Helps in facilitating the training of farmers by providing resources.

### **USAID**

- Donated \$94 000 this year for repairing vehicles and machinery; renovations, training, constructing reserve water tank to be used when there is no water and purchasing of generator to use when there is no electricity.
- It promised to donate more than \$200 000 if the above mentioned sum is used according to the agreement.

### **Zimbabwe farmers Union (ZFU)**

Is an organization for all farmers in Zimbabwe, especially those in rural settings and its objectives are as follows:

- To discuss problems affecting farmers.
- To represent farmers at meetings, workshops at all levels that is village, district, province, national, and International.

- To achieve farmers' interests.
- To solve farmers' problems through negotiations and advocacy among others (Isoh A, 2002).

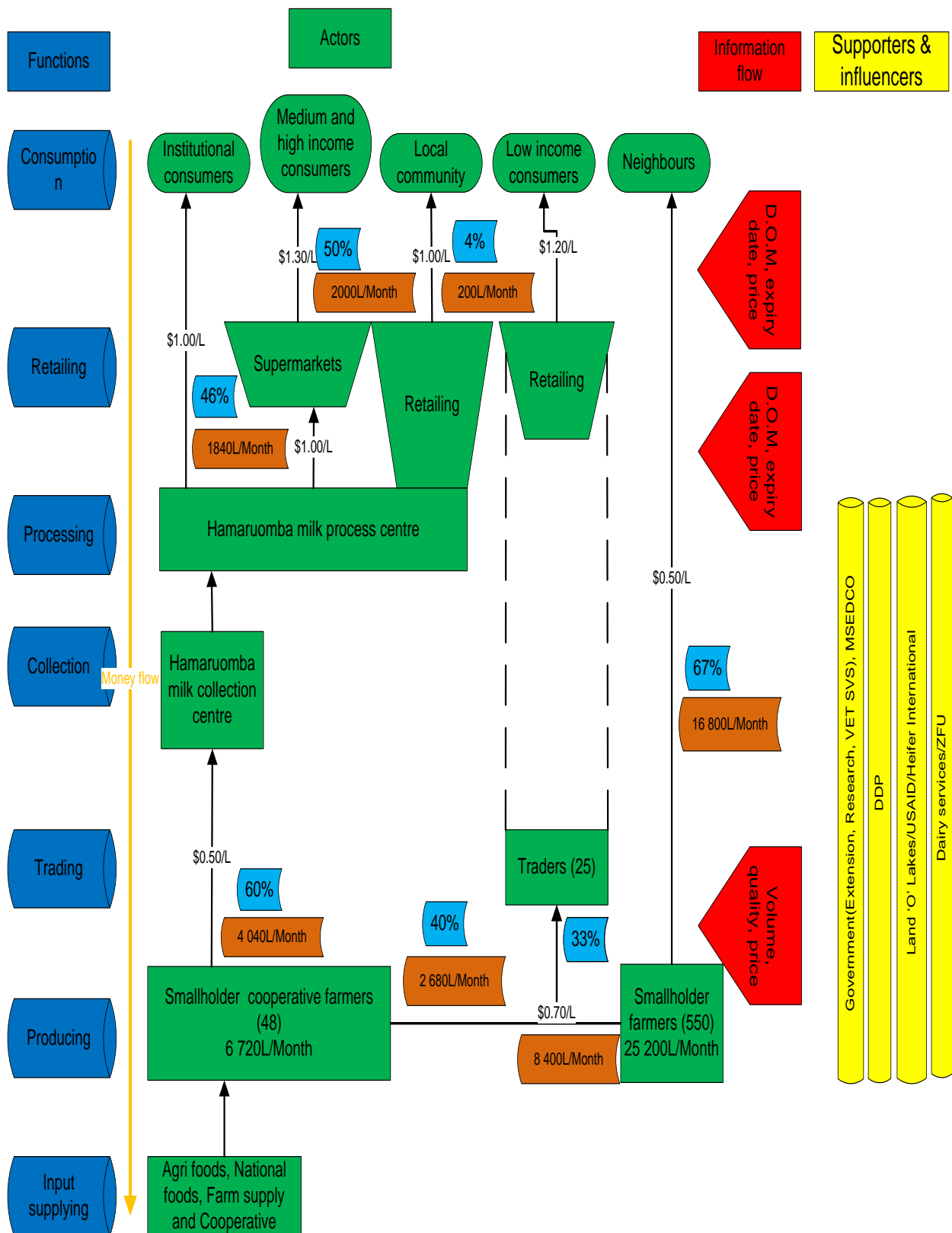


Figure 11: Chain map of dairy of Masvingo district



## 4.2 Market channels for various dairy products

The market channels of dairy products are Hamaruomba dairy cooperative, traders and supermarkets. Farmers sell raw milk to Hamaruomba dairy cooperative and some side market to traders who sell to low income consumers in urban areas. Supermarkets buy processed dairy products from Hamaruomba dairy cooperative.

### 4.2.1 Market segments of various dairy products

Medium and high income consumers buy Amasi from local supermarkets. Institutional consumers and local community buy Amasi direct from Hamaruomba dairy cooperative. Low income consumers and neighbours buy raw milk from traders and farmers respectively.

## 4.3 Value shares of actors in Masvingo district chain

Assumptions for formal market:

Variable costs of farmer for producing 1L of milk

- A dairy cow require 4kgmidlac/day which cost \$21.00/50kg
- The same dairy cow require 4kg feed for body maintenance in winter which cost \$14.00/50kg
- An average cow produce 10L/day at an average feed cost of \$2.80/day
- The cost of producing 1L of milk is \$0.28
- Transport cost of farmer is 10% of selling price of 1L of milk=\$0.05
- Medicines cost of farmer is 2% of selling price of 1L of milk=\$0.01
- Total variable costs of farmer =\$0.28+\$0.05+\$0.01= **\$0.34/L**

Variable costs of supermarket for retailing 1L of milk

- Retailing costs of supermarket is 12% of the purchase price of 1L of milk.

Table 2: Value share per litre of milk in the formal market of actors in the milk value chain in Masvingo district

Chain actor	Variable costs	Revenue Selling price	Gross income Revenue-Costs	Added value Revenue-Previous actor's revenue	Gross margin Gross income x 100/ Revenue	Value share Added value x 100/ Retail price
Farmer	\$0.34	\$0.50	\$0.16	\$0.50	32%	38%
Cooperative	\$0.75	\$1.00	\$0.25	\$0.50	25%	38%
Supermarket	\$1.12	\$1.30	\$0.18	\$0.30	13.85%	24%

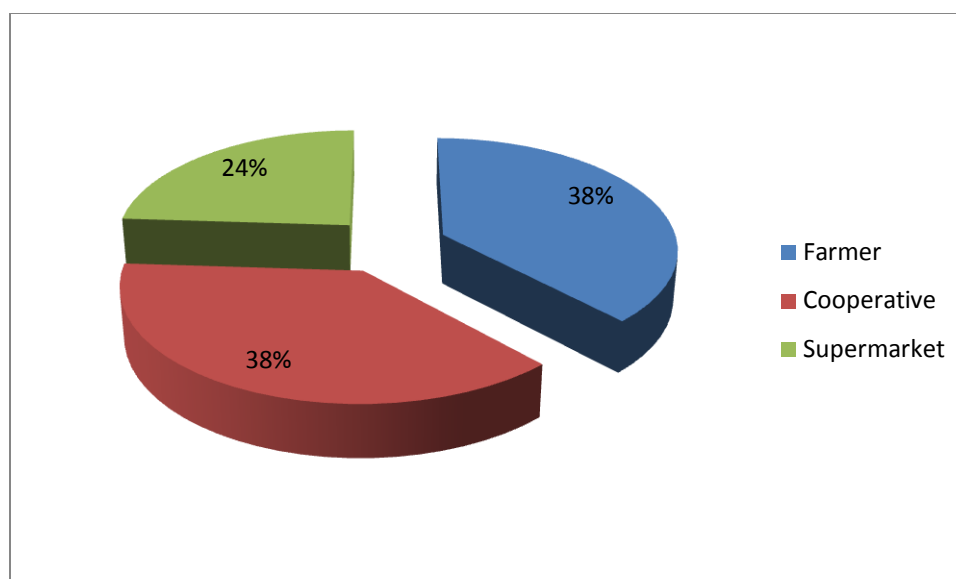


Figure 12: The value share per litre of milk in the formal market in Masvingo district

The dairy farmer and the cooperative have the highest value shares in formal chain while the supermarket has the least share. The cooperative share is kept in the cooperative account and is only shared to the farmers as profits annually.

Assumptions for informal market:

Variable costs of farmer for producing 1L of milk

- Total variable costs \$0.34 - transport cost \$0.05= \$0.29/L
- The average total milk traded by traders is 11 080L/Month
- One trader sell an average of 443.2L in 30 days
- A trader need \$2 to transport 14.77L per day
- It cost \$0.14 for a trader to transport 1L of milk

Table 3: Value share per litre of milk in the informal market of actors in the milk value chain in Masvingo district

Chain actor	Variable costs	Revenue Selling price	Gross income Revenue- Costs	Added value Revenue- Previous actor's revenue	Gross margin Gross income 100/ Revenue	Value share Added value x 100/ Retail price
Farmer	\$0.29	\$0.70	\$0.41	\$0.70	58.57%	58%
Trader	\$0.84	\$1.20	\$0.36	\$0.50	30%	42%

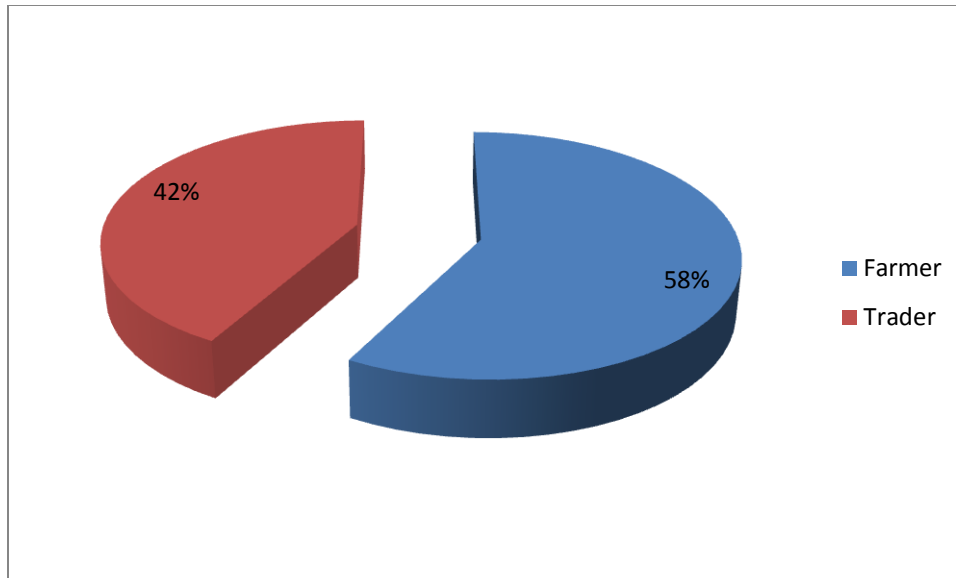


Figure 13: The value share per litre of milk in the informal market in Masvingo district

The dairy farmer has the highest value shares in the informal chain while the trader has the least share.

## CHAPTER 5: DAIRY COOPERATIVE PERFORMANCE

This chapter contains three sections of results; the first section is obtained from board members of the cooperative about the performance of the cooperative with regard to processing, internal organisation and marketing. The second section contains self assessments results of cooperative performance obtained from both cooperative members and cooperative board members. The last section contains the challenges and opportunities for improving the performance of dairy cooperative.

### 5.1 Cooperative board members results

Figure 14 shows the performance of the cooperative when focusing on processing, internal organisation and marketing.

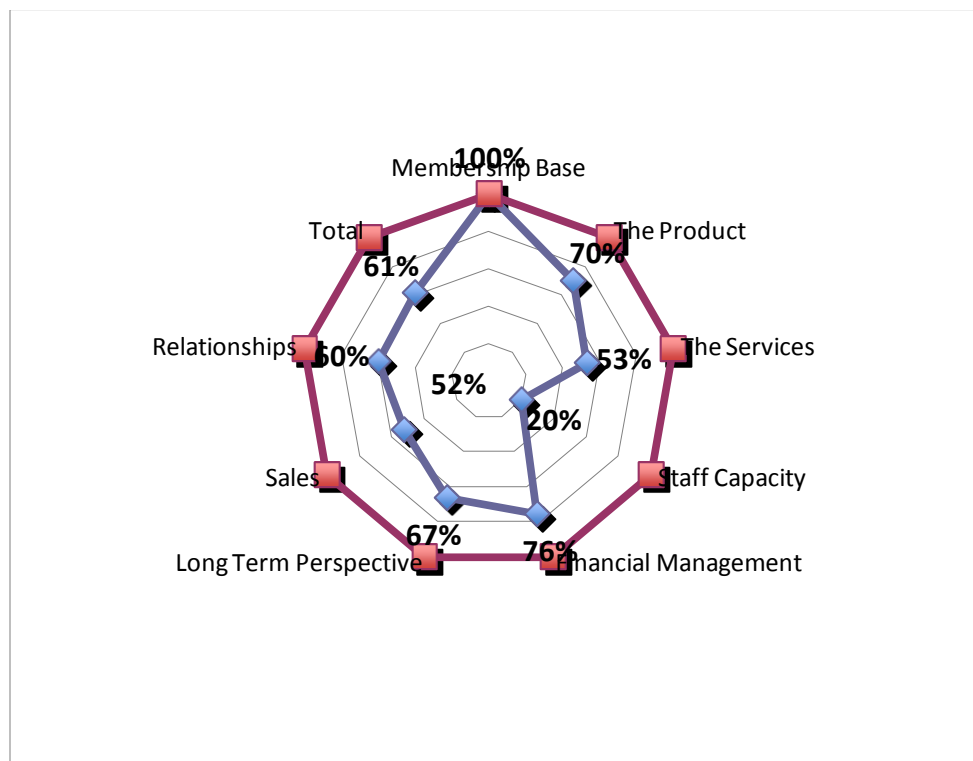


Figure 14: Performance of the cooperative with regard to processing, internal organisation and marketing

#### 5.1.1 Processing

The membership base of the cooperative is 100%. The actions to increase (active) membership are appropriate and have resulted in increments of active membership. Volumes processed by the cooperative are not increasing and the quality of products is poor as compared to export and local products. The cooperative has a good Quality Management System (QMS) in place that guarantees good quality milk. The average processing capacity of plant per day is 170L/day but

currently it's about 135L/day. The average processing per processing plant compared to averages of other cooperatives is more but the services provision to members are low with no premium prices for best quality milk.

### 5.1.2 Internal Organisation

The internal organisation of Hamaruomba dairy cooperative comprises of board members, cooperative members and employees as shown in figure 15. Both cooperative board members and cooperative members are farmers who supply milk to the cooperative but employees are not farmers. Every member performs tasks as described in the cooperative constitution. The chairperson chair the cooperative, the secretary document all activities of the cooperative, the treasurer manage the financial assets and liabilities of the cooperative, the advisors gives advice to cooperative on all aspects and the committee members assess the finance of the cooperative. Although women and youth are allowed to be elected as body members of the cooperative there are only three women and no youth at all in the cooperative board. The average age of cooperative members is 60 years.

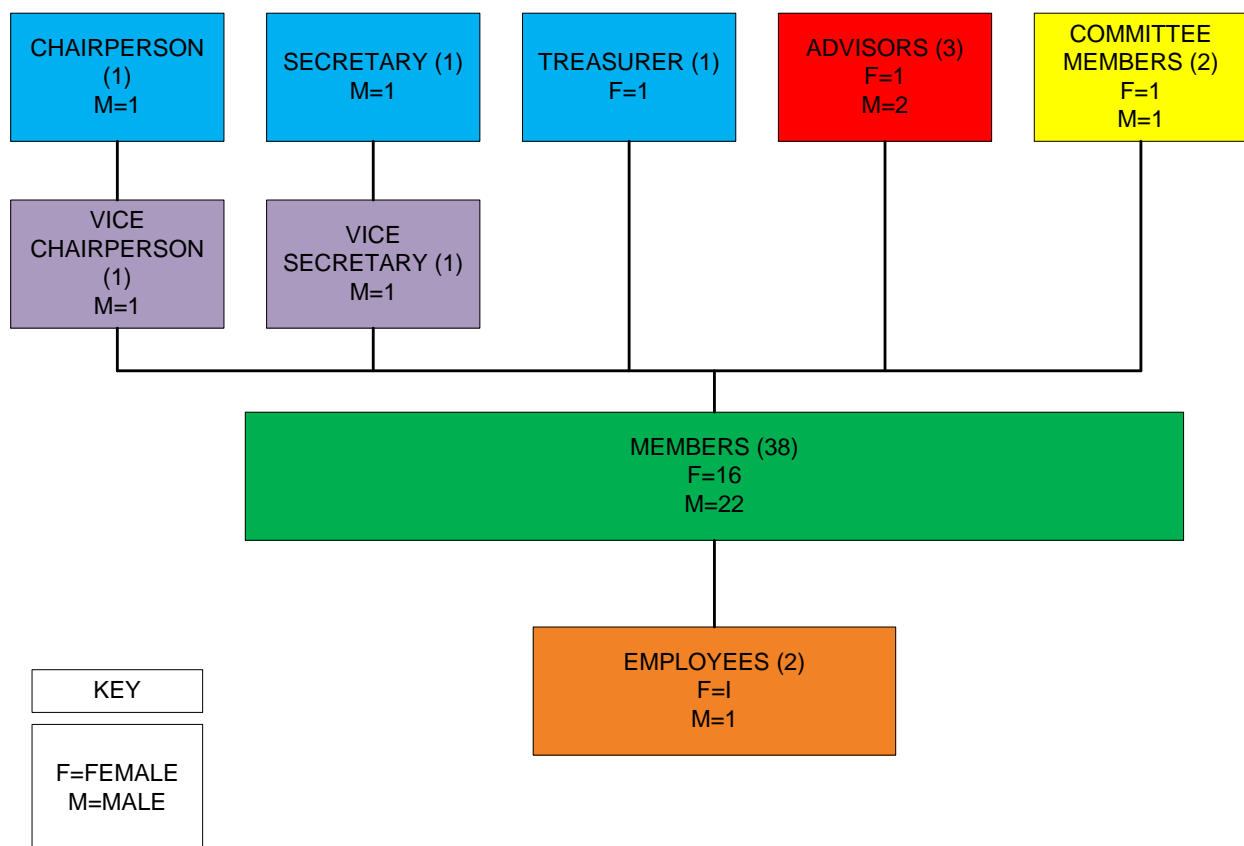


Figure 15: Hamaruomba dairy cooperative structure

All the cooperative board members posts are filled as shown in figure 15, but they are not well trained for their tasks and responsibilities. The staff performance is very low with staff capacity of 20% depicted in figure 14. There are insufficient employees and they are not well trained for

their tasks and responsibilities. These technical staffs are not capable of processing diverse milk products. The current organisational structure of the cooperative works, but the current governance structure is not performing well.

The financial management of the cooperative is not very good. The board or treasure clearly explains resource and income use every year but the organization has limited access to local bank/financial institutions to cover their financial needs. Financial information of the last three years is available and audited. The procedure of buying things is transparent. Although cooperative use membership fee of the cooperative members the organisation's dependency on sources of grant funding is very high.

The cooperative have a written declaration of the organisation's vision and mission with a long term strategic plan. The organisation has a clear vision on building capital and becoming financially self-sufficient in the long term.

The study revealed that the cooperative adhere to the following cooperative principles open and voluntary to everyone, democratically controlled, cooperative independence, member financial contribution, collaboration with similar cooperatives. Although it offers information, education and training there is need for more training to both staff and members. The cooperative is not adhering to the principle of developing communities.

### **5.1.3 Marketing**

The marketing strategies of the cooperative are poor. The cooperative has a sufficiently diversified client portfolio so that they are not dependent on a few clients, but sales are not increasing and some supermarkets are now rejecting their product because it does not have a bar code. Although the organisation efficiently executes marketing activities to broaden the client portfolio their sales are low in winter because volumes processed cannot meet the demand. The cooperative used to produce diversified product range but because of low volumes of milk supplied by the cooperative members the cooperative is solely dependent on single product.

The cooperative has good relationships with financers, community and supporters, but has poor relationships with farmers and clients. The relationships were evaluated in terms of constructive cooperation, transparency, trust, mutual respect, win-win and long term.

## 5.2 Self assessment results

This section presents self assessment findings of field study conducted in Mushagashe area with 38 cooperative members and 10 cooperative board members. Cooperative members and cooperative board members were able to assess the performance of their cooperative by completing structured questionnaire focusing on (1) membership base; (2) governance, leadership and internal democracy; (3) management of financial resources; (4) collaboration and networks; (5) service provision to members; (6) animal management and production; (7) stakeholder collaboration; (8) entrepreneurial skills and (9) cost and marketing as shown in annex A.

### 5.2.1 Average median score per assessment

The average median score per assessment of cooperative members and cooperative board members are shown in table 4 and figure 16.

### 5.2.2 Average dairy cooperative performance per class

Table 4 and figure 16 shows notable similarities and differences between cooperative members and cooperative board members.

Table 4 : Average performances per class between cooperative members and cooperative board members of dairy cooperative

Assessment classes	Average median score	
	38 Cooperative members	10 Cooperative board members
Membership base	3.58	4
Governance, leadership and internal democracy	3.5	3.58
Management of financial resources	3.36	3.14
Collaboration and networks	3.5	3.5
Service provision to members	3	3
Animal management and production	3.33	3.75
Stakeholder collaboration	3.4	3.8
Entrepreneurial skills	2.25	2.38
Cost and marketing	2.78	2.94

In average dairy cooperative performance per class there were nine classes of average median score of cooperative members and cooperative board members.

Table 5: Dairy cooperative classes

No	Class
1	Membership base
2	Governance, leadership and internal democracy
3	Management of financial resources
4	Collaboration and networks
5	Service provision to members
6	Animal management and production
7	Stakeholder collaboration
8	Entrepreneurial skills
9	Cost and marketing

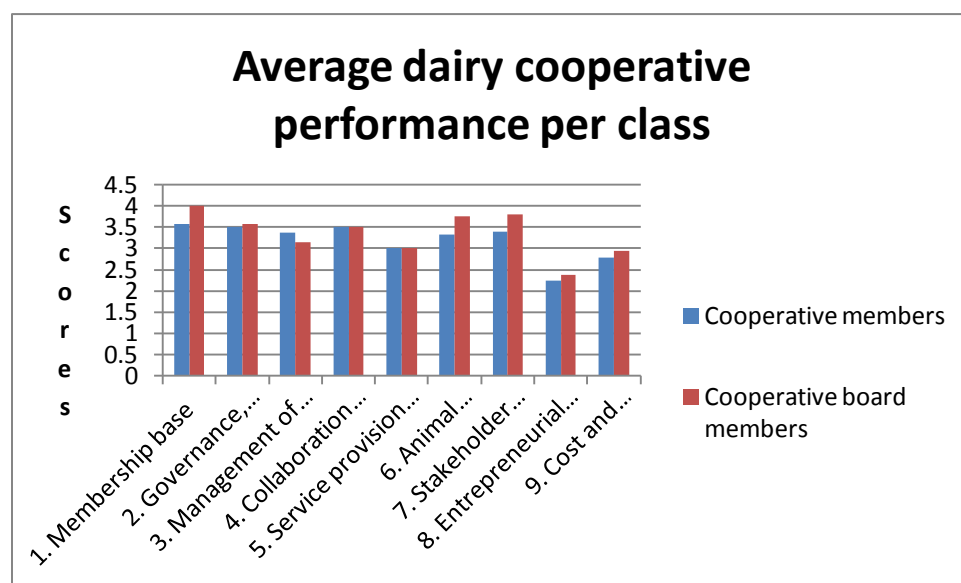


Figure 16: Average performances per class between cooperative members and cooperative board members of dairy cooperative

- The average median scores for cooperative members are slightly lower than those of cooperative board members in all classes except in class (3).
- The average median scores are similar for both respondents in classes (4) and (5).
- Also the results clearly indicate that the respondents are not satisfied with entrepreneurial skills.



## 5.3 Median scores per assessment

### 5.3.1 Membership base

In membership base there were six statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 6: Membership base statements

No 1	Statement
1	The conditions for adhering to our farmers cooperative are clearly defined
2	Our farmer's cooperative has clearly formulated the objectives it wants to reach
3	I am totally aware of the objectives and the planning of our farmers cooperative
4	All farmers who want to, can be member of our farmers cooperative
5	I regularly pay membership fees
6	I actively participate in the activities of our farmers cooperative

On a scale of 0-4, the member base performance score per assessment of 48 respondents are as follows:

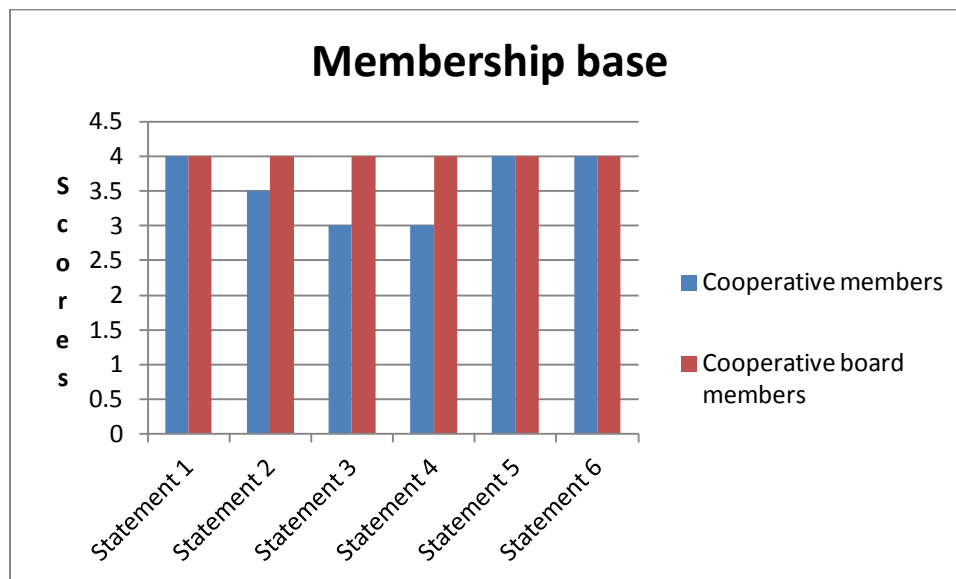


Figure 17: Membership base performances

- Cooperative board members are more positive than cooperative members on statements (2), (3) and (4).
- All the respondents fully agree with statements (1), (5) and (6) with a very high score of 4.

### 5.3.2 Governance, leadership and internal democracy

In governance, leadership and internal democracy there were six statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 7: Governance, leadership and internal democracy statements

No 2	Statement
1	I know the internal regulations of our farmers' cooperative
2	The statutory bodies of our farmers' cooperative (general assembly, board meetings) function according to their mandates
3	The governing board of our farmers cooperative has been democratically and transparently elected
4	Internal communication within our farmers cooperative is well organized: members are well informed about whatever is happening
5	Women and youth are sufficiently represented in the elected bodies of our farmers association
6	Every member in our farmers cooperative has the same decision rights

On a scale of 0-4, the governance, leadership and internal democracy performance score per assessment of 48 respondents are as follows:

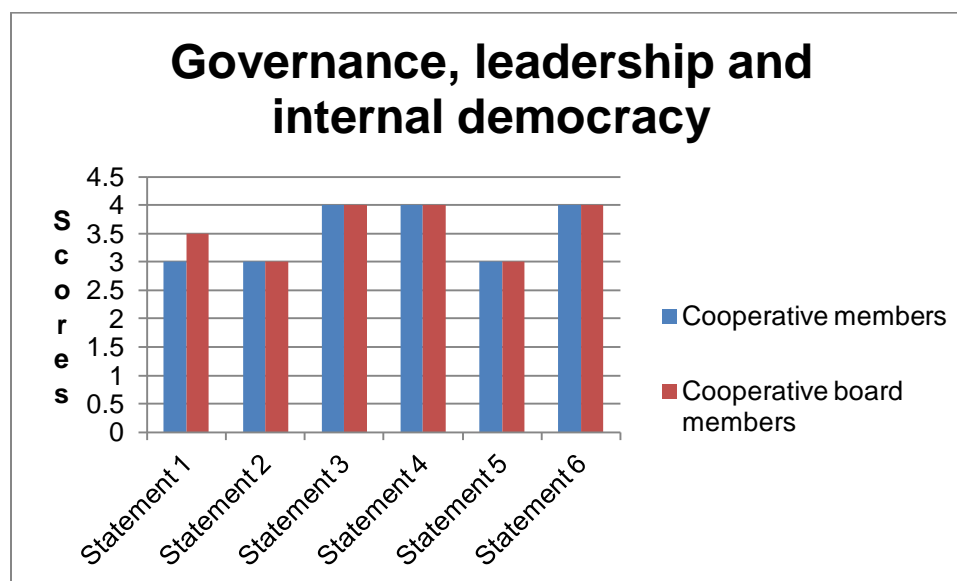


Figure 18: Governance, leadership and internal democracy performances

- ✚ The only difference between cooperative members and cooperative board members was on statement (1), with scores of 3 and 3.5 respectively.
- ✚ The satisfactions of all respondents are not optimal with statements (2) and (5). However all respondents fully agree with statements (3), (4) and (6) which have very high score of 4.

### 5.3.3 Management of financial resources

In management of financial resources there were seven statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 8: Management of financial resources statements

No 3	Statement
1	Our farmers cooperative functions on the basis of the financial contributions of the members
2	Our farmers' cooperative can function well without outside financial support
3	We have elected a treasurer who can keep the books correctly
4	We have a committee that controls how expenditures have been done and how the financial books are kept
5	When the farmers' cooperative needs to buy something, the procedures to do so are transparent
6	If I want to, I am also allowed to check the records
7	Every year, the board or the treasurer explains how resources and income of the farmers' cooperative have been used

On a scale of 0-4, the management of financial resources performance score per assessment of 48 respondents are as follows:

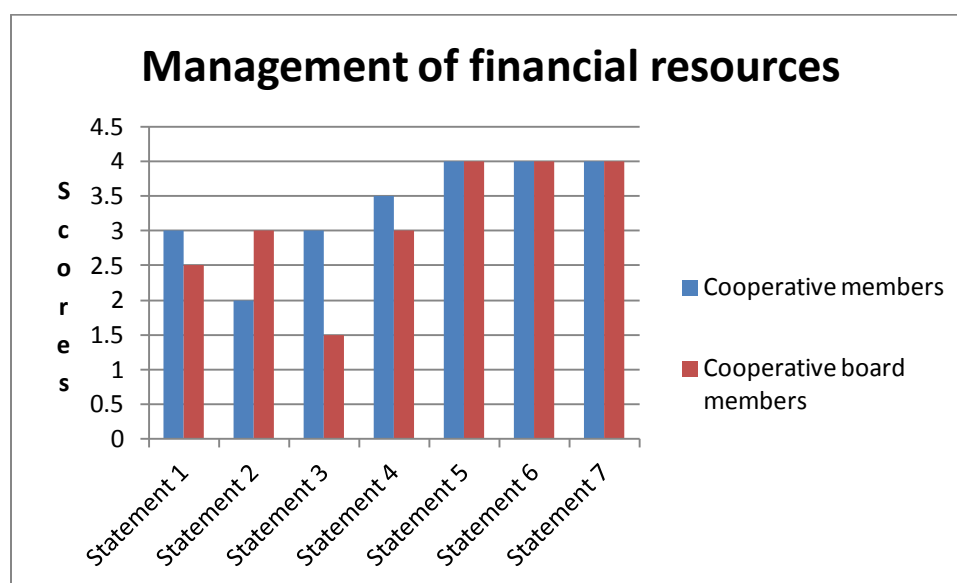


Figure 19: Management of financial resources performances

- Cooperative members are more positive than cooperative board members on statements (1), (3) and (4).
- Cooperative board members are more positive than cooperative members on statement (2) only.
- All respondents fully agree with statements (5), (6) and (7) which have very high score of 4.

### 5.3.4 Collaboration and networks

In collaboration and networks there were six statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 9: Collaboration and networks statements

No 4	Statement
1	In the past, we have had exchange visits with other dairy farmers' cooperatives, to observe how other farmers cooperatives are functioning and working.
2	Our farmers cooperative had written project proposals with the aim to get support and funding for our activities
3	Our farmers cooperative has formal agreements with banks facilitating members' access to credit
4	Our farmers cooperative has established good agreements with input providers, to buy animal feed and medicine for reduced prices
5	Our farmers cooperative has established good agreements with veterinary services, such as the set-up of collective vaccination programs
6	Our farmers cooperative actively participates in meetings of other farmers association

On a scale of 0-4, the collaboration and networks performance score per assessment of 48 respondents are as follows:

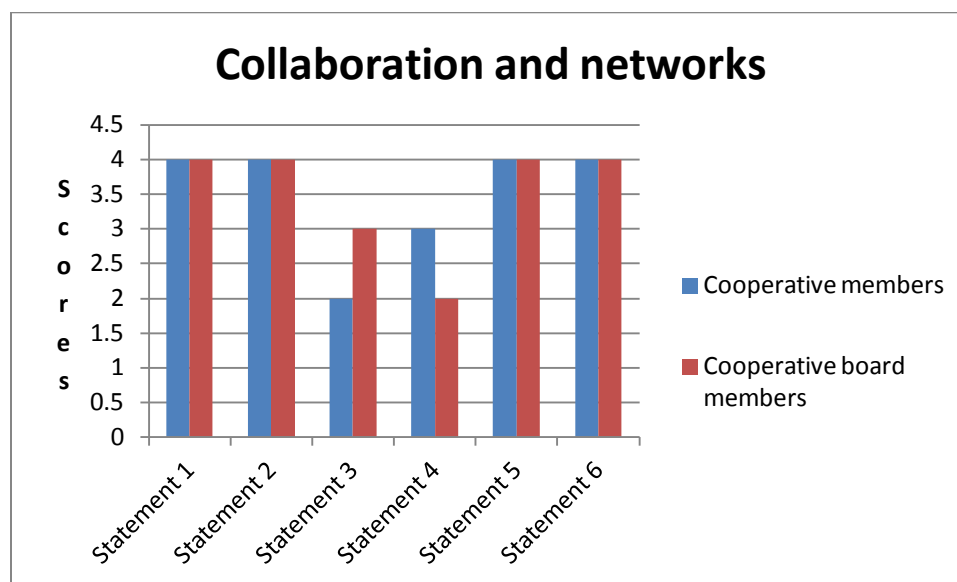


Figure 20: Collaboration and networks performances

- Cooperative members are more positive than cooperative board members on statement (4) while cooperative board members are more positive than cooperative members on statement (3).
- All respondents fully agree with statements (1), (2), (5) and (6) which have very high score of 4.

### 5.3.5 Service provision to members

In service provision to members there were three statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 10: Service provision to members statements

No 5	Statement
1	The services of the farmers' cooperative respond to my needs as a dairy farmer
2	The board members receive training to improve the competencies and skills to perform their tasks
3	I think our farmers' cooperative is efficient in providing information and training to the members

On a scale of 0-4, the service provision to members performance score per assessment of 48 respondents is as follows:

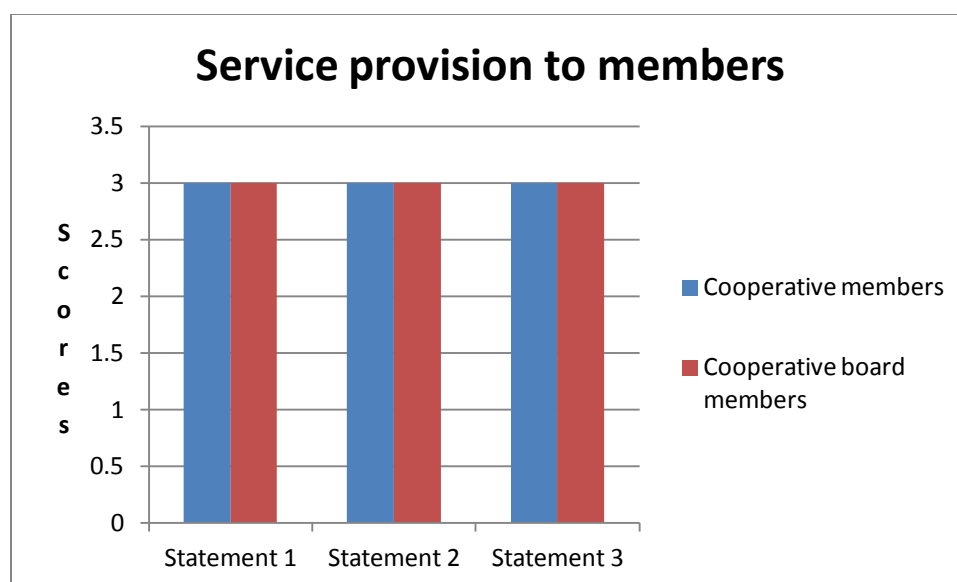


Figure 21: Service provision to members performances

- Cooperative members and cooperative board members agree on all the statements but they are not optimally satisfied with the statements.

### 5.3.6 Animal management and production

In animal management and production there were six statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 11: Animal management and production statements

No 6	Statement
1	I have very good knowledge on dairy farming
2	The production of my milk is high and is how I desired
3	I am aware and keen on performing hygienic measures during milking
4	I am able to plant good pastures and feed my cow(s) sufficiently
5	I always vaccinate my cow(s)
6	Every season, I calculate the costs and benefits of the cow production

On a scale of 0-4, the animal management and production performance score per assessment of 48 respondents are as follows:

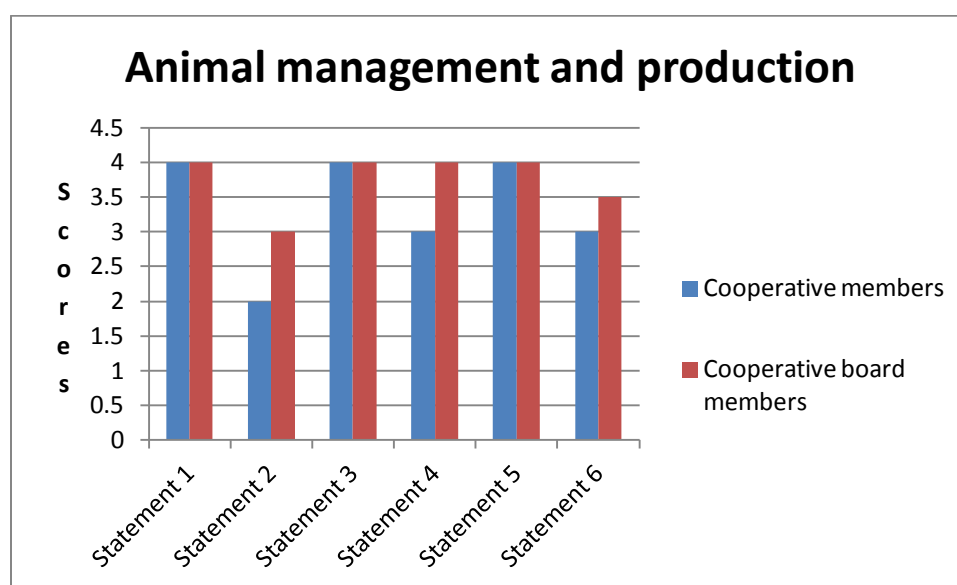


Figure 22: Animal management and production performances

- Cooperative board members are more positive than cooperative members on statements (2), (4) and (6).
- However all respondents fully agree with statements (1), (3), and (5) which have very high score of 4.

### 5.3.7 Stakeholder collaboration

In stakeholder collaboration there were five statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 12: Stakeholder collaboration statements

No 7	Statement
1	My input supplier gives me advice on how best to use the feed, medicine and other input supplies
2	I know the quality requirements of our buyers
3	If there is a problem, we openly discuss matters with the processors
4	If our farmers cooperative would engage in collective marketing and sells at a better price, I would be happy to contribute cash in \$ for the benefit of the farmers' cooperative
5	Within the district, different stakeholders are discussing how best to develop the dairy value chain

On a scale of 0-4, the stakeholder collaboration performance score per assessment of 48 respondents are as follows:

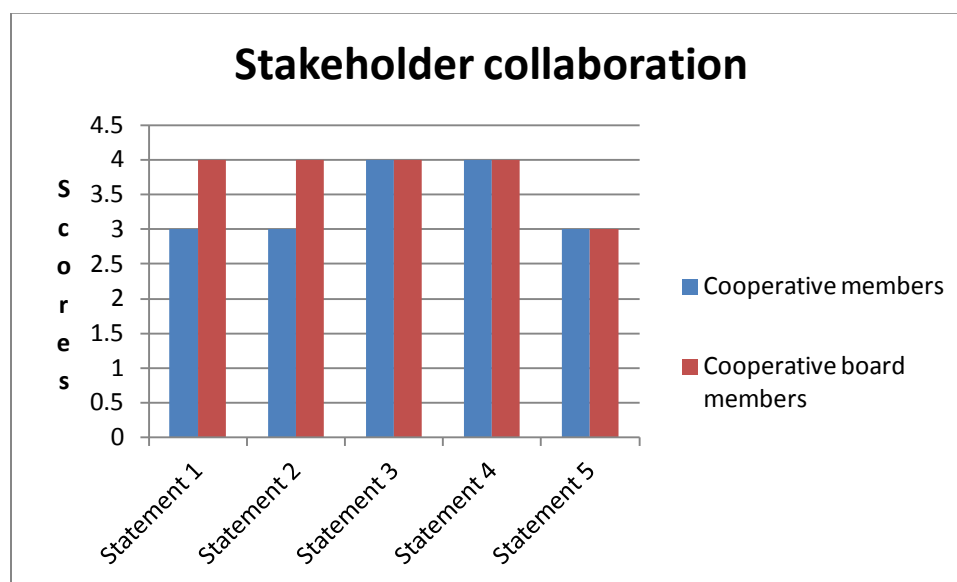


Figure 23: Stakeholder collaboration performances

- Cooperative board members are more positive than cooperative members on statements (1) and (2).
- Also all respondents are not optimally satisfied with statement (5) and fully agree with statements (3) and (4) with a high score of 4.

### 5.3.8 Entrepreneurial skills

In entrepreneurial skills there were four statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 13: Entrepreneurial skills statements

No 8	Statement
1	Our farmers cooperative has diversified into other activities in relation to milk products
2	Our farmers cooperative has diversified into other activities which are not related to dairy production.
3	Our farmers cooperative is very good in identifying market possibilities
4	Our farmers cooperative is in general able to identify risks and opportunities very well

On a scale of 0-4, the entrepreneurial skills performance score per assessment of 48 respondents are as follows:

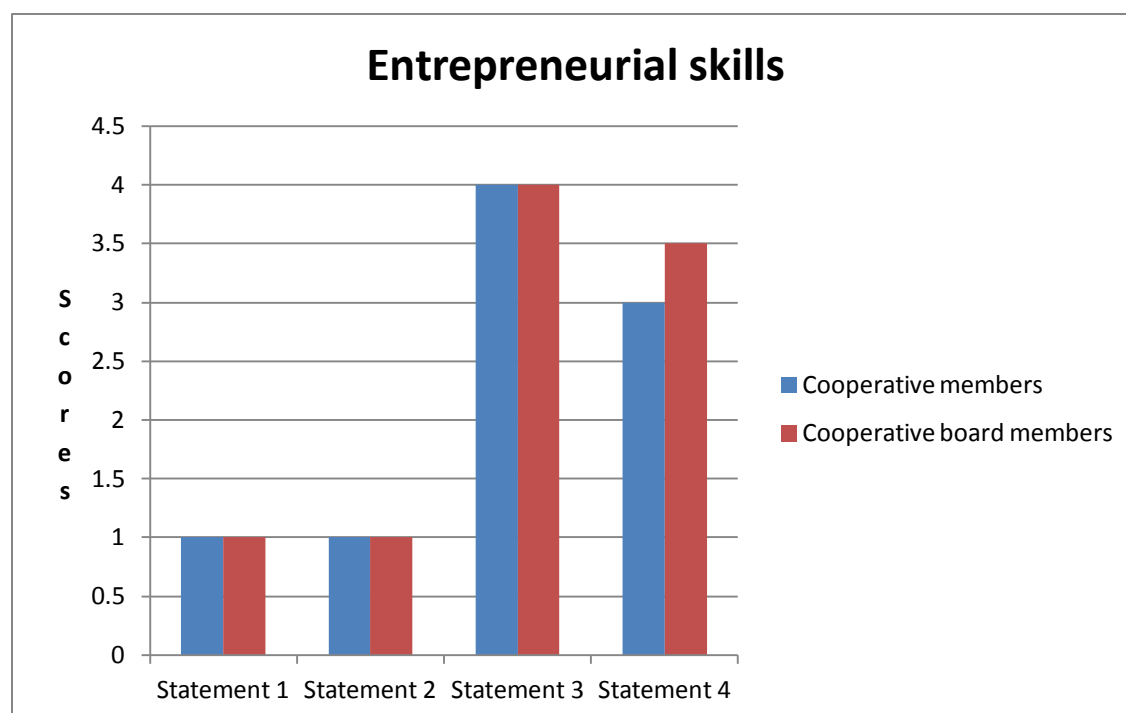


Figure 24: Entrepreneurial skills performances

- Cooperative board members are more positive than cooperative members on statement (4).
- Both members agree on the remaining statements where they both fully disagree with statements (1) and (2) with very low score of 1 and fully agree with statement (3) with a high of 4.



### 5.3.9 Cost and marketing

In cost and marketing there were nine statements where by cooperative members and cooperative board members fill to express their opinions about their cooperative performance.

Table 14: Cost and marketing statements

No 9	Statement
1	I am always able to sell my milk
2	The cooperative pay premiums for good quality milk
3	The cooperative give sanctions for poor quality milk
4	In case there is little market to sell the milk, our farmers' cooperative searches for new markets
5	Even if there is market for the milk, the farmers' cooperative is still active in searching markets
6	I always get the same price for my milk
7	I am happy with the price I get for my milk
8	I am happy with the procedure how I get paid for my milk
9	My production costs are covered by the sales of milk

On a scale of 0-4, the cost and marketing performance score per assessment of 48 respondents are as follows:

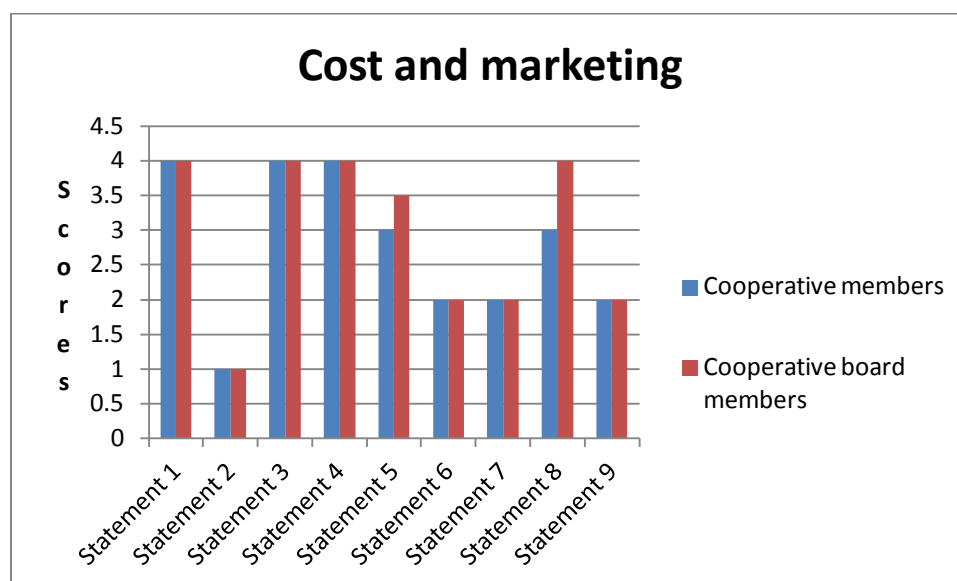


Figure 25: Cost and marketing performances

- Cooperative board members are more positive than cooperative members on statements (5) and (8).
- Both members agree on high score on statements (1), (3), and (4). The same respondents agree on low score for statements (6), (7) and (9) and they further agree on very low score for statement (2).

Table 15: List where median score of cooperative members were lower than of board members

CLASS	STATEMENT
5.3.1 Membership base	2. Our farmer's cooperative has clearly formulated the objectives it wants to reach
	3. I am totally aware of the objectives and the planning of our farmers cooperative
	4. All farmers who want to, can be member of our farmers cooperative
5.3.2 Governance, leadership and internal democracy	1. I know the internal regulations of our farmers' cooperative
5.3.3 Management of financial resources	2. Our farmers' cooperative can function well without outside financial support
5.3.4 Collaboration and networks	3. Our farmers cooperative has formal agreements with banks facilitating members' access to credit
5.3.6 Animal management and production	2. The production of my milk is high and is how I desired
	4. I am able to plant good pastures and feed my cow(s) sufficiently
	6. Every season, I calculate the costs and benefits of the cow production
5.3.7 Stakeholder collaboration	1. My input supplier gives me advice on how best to use the feed, medicine and other input supplies
	2. I know the quality requirements of our buyers
5.3.8 Entrepreneurial skills	4. Our farmers cooperative is in general able to identify risks and opportunities very well
5.3.9 Cost and marketing	5. Even if there is market for the milk, the farmers' cooperative is still active in searching markets
	8. I am happy with the procedure how I get paid for my milk

Table 16: List where median score of cooperative board members were lower than of cooperative members

CLASS	STATEMENT
5.3.3 Management of financial resources	1. Our farmers cooperative functions on the basis of the financial contributions of the members
	3. We have elected a treasurer who can keep the books correctly
	4. We have a committee that controls how expenditures have been done and how the financial books are kept
5.3.4 Collaboration and networks	4. Our farmers cooperative has established good agreements with input providers, to buy animal feed and medicine for reduced prices

Table 17: List where median score of all members were low

CLASS	STATEMENT
5.3.8 Entrepreneurial skills	1. Our farmers cooperative has diversified into other activities in relation to milk products
	2. Our farmers cooperative has diversified into other activities which are not related to dairy production.
5.3.9 Cost and marketing	2. The cooperative pay premiums for good quality milk
	6. I always get the same price for my milk
	7. I am happy with the price I get for my milk
	9. My production costs are covered by the sales of milk

#### 5.4 Challenges and opportunities for improving dairy cooperative.

SWOT analysis was done to identify areas that can be improved for the success of the cooperative. Strength and weaknesses are internal factors that affect performance of the cooperative and opportunities and threats are external situational factors outside the cooperative. The information obtained through desk research, survey, case study and SWOT analysis tool was used to identifying the challenges and opportunities of dairy cooperative.

Table 18: SWOT ANALYSIS

<b>Strength</b>	<b>Weakness</b>
<ul style="list-style-type: none"> <li>- The cooperative has infrastructure in place to process diverse milk products to reduce market risk of relying on single product.</li> <li>- The hierarchy between cooperative members and board members responsible for decision making is short promoting full participation of farmers in decision making.</li> <li>- Farmers have very good knowledge on dairy farming promoting production of high volumes of quality milk if all farmers get dairy cows.</li> <li>-The farmers have large pieces of land to plant pastures, crops for making silage and urea treatment for feeding dairy cows cutting down feed costs.</li> <li>- Meetings are held at six weeks intervals to discuss issues to do with the cooperative.</li> </ul>	<ul style="list-style-type: none"> <li>- The cooperative is selling one product of low quality posing a market risk of relying on single product.</li> <li>-The cooperative cannot consistently supply Amasi to buyers resulting in market losses.</li> <li>- Most farmers do not have dairy cows resulting in low volumes being supplied to the cooperative.</li> <li>- Some cooperative members are side selling milk reducing processing capacity of the plant.</li> <li>-Most dairy farmers are old and this will cause low production in the future since there are very few young farmers to produce milk for the cooperative.</li> <li>-Cooperative does not have a mobile vehicle which makes it difficult to collect afternoon milk as farmers cannot make two trips per day.</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>- The cooperative is situated close to the provincial city where there are many buyers of milk products.</li> <li>- Land 'O' Lakes and Heifer International are supporting cooperative members by giving them dairy heifers to increase their dairy breeds and offering them training to improve their skills and knowledge.</li> <li>- USAID donated money to the cooperative for renovating its plant and repairing the vehicles to enhance smooth operations and mobility.</li> <li>-Veterinary department is helping farmers to control disease and there are no incidences of animal death due to Veterinary negligence.</li> <li>-There is a nearby farmer in a neighbouring district who can supply the cooperative with milk to keep the plant operating when the cooperative volumes are too low.</li> <li>-There are nearby farmers in neighbour district who can sell dairy breeds to cooperative members to increase the number of their dairy breeds.</li> </ul>	<ul style="list-style-type: none"> <li>- There is stiff competition from cheap milk products from neighbouring country and local products.</li> <li>-Competitors are selling high quality milk products causing serious market problems for low quality product of the cooperative.</li> <li>- Cooperative has not established good agreements with input providers, to buy animal feed and medicine for reduced prices.</li> <li>-The cooperative has no formal agreements with banks for facilitating members' access to credit.</li> <li>-Power cuts and water shortage negatively affect the processing of milk products at the plant forcing the cooperative to process natural sour which has very low profit margin as compared to Amasi.</li> <li>-Inadequate extension support from Government extension workers due to lack of experience in newly employed.</li> </ul>

## **CHAPTER 6: DISCUSSION**

This chapter describes the dairy sub sector in Masvingo district and performance of Hamaruomba smallholder dairy cooperative based on the results in chapter 4 and 5 together with challenges and opportunities for improving the performance of dairy cooperative.

### **6.1 Dairy value chain of Masvingo district**

The dairy sub sector in Masvingo district is not well established and it comprises of smallholder dairy cooperative farmers who own both indigenous and dairy breeds and smallholder non cooperative members who mainly keep indigenous breeds to produce milk for family consumption and sell excess milk to neighbours and traders who sell unprocessed milk to consumers. This is contrary to findings of Roduner, (2007) who classify value chain as an analytical and operational model where the product is hardly ever consumed at the place of production before transformed. The dairy sector is characterised by actors who add value to milk at different levels of the chain and has supporters who support actors in the chain but the cooperative is not in joint venture with any of them. This is supported by FAO (2010), International Cooperative Alliance (ICA, 1995) and Penrose-Buckley (2007) who stated that cooperatives should be independent and avoid being controlled by external owners or avoid joint ownership by private companies and NGOs for them to be successful. Hamaruomba dairy cooperative is vertically integrated and is the only milk processor in the district which sells the product to supermarkets, institutional consumers and local community, although other cooperative members are side selling to traders. These findings are similar to (KIT and IIRR, 2008), who reported that actors in a chain know each other well and form stable, long-term relationships to reach a common goal of satisfying consumer needs that enable them to increase their profits.

### **6.2 Profitability in the dairy value chain**

The dairy farmer and the cooperative have the same highest value shares in formal chain while the supermarket has the least share. Although the farmer and the cooperative have the same highest value share the cooperative has the highest profit, followed by supermarket and the farmer has the least profit because of high retailing and production cost respectively. This is contrary with findings of KIT and IIRR (2008) who reported that when farmers are organised into cooperatives they have more assured market and they earn more per litre of milk. The farmers' low profits are also attributed to low volumes supplied to the cooperative because farmers receive their payments after deduction of all cooperative expenses. If volumes are low farmer profits will be low since most of their profits cover cooperative expenses. If volumes supplied by farmers are high their profits will be high since there will be more money remaining after covering cooperative expenses. Sometimes farmers encounter losses but normally farmers receive between \$0.35-\$0.50/L of milk. Farmers rarely get annual profits because of high expenses encountered by the cooperative. When Amasi is delivered and sold in the

supermarkets the return is low because cooperative recommend supermarkets to sell their product at low price to gain more buyers.

The dairy farmer has the highest value shares in the informal chain while the trader has the least share and the return of farmer per litre of milk is higher than of trader. This is consistent with findings of KIT and IIRR (2008) who states that if the actor added more value into the product the value share should be high. Cooperative members are side marketing because traders are paying price which cover all costs they encountered during production and there is no transport cost paid by farmers as traders go to farmers' homesteads to collect milk. This can be further supported by farmers who revealed that they are not happy with the price from the cooperative. Cooperative members mentioned that they prefer an average price of \$0.70/L of milk. Traders are paying more money to farmers to get raw milk than going for cheap milk imports because consumers prefer local milk than milk imports and if traders sell import milk it will be more expensive than the supermarket price due to high transportation and refrigeration costs encountered by traders so consumers will not buy from traders.

The study revealed that level of milk production in Masvingo district is very low. This is in agreement with Dairibord Zimbabwe Private Limited, (2007), FAO, (2013), ITC Trademap, (2013) and Ministry Of Finance, (2012) that the current milk production level still remains below the national milk requirement therefore the country has shifted from being a net exporter to a net importer.

### **6.3 Governance of dairy cooperative**

#### **Processing**

Hamaruomba dairy cooperative is operating below capacity because cooperative members are producing low volumes of milk which is further worsened by side selling. This is consistent with findings of Dairibord Zimbabwe Private Limited (2007) which reported that the processing capacity of 34 processing companies in the country is 400 million litres but the processing capacity is less than 30 percent. Although most of the cooperative members are not producing enough milk to supply to the cooperative the membership base is 100%. This is because all cooperative members are paying their membership fee so they are actively participating in running of dairy cooperative. Although the cooperative product has full cream its quality is lower than milk imports and local products. The cooperative board members attributed this to absence of special flavours and ingredients in their products.

#### **Internal organisation**

International Cooperative Alliance (ICA, 1995) cited that cooperatives offer information, education and training to its members and employees to strengthen their managerial and operational capabilities contributing to the development of cooperative. Cooperative members and employees are performing their tasks but they are not competent because they are not well trained for their duties and they also lack qualifications especially employees and treasurer. This is affecting the performance of the cooperative since the board members are not performing their task efficiently and technical staff could not process diverse milk products.

Inadequate education and training hinders to make the vision of the cooperative a success. The average age of cooperative members is too high and this will have a negative impact on milk production in the future since there are no young farmers in cooperative. The number of board members seems to be too big for the cooperative, but cooperative members are comfortable with their number since board members can represent each other if some are attending other business. They are also not on pay roll so their large number is not a threat to the cooperative. Although the cooperative is adhering to six cooperative principles stated by International Cooperative Alliance (ICA, 1995) the cooperative is not adhering to the principle of developing communities due to inadequate financial resources.

## **Marketing**

The marketing strategies of the cooperative are poor as they are depicted by low sales and poor relations. This is in agreement with Koopmans, (2006) who reported that the success or failure of the cooperative is influenced by current and future market conditions. The cooperative used to have diversified client base but it is declining because it is failing to meet requirements of some supermarkets which are now rejecting their product due to absence of barcodes. This is consistent with findings of Boucher and Guegan, (2002) who cited that in Cajamarca Peru, cheese-makers have their own brand name and are commencing to use barcodes which is a requirement for selling in supermarkets. KIT *et al.*, (2006) also reported new hindrances created by recent steady increase of supermarkets that enforce new quality systems and packaging requirements.

The cooperative sell one dairy product to clients imposing the market risk of selling single product. This is contrary with findings of KIT and IIRR (2010) who reported that in Bolivia farmers have a new source of revenue (milk rather than cheese) which diversifies their risks.

## **6.4 Satisfaction level of members with their cooperative**

### **Membership base**

The focus group discussion revealed that cooperative members are not well versed with the objectives and planning of the cooperative because they are some changes because they changed last year from being an association to become a cooperative. The cooperative members said they don't have copies of the new objectives and they need further explanation to understand very well. However the cooperative board members reported to be quite aware because they have copies and they are the ones who explain the changes to the rest of farmers. Board members further revealed that it's easier to be a cooperative member because the pre-requisites of being a cooperative member are well explained. However cooperative members did not fully agree with board members citing that is not very easy for any farmer to meet these requirements. Despite all this, members actively participate in the activities of farmer's cooperative because they know the vision, mission, objective and plans of the cooperative although they are some minor changes on objectives. This is in agreement with

findings of Corn forth, (2004) who indicated that joining of the cooperative and remaining a member and the degree of active participants within the cooperatives depict membership satisfaction.

### **Governance, leadership and internal democracy**

The only difference between members was on the internal regulations of farmers' cooperative. Cooperative board members know the internal regulations of the cooperative better than cooperative members. This is attributed to the fact that cooperative has recently changed from being an association and members are not yet familiar with the new internal regulations. The cooperative members revealed that they will be versed with regulations if each member get a copy of regulations rather than relying on being informed by board members through reading.

All respondents fully agree with democracy and transparency of the governing board, well organised internal communication within the cooperative and same decision rights among cooperative members. This is in agreement with findings of Kimberly and cropp (2004) who indicated there need of sound by laws for the cooperative to be successful and sustainable. He further explained that these by laws are internal documents which govern the cooperatives in terms of how members are voted into office; member expectations and restrictions; how decisions are made by board members; procedure of changing by laws and cooperative plan; stock requirements and patronage allocations and distribution. Focus group discussion revealed that everything to do with the cooperative was explained at meetings and in case of emergence board members phoned each member. Respondents revealed that board members were elected democratically at AGM every year. This is similar with Penrose-Buckley (2007) that decisions are made at AGM by voting and in most cooperatives including traditional once, each member has an equal vote.

Every member has the right to be voted to be a board member but the cooperative is dominated by males and there is no youth at all. The focus discussion revealed that the youth were not voted as board members because they were not committed to cooperative duties as they can leave the cooperative anytime in search of better employment opportunities. These results are similar to findings of Koopmans, (2006) who pointed lack of member commitment as the potential pitfalls of the cooperative.

### **Management of financial resources**

For a cooperative to be sustainable Koopmans, (2006) indicated that members finance is the most essential source, especially when starting a cooperative. Cooperative members think cooperative function on the basis of their financial contributions because they pay monthly subscription. However the board members revealed that money of members is not enough for cooperative performance, since there are many costs which need to be covered.



On the other note cooperative members revealed that their cooperative cannot function well without outside financial support because their volumes of milk are very low to cover costs. This is contrary to Board members who reported that their cooperative can function well without outside financial support if more members get dairy breeds and avoid side selling.

Cooperative members mention that their treasurer can keep the books correctly, but members including the treasurer herself revealed that the treasurer is not qualified for the task. They further mention that the staff is not enough there is need to recruit a book keeper who is trained for the job to have better financial statements. Although all members are satisfied with committee that controls how expenditures have been done and how the financial books are kept, cooperative members are more satisfied than board members. Cooperative members are more satisfied because all financial transactions are transparent, but members insisted the need for more training to financial committee to execute the task well.

All members are satisfied because every member is allowed to check the records, procedures of buying things are transparent and the board or the treasurer explains resources and income usage at every meetings held after six weeks. These results are similar to Banco Central Do Brasil, (2008) which reported that the principle of transparency defines, in governance practices, the interest of board members in making members, have full knowledge of information and results, in a way to further their opinion.

### **Collaboration and networks and stakeholder collaboration**

With regard to collaboration and networks cooperative members reported not to have formal agreements with banks facilitating members' access to credit because they never get loans from the banks. Their findings are not consistent with those of board members who agree with the above statement and insisted that its only farmers who are afraid of risk associated with taking loans.

The cooperative members agreed that their cooperative has established good agreements with input providers, to buy animal feed and medicine for reduced prices. This is because the cooperative are accessing medicines at reduced price and dairy feed at normal retail prices with payments being made every month end after selling milk. However board members disagree with this because there are no agreements of buying feed at reduced costs of which feed cost is the major cost when rearing dairy cows. Board members revealed that feed companies only reduce prices if the cooperative purchase at least 30 tonnes of feed a quantity which is too high for cooperative to buy.

All respondents report to have strong collaboration with other cooperatives at national and regional; funding agency; veterinary services and farmer associations. This is consistent with International Cooperative Alliance (ICA, 1995) which reported that collaboration of cooperatives at local, regional or national level strengthens the effectiveness of the cooperative.

Pertaining stakeholder collaboration board members reported to get full advice than cooperative members on how best to use the feed, medicine and other input supplies and quality requirements of buyers. Board members revealed that input suppliers provide all the advice if they are asked and also provide pamphlets on how to use the inputs. Although this service is available the satisfaction of cooperative members is not optimum because they want an input supply agent who come to advice them regularly.

Board members know quality requirements of cooperative because every member was given testing kit to test the milk before sending to the cooperative. However cooperative members do not fully agree with this statement because members themselves know the quality requirements but most of the milking is done by workers who does not stick to the hygiene requirements. Members mentioned that workers need close monitoring but this is difficult due to attachment to other commitments.

### **Service provision to members and Animal management and production**

Cooperative members and board members revealed that service provision was not optimal because the cooperative have limited resources. They further elaborate that the cooperative was trying its best to offer services so they expect more better services if their resource base increase. These results are similar to Penrose-Buckley (2007) who cited that cooperative can offer many business oriented activities and services if resources permits.

Focus group discussion revealed that production of their milk is below cooperative member's expectations due to shortage of dairy cows and inadequate feeding especially in winter due to high feed cost. However board members report to be satisfied though not optimally satisfied because they are adequately feeding their cows and some of them bought dairy breeds from neighbouring district farmers to boost milk production.

Although members and board members are able to plant good pastures and feed their cow(s) sufficiently, board members are better in carrying out such activity than cooperative members. Cooperative members reported water shortage as their main challenge to plant good pastures though there is abundant land. Board members counter this problem by planting pastures in the rain season and irrigate in the events of dry spells. All respondents reported to receive trainings on planting pastures, silage making, urea treatment and hay making from Land 'O' Lakes personnel with some assistance from government extension agents.

Focus group discussion further revealed that board members have better entrepreneurship skills than other members because they get some few training on budgeting so they regularly calculate the costs and benefits of the cow production.

## **Entrepreneurial skills and Cost and marketing**

Board members revealed that they have advisors who are able to identify risks and opportunities very well, but members are not optimally satisfied with the ability of the cooperative to identify risk. Cooperative members attributed this to some of the experienced advisors who are not dedicated to work for the benefit of the cooperative but need to be paid for the service, which is not supposed to be the case.

The cooperative members need to be innovative and process diverse milk products to reduce market risk of selling one product and also venture into other business which is not dairy. However the cooperative is processing one dairy product and has not diversified into other activities which are not related to dairy production. This is contrary to McDonnell *et al.*, (2012) who indicated that business venture successes if co-operative members have common interests and capacity to be innovative. They further recommend cooperative entrepreneurs to dedicate to democratically work for the benefit of cooperative not for individual benefits. This is contrary to the findings of survey because other cooperative members are side selling milk to the traders which negatively affect the success of the cooperative.

With regard to costs and marketing members are demoralised by absence of premium prices for good quality milk. Farmers are not getting same price for their milk and they are not happy with the price they get for their milk causing side selling.

Cooperative board members are more satisfied than cooperative members with the statement that even if there is market for the milk, the farmers' cooperative is still active in searching markets. During the focus group discussion board members revealed than they continuously search for market to expand their client base. This is contrary to views of cooperative members who revealed that sometimes they received very low prices per litre of milk, which implies that their marketing team is not committed to its task.

Generally respondents are happy with the way they are being paid because getting money once at month end, makes it easier for farmers to plan for their money, but some cooperative members were complaining about untimely payment though this is not common. This is consistent to findings of KIT and IIRR (2008) where farmers in Kenya prefer to sell their milk to the cooperative because they pay a monthly lump sum which is easier to budget with.

## **6.5 Challenges and opportunities for improving dairy cooperative.**

The survey findings depicted that inadequate entrepreneurial skills and costs and marketing are the main challenges hindering efficient performance of dairy cooperative. These inadequate entrepreneurial skills and costs and marketing negatively affect the farmer revenue. This is consistent with findings of Koopmans, (2006) who mention lack of entrepreneurship skills, mistrust between members and leaders as some of the main challenges facing cooperative in developing countries. He further mentioned that the success or failure of the cooperative is influenced by current and future market conditions.

## CHAPTER 7: CONCLUSIONS

The dairy sub sector in Masvingo district is not well established and it comprises of smallholder dairy cooperative farmers who own both indigenous and dairy breeds and smallholder non cooperative members who mainly keep indigenous breeds to produce milk for family consumption and sell excess milk to neighbours and traders who sell unprocessed milk to consumers. The dairy sector is characterised by actors who add value to milk at different levels of the chain and has supporters who support actors in the chain but the cooperative is not in joint venture with any of them. Hamaruomba dairy cooperative is vertically integrated and is the only milk processor in the district which sells the product to supermarkets, institutional consumers and local community, although other cooperative members are side selling to traders.

The average milk production of Hamaruomba smallholder dairy cooperative farmers is 80 640L/year but only 60% is sold to the cooperative and the remaining 40% is sold to the traders. The dairy farmer and the cooperative have the same highest value shares in formal chain while the supermarket has the least share. Although the farmer and the cooperative have the same highest value share the cooperative has the highest profit, followed by supermarket and the farmer has the least profit because of high retailing and production cost respectively. The farmers' low profits are also attributed to low volumes supplied to the cooperative because farmers receive their payments after deduction of all cooperative expenses. The dairy farmer has the highest value shares in the informal chain while the trader has the least share and the return of farmer per litre of milk is higher than of trader. High prices offered by traders promote cooperative members to do side marketing because traders are paying price which cover all costs they encountered during production. The study also revealed that level of milk production in Masvingo district is very low.

The cooperative is operating below capacity because cooperative members are producing low volumes of milk which is further worsened by side selling. It is also suffering stiff competition since the cooperative is processing low quality product as compared to milk imports and local products. Inadequate entrepreneurial skills, management skills and technical skills of cooperative members and employees are affecting the performance of the cooperative since the board members are not performing their task efficiently and technical staff could not process diverse milk products. The cooperative used to have diversified client base but it is declining because it is failing to meet requirements of some supermarkets which are now rejecting their product due to absence of barcodes. The selling of one dairy product is imposing the market risk to the cooperative.

The survey findings depicted that inadequate entrepreneurial skills and costs and marketing are the main challenges hindering efficient performance of dairy cooperative. These challenges are barriers to improve the market competitiveness of the dairy cooperative for increased income generation to farmers.

## CHAPTER 8: RECOMMENDATIONS

The study identified a number of weakness and threats which hinders the successful performance of the cooperative in the light of its strengths and opportunities. In order to overcome these challenges and contribute to improving the market competitiveness of the dairy cooperative for increased income generation to farmers, the following recommendations need to be considered.

### To the whole cooperative

- ✚ The cooperative should process diverse milk products to reduce market risk of relying on single product. It can improve the quality of their product by adding flavours and other ingredients in order to compete with milk imports and local products thus getting higher income. This should couple by consistently supplying the product and meeting selling requirements of supermarkets such as barcodes.
- ✚ The relationships between cooperative and its members are poor so members are not respecting the constitution resulting in side selling. Therefore there is need to sign contract between both parties, with stiff penalties to enforce members to honour contract.
- ✚ The cooperative should pay premiums for good quality milk to promote farmers to supply good quality milk to the cooperative
- ✚ The cooperative should discard milk which fail to meet the standards because this pose health risk to the general public as farmers sell condemned milk to the traders.
- ✚ Cooperative need to repair its vehicle for collecting milk from farmers to curb side selling especially in the afternoon since farmers cannot afford to travel two trips to the cooperative per day.
- ✚ Cooperative should establish good agreements with input providers, to buy animal feed and medicine for reduced prices.
- ✚ Cooperative should establish formal agreements with banks for facilitating members' access to credit. The banks should clearly explain terms of payments to the cooperative members to make them capable of deciding whether to take a loan or not.
- ✚ The cooperative should have a standby generator to use in the event of power cuts and a reserve water tank for storing water in the event of water rationing.

### To the cooperative board members

- ✚ Cooperative board members should undergo management training courses offered by recognised institutions especially Government institutes to improve their management skills. Board members are in need of training on entrepreneurial skills; negotiation skills and cost and marketing to improve the market competitiveness of the cooperative.

### **To the cooperative staff**

- ✚ The available staff is not well trained for their tasks so they need training in order to process diverse milk products. One staff member should be trained to have an employee who is capable of doing book keeping for better financial statements.

### **To the cooperative members**

- ✚ Cooperative members should increase their dairy breeds by buying dairy breeds from farmers in the nearby district rather than waiting for donations and loans. Increase in dairy breeds will result in high milk production hence more profits as more volumes will be supplied to the cooperative.
- ✚ Since most dairy farmers are old they should train and motivate young people to be dairy farmers to produce milk for the cooperative in the future.

### **To the ministry of Agriculture**

- ✚ There is need for capacity building to improve the performance of newly employed Government extension workers.

Although some of the above mentioned recommendations can apply to other smallholder dairy cooperatives in the country since they are being affected by almost similar problems. I recommend further research with other cooperatives to improve validity of results nationwide as this study alone cannot be a representative of all smallholder cooperatives in the country since other cooperatives are not processing milk and they are located in different geographical and climatic conditions which might have a bearing on cooperative's performance.

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## ANNEX A

Questionnaire for dairy farmers in Hamaruomba smallholder dairy cooperative

Questionnaire number:

Personal information:

Name-----Gender(F/M)----- Age----- Education level-----

1. Where are you selling your milk 1. ☐ Cooperative 2 ☐ Traders 3. ☐ Other specify-----  
Multiple response

2. Why do you prefer the above selected market 1. ☐ Forced by cooperative regulations

2. ☐ Better prices 3. ☐ Reliable market 4. ☐ Offer services 5. ☐ Proximity 6. ☐ Other  
specify-----Multiple response.

3. What volumes of milk per day in litres are you selling to your market point above?-----

4. What price are you selling a litre of milk now?-----

5. What prices do you prefer per litre of milk?-----  
-----

6. Give reason for the above answer-----  
-----  
-----

7. How many cows do you have?-----

8. What kind of dairy cows do you have? 1. ☐ Local breeds namely----- 2. ☐ Cross  
breeds namely----- 3. ☐ Exotic breeds namely----- Multiple response

9. Where do you get heifers/cows?-----

11. If you buy, which means of payment do you use? ☐ Cash ☐ Loan ☐ Other specify-----  
Multiple response

Questionnaire /statements, Part 2								
Below, you'll find a list of statements. For every statement, please make up your mind and determine to what extent you disagree or agree with the statement. Please give your opinion on the statement by asking yourself: "Is this statement true or not true? " And: To what extent is this true or not true? "								
You can give a score ranging from 1 to 4. A score '1' means: I totally disagree with the statement. A score '4' means: I fully agree with the statement. The scores 2 and 3 are in between.								
Please clearly indicate the scores you give (circle the chosen scores). Please answer all statements.								
<b>scores</b>					1= I totally disagree with the statement.			
2= disagree								
3= agree								
4= I fully agree with the statement.								
<b>No 1</b>	<b>Statement</b>				<b>Score</b>			
	<b>Membership base</b>							
1	The conditions for adhering to our farmers cooperative are clearly defined	1	2	3	4			
2	Our farmer's cooperative has clearly formulated the objectives it wants to reach	1	2	3	4			
3	I am totally aware of the objectives and the planning of our farmers cooperative	1	2	3	4			
4	All farmers who want to, can be member of our farmers cooperative	1	2	3	4			
5	I regularly pay membership fees	1	2	3	4			
6	I actively participate in the activities of our farmers cooperative	1	2	3	4			
<b>No 2</b>	<b>Statement</b>							
	<b>Governance, leadership and internal democracy</b>							
1	I know the internal regulations of our farmers' cooperative	1	2	3	4			
2	The statutory bodies of our farmers' cooperative (general assembly, board meetings) function according to their mandates	1	2	3	4			
3	The governing board of our farmers cooperative has been democratically and transparently elected	1	2	3	4			
4	Internal communication within our farmers cooperative is well organized: members are well informed about whatever is happening	1	2	3	4			
5	Women and youth are sufficiently represented in the elected bodies of our farmers association	1	2	3	4			
6	Every member in our farmers cooperative has the same decision rights	1	2	3	4			
<b>No 3</b>	<b>Statement</b>							
	<b>Management of financial resources</b>							
1	Our farmers cooperative functions on the basis of the financial contributions of the members	1	2	3	4			
2	Our farmers' cooperative can function well without outside financial support	1	2	3	4			
3	We have elected a treasurer who can keep the books correctly	1	2	3	4			
4	We have a committee that controls how expenditures have been done and how the financial books are kept	1	2	3	4			

5	When the farmers' cooperative needs to buy something, the procedures to do so are transparent	1	2	3	4
6	If I want to, I am also allowed to check the records	1	2	3	4
7	Every year, the board or the treasurer explains how resources and income of the farmers' cooperative have been used	1	2	3	4
<b>No 4</b>	<b>Statement</b>				
	<b>Collaboration and networks</b>	1	2	3	4
1	In the past, we have had exchange visits with other dairy farmers' cooperatives, to observe how other farmers cooperatives are functioning and working.	1	2	3	4
2	Our farmers cooperative had written project proposals with the aim to get support and funding for our activities	1	2	3	4
3	Our farmers cooperative has formal agreements with banks facilitating members' access to credit	1	2	3	4
4	Our farmers cooperative has established good agreements with input providers, to buy animal feed and medicine for reduced prices	1	2	3	4
5	Our farmers cooperative has established good agreements with veterinary services, such as the set-up of collective vaccination programs	1	2	3	4
6	Our farmers cooperative actively participates in meetings of other farmers association	1	2	3	4
<b>No 5</b>	<b>Statement</b>				
	<b>Service provision to members</b>				
1	The services of the farmers' cooperative respond to my needs as a dairy farmer	1	2	3	4
2	The board members receive training to improve the competencies and skills to perform their tasks	1	2	3	4
3	I think our farmers' cooperative is efficient in providing information and training to the members	1	2	3	4
<b>No 6</b>	<b>Statement</b>				
	<b>Animal management and production</b>				
1	I have very good knowledge on dairy farming	1	2	3	4
2	The production of my milk is high and is how I desired	1	2	3	4
3	I am aware and keen on performing hygienic measures during milking	1	2	3	4
4	I am able to plant good pastures and feed my cow(s) sufficiently	1	2	3	4
5	I always vaccinate my cow(s)	1	2	3	4
6	Every season, I calculate the costs and benefits of the cow production	1	2	3	4
<b>No 7</b>	<b>Statement</b>				
	<b>Stakeholder collaboration</b>				
1	My input supplier gives me advice on how best to use the feed, medicine and other input supplies	1	2	3	4
2	I know the quality requirements of our buyers	1	2	3	4
3	If there is a problem, we openly discuss matters with the processors	1	2	3	4

4	If our farmers cooperative would engage in collective marketing and sells at a better price, I would be happy to contribute cash in \$ for the benefit of the farmers' cooperative	1	2	3	4
5	Within the district, different stakeholders are discussing how best to develop the dairy value chain	1	2	3	4
<b>No 8</b>	<b>Statement</b>				
	<b>Entrepreneurial skills</b>	1	2	3	4
1	Our farmers cooperative has diversified into other activities in relation to milk products	1	2	3	4
2	Our farmers cooperative has diversified into other activities which are not related to dairy production.	1	2	3	4
3	Our farmers cooperative is very good in identifying market possibilities	1	2	3	4
4	Our farmers cooperative is in general able to identify risks and opportunities very well	1	2	3	4
<b>No 9</b>	<b>Costs and marketing</b>	1	2	3	4
1	I am always able to sell my milk	1	2	3	4
2	The cooperative pay premiums for good quality milk	1	2	3	4
3	The cooperative give sanctions for poor quality milk	1	2	3	4
4	In case there is little market to sell the milk, our farmers' cooperative searches for new markets	1	2	3	4
5	Even if there is market for the milk, the farmers' cooperative is still active in searching markets	1	2	3	4
6	I always get the same price for my milk	1	2	3	4
7	I am happy with the price I get for my milk	1	2	3	4
8	I am happy with the procedure how I get paid for my milk	1	2	3	4
9	My production costs are covered by the sales of milk	1	2	3	4

**THANK YOU FOR TAKING TIME IN FILLING UP THIS SURVEY.**

## **ANNEX B: Interview checklist**

### **Checklist for the board members of Hamaruomba dairy cooperative**

1. What is the performance of the dairy farmer's cooperative when focussing on processing, internal organisation and marketing?

#### **Processing**

What are percent numbers of active members out of total numbers? (Fact)

What average price paid to the farmers? (Fact)

What are the different products processed by the cooperative? (Fact)

What is the average processing per processing plant compared to averages of other cooperatives in other areas? (Fact)

What plans and implements measures to minimize impacts of its operation to its environment? (Opinion)

#### **Internal organisation**

What are the total numbers of staffs? (Fact)

What is the organisation structure of cooperative? (Fact)

What is the financial management performance of your organisation? (Opinion)

What are the sources of grant funding? (Fact)

What is the long term perspective vision of your organisation? (Fact)

#### **Marketing**

What are the average sales prices received? (Fact)

What are the clients of cooperative? (Fact)

What are the relationships with other stakeholders in dairy value chain? (Opinion)

2. What are the external factors affecting and opportunities for improving the performance of dairy cooperative? (Opinion).