AN ASSESSMENT OF MAIZE MARKETING LINKAGES: 
A CASE STUDY OF CHIBOMBO DISTRICT COOPERATIVES

A Thesis Presented to the Department of Agricultural Economics and Extension 
Education of the University of Zambia

By

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In Partial Fulfillment of the Requirement for the Degree of Bachelor of Agricultural 
Sciences

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My acknowledgements can not be complete without thanking the entire staff of the Department of Agriculture Economics and Extension Education, University of Zambia for their helpful suggestions, my sincere appreciation to them all.

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Lastly, I dedicate this work to my three sisters, Mwimba, Mwewa and Chileshe for making me believe in myself and encouraging me through my education.
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<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACP</td>
<td>Agriculture consultative partnership</td>
</tr>
<tr>
<td>AGOA</td>
<td>Africa growth opportunity ACT</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ARV</td>
<td>Anti retroviral</td>
</tr>
<tr>
<td>CMA</td>
<td>Crop marketing authority</td>
</tr>
<tr>
<td>Coops</td>
<td>Cooperatives</td>
</tr>
<tr>
<td>COMESA</td>
<td>Common Market for eastern and southern Africa</td>
</tr>
<tr>
<td>CUSA</td>
<td>Credit Union and Savings Association</td>
</tr>
<tr>
<td>FRA</td>
<td>Food Reserve Agency</td>
</tr>
<tr>
<td>FSP</td>
<td>Fertilizer Support Programme</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immune virus</td>
</tr>
<tr>
<td>MACO</td>
<td>Ministry of Agriculture and Cooperatives</td>
</tr>
<tr>
<td>MAWD</td>
<td>Ministry of Agriculture and Water Development</td>
</tr>
<tr>
<td>NAMBOARD</td>
<td>National Marketing Board</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
</tr>
<tr>
<td>NMC</td>
<td>National Milling Company</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strengths, Weaknesses, Opportunities and Threats</td>
</tr>
<tr>
<td>WTO</td>
<td>World trade organization</td>
</tr>
<tr>
<td>ZCF</td>
<td>Zambia Cooperatives Federation</td>
</tr>
</tbody>
</table>
ABSTRACT

AN ASSESSMENT OF MAIZE MARKETING LINKAGES:
A CASE STUDY OF CHIBOMBO DISTRICT COOPERATIVES

Paul K. Kapapula
University of Zambia, 2005

Supervisor:
Mrs. R. Lubinda

The overall focus of this study was to analyze the cooperatives maize marketing linkages in Chibombo District in terms of strengths, weaknesses, opportunities and threats. This meant finding out exactly how the farmers in the district sell their produce, specifically maize, and how they acquire the inputs. The study also analyzed the strengths, opportunities that can be taken advantage of within the market and weaknesses and threats that should be minimized in the maize market. The study went on further to analyze the relationship between the farmers in the district cooperatives and the market which is made up of several players including the government and the private sector.

The findings were that most farmers prefer to sell their maize to millers; however there are also a good number of farmers who sell to other markets which include traders (individuals), FRA and export market including those who engage in batter system of trade. There are several strengths and opportunities which were identified during this study; this is not to say there were no weakness and threats in the way the market operates. These results are clearly outlined in a table under results and discussion. The relationship which is significant between farmers and the market is mainly on the output side whilst on the input side most small scale farmers deal with government through the Ministry of Agriculture and Cooperatives-Fertilizer Support Programme (FSP). Cooperatives members failed to clearly state the benefits that they derive from being members of cooperatives but the main benefit that was prominent was input acquisition, and the few who sell outputs through cooperatives acknowledged indirect financial benefits through assistance offered in the marketing process. Overall the importance of cooperatives in the marketing of maize was appreciated.

The recommendations are that measures to encourage cooperatives should be initiated such as Government giving loans to cooperatives and increasing the monitoring of use of these funds. Specific maize commodity policies should be put in place to avoid private individuals from taking advantage of the farmers. In addition, inspections of cooperatives to ensure that by laws are being followed should be frequent, say monthly. The district agriculture extension officers should be empowered to carry out this task. The organization of cooperatives should be a pre-requisite for any cooperative to be recognized as an institution and more storage facilities should be put up by the government in the district to encourage production.
CHAPTER 1
INTRODUCTION

1.1 INTRODUCTION

About 80% of Zambia’s population lives in rural areas and 73.8% are involved in farming, specifically maize production and produce about 70% of marketable maize (MACO Report, 2002). Most of these farmers are scattered in outlaying areas and grow maize as their staple crop on small scale with limited capital. Besides the low capital investment and technology levels, small-scale farmers also lack technical skills in production and marketing. The marketing dilemma is further worsened by poor infrastructure and distance from the market there by affecting their bargaining power. Food Reserve Agency (FRA) and a few maize traders buy from the districts and provincial headquarters, this to some extent disadvantages the farmers in far flung areas. Since small scale farmers produce in small quantities they can not influence the market price hence they are price takers.

1.2 BACKGROUND

During the era of Government controlled economy (second republic) the small scale maize producers had a guaranteed market from the government supported agencies such as the Zambia Cooperatives Federation (ZCF), NAMBOARD, CUSA etc which formed market linkages with the producers, but this was not the case in the third republic after the market was liberalized. More players entered the market and hence increased competition. Due to this challenge and others, small scale farmers are encouraged to form cooperatives to improve their market position through the cooperatives market linkages. Market linkages are the relationship between the producer and the market and these linkages can either be forward or backward linkages. The backward linkages are related to the input side while the forward linkages are related to the output part of production. This can
be through outgrower schemes or cooperatives relationships with consumer organizations such as millers.

It is against such a market environment background that Government emphasizes small scale farmers’ involvement in cooperatives by restricting distribution of most farming inputs such as maize seed and fertilizers at a subsidized rate through cooperative societies. But once the farmers have produced they are left with a sense of helplessness as regards securing a reliable market for their produce (The Farmer Magazine, 2004). The small scale farmer’s main interest is how to access inputs and credit facilities, and how to secure a reliable market for their produce. The government through FRA tries to help but this is not adequate as evidenced by the surpluses after each marketing season, for instance in 2004 marketing season, Chibombo and Chongwe Districts had unpurchased maize stocks amounting to 1598.20 and 3169.10 metric tones respectively. Forward market linkages are therefore an important aspect in the marketing of any commodity and maize is not an exception. Hence the success of cooperatives to a large extent depends on the linkages that can be established between themselves and the consumer organizations who are the end users of the output.

1.3 PROBLEM STATEMENT

In a free market economy farmers at all levels need to market their produce in the most effective and efficient manner to ensure profit from their respective enterprises with the given limited scarce resources. Cooperatives are institutions aimed at bringing this efficiency in the market. Their success to a large extent depends on the linkages that they can form with consumer organizations who are the end users of the outputs. The liberalization policy assumed that the economic and business activities can be performed more efficiently by the private sector, and ensure accelerated economic development but this is yet to be experienced in the Zambian economy. The statistics on the ground indicate that the maize market
is still very inefficient. This was clearly seen from the maize stocks that remain unpurchased at the end of the marketing season.

In 2004, FRA the major buyer of small scale maize allocated ZMK 75.191 billion for the exercise but this was not adequate as evidenced by the reported balances in various districts. According to its marketing linkages report, FRA targets small scale farmers organized in cooperatives and farmer groups participating in the Fertilizer Support Programme. Despite the absence of the data on how much of the produce went to the private traders, the facts on the ground still indicated the inadequacies in the maize marketing exercise. For this year’s maize marketing (2005/6) which commences on May 20th, FRA has allocated ZMK 129 billion for the purchase of maize and other crops, while the private sector is expected to participate actively in the market. The question is how this amount and the private sector contribution will affect the marketing linkages in light of the ZMK 36,000 floor price per 50-kilogramme bag?

Hence this research will seek to identify the established market linkages, their strengths and challenges in the market and the benefits of farmers organized in cooperatives and farmers groups.

1.4 RESEARCH OBJECTIVES
1.4.1 General Objectives

To identify the maize marketing linkages in Chibombo district, their strengths, weaknesses, opportunities and threats and cooperatives members benefits.

1.4.2 Specific Objectives
1. To identify the maize marketing linkages of cooperatives.
2. To identify the strengths, weaknesses, opportunities and threats (SWOT) of maize market linkages.
3. To identify that accrue to cooperative members.

1.5 AREA AND SCOPE OF STUDY

Chibombo district is found in the Central Province of Zambia, and driving from Lusaka it is located about 50 kilometers along Kabwe road. It has a total number of 301 cooperatives of which 131 are agricultural cooperatives while the rest are multipurpose cooperatives. The study was based on these 131 agriculture cooperatives.

1.6 RATIONALE

The economy of Zambia in 1991/2 was transformed from the state controlled to a market based economy, this lead to adjustments in all the sectors of the national economy including Agriculture marketing.

Thus the findings in this research will help to recommend the possible solutions to challenges being faced by small scale farmers organized in cooperatives and the stake holders in marketing maize in a liberalized economy. In particular the beneficiaries of this research will be:

- The stake holders in the maize marketing linkages such as the government agents (FRA) can use these findings to propose policy changes to MACO and align themselves appropriately in the market.
- Cooperatives will use the findings to enhance their efficiency and effectiveness in marketing maize.
- General traders will be able to use this information to position themselves in the market by understanding the advantages and disadvantages of each marketing link that one uses in trading.
- Overall, the findings will help increase knowledge on the maize market linkages and the role that the various stake holders are supposed to play in the smooth operation of the maize marketing process.
This in the end will contribute positively to the overall increase of the country’s economy especially incomes from the agriculture sector.

4.7 ORGANIZATION OF THE THESIS

Chapter one of this thesis presents the introduction and background. Problem statement, research objectives, area of study and the rationale are also in this chapter. Chapter two reviews relevant studies which includes; reports, books and comments on cooperatives and marketing. Research design and methodology form chapter three. Chapter four presents the findings and discussion. The report ends with chapter five discussing the conclusion and recommendation.
CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

This chapter highlights some of the relevant studies reviewed during this research that have been carried out by various individuals, government departments and institutions such as the University of Zambia, their findings and recommendations.

2.2 DEFINITION OF COOPERATIVES

A cooperative is 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. Cooperatives are based only on the self-help, self responsibility, democracy, equality, and solidarity. In the tradition of their founders, cooperative members believe in the ethic value of honesty, openness, social responsibility and caring for others. (Hyde Haantuba, 2003).

2.3 BACKGROUND OF COOPERATIVE MOVEMENT IN ZAMBIA

Government involvement in Cooperatives in Zambia started in 1947 when the first cooperative ordinance was enacted in order to regularize the operations of cooperative societies. Hither to, cooperatives were registered by the high court. The 1947 ordinance was a turning point for the cooperatives. For the first time indigenous Zambians were officially allowed to form and join cooperatives. The increased intervention occurred in 1948 when the Department of marketing and Cooperatives was created for registration and regulation of cooperatives (MACO, strategic plan 2002-2005)
In 1971, the Government of the Republic of Zambia called up a national Cooperative convention to review the causes of the failure of about 50% of the cooperatives. There were 1121 registered cooperatives but only less than 50% were operating by the end of 1970 (Ministry of Agriculture, 1970). Many reasons were cited which included:

1. Lack of administrative machinery;
2. Lack of trained and skilled staff both in the government departments and the cooperatives movement;
3. Inadequate control of production credits;
4. Lack of proper planning and studies before societies were organized and registered and;
5. Lack of education in the cooperatives principles among other reasons.

2.4 PERFORMANCE OF COOPERATIVES MARKET LINKAGES

"The 2004 maize marketing exercise had been characterized by a number of problems to the extent that many farmers were left with a sense of helplessness. While farmers are appreciative of the Fertilizer Support Programme (FSP) subsidized inputs, they have not seen a similar goodwill from the Government to help them market their Produce profitably – especially maize". The main problem is that though FRA buys at the set floor price it is unable to buy all the marketable surplus produce. For instance in 2004 it only managed to buy 6% of the surplus maize on the market. Hence, Instead of being the buyer of the last resort, FRA is now a buyer of first resort. (The Farmer Magazine 2004 vol.7 No. 9 pg 14).

The ministry of Agricultural and Water Development (MAWD) in 1988 did a review of maize marketing and reported that at the time, maize marketing in Zambia comprised of various participants and the numerous points where physical functions of marketing such as assembly, transportation, standardization, storage and processing were performed. There were basically two ways of maize
marketing, first of all maize could move through the official channels i.e. Parastatal agencies and secondly through selected private organizations and individuals (MAWD, 1988).

Nyoni et al (1993) carried out a study on the impact of market liberalization on maize production and marketing in Zambia. He noted that farmers preferred to sell their maize to other buyers instead of the established government agencies such as ZCF and cooperative unions. This was tabulated in a table copied below:

**Table 1: Buyers of Maize**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ZCF</td>
<td>17.4</td>
<td>ZCF</td>
<td>52.2</td>
</tr>
<tr>
<td>CO-OP. UNIONS</td>
<td>8.7</td>
<td>CO-OP. UNIONS</td>
<td>34.8</td>
</tr>
<tr>
<td>OTHER BUYERS</td>
<td>70.9</td>
<td>OTHER BUYERS</td>
<td>12.0</td>
</tr>
</tbody>
</table>

*Source: Nyoni et al (1993)*

Other buyers comprised of individuals, consumer organizations such as millers etc. As can be seen from above the farmers sold most of their outputs to private institutions, this was attributed to the fact that private institutions offered cash for commodities unlike the government agencies which collected first and then pay later.

However, Bangwe et al (1996) did a study on economics of maize production and marketing under a liberalized market in Monze District. They noted that after governments withdraw from direct involvement in marketing of agricultural produce, especially maize, the private sector was expected to fill the gap, which they did but problems arose: farmers and politicians complained that prices had fallen drastically by 1995 that they farmers were failing to break-even. This was also echoed by Hyde Haantuba and Mukata Wamulume in their study of rural producer organizations and policy formulation in Zambia. They reported that government maintains a minimal presence in the agriculture sector after market
liberalizations. This was as a result of a rude awakening that resulted into a market failure in 1994-5 seasons, when the private sector failed to satisfy the farmers’ needs both for the supply of inputs and the marketing of the produced commodities. The market failure observed in Zambia was to do with the few number of private sector players (i.e. Traders) to takeover the previous functions of government. The government has maintained a presence in agriculture market through FRA.

2.5 COOPERATIVES VIABILITY (SWOT)

“From the outset, it is important to emphasize that it is the market that drives production and not the other way round. We just have to get our markets right were maize is concerned. This is because it is our staple crop. The role of the government can not be over emphasized; its role is to provide an enabling environment for the markets to market while the role of the private sector is to perform efficiently and competitively within this enabling environment. What is needed now is the action through public-private sector strategic partnership ……”


Banda (1984) carried out a study in which he was trying to assess the socio-economic impact of the Petauke Cooperative Marketing Union (PCMU) on the peasant economy in the colonial government (1947-1964). The study’s specific concern was examining the rationale for cooperatives and assessing their activities, so as to see whether the co-operatives during the colonial period were a viable economic venture that benefited Africans in the rural areas; or whether it was a mechanism for exploiting rural based labour that was not employed in the mining and other sectors. His findings were that cooperatives were viable and would be a better way of organizing the small-scale farmers in a competitive market.
On the overall, it is clear from the studies that have been reviewed above and others, that there has been no work that has been done specifically to evaluate the cooperatives marketing linkages, hence this study is intended to address this very issue.
CHAPTER 3
RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter discusses the design and the methodology of the study, the study population and methods of data collection employed during this research.

3.2 STUDY DESIGN.

This was a descriptive study which used primary data from the cooperatives members and traders in the maize market. This was supplemented by secondary data which was obtained from consumer organizations, selected traders and government officials from both the Ministry of Agriculture and Cooperatives headquarters and FRA.

3.3 STUDY POPULATION AND SAMPLING PROCEDURE

The study population was 20 purposely selected cooperatives and traders of maize and the government agriculture sector department and agents' officials. A random sample of 60 small scale farmers from the 20 different local cooperatives and 20 maize traders including FRA were selected. The officials from the MACO cooperatives departments were also interviewed.

3.4 DATA COLLECTION

Three questionnaires were used in data collection. Two were structured questionnaires; one for the farmers and the other for the traders. The third questionnaire was a guided questionnaire for discussion with Ministry of agriculture officials, cooperatives officials and the companies such as the Milling companies.
3.5 DATA ANALYSIS AND PROCESSING

Statistical Package for Social Scientists (SPSS) was used to analyze both qualitative and quantitative data to make it more meaningful. The questionnaires were edited and coded after data collection. This information was then entered in the SPSS program for analysis. Percentages, graphs and frequencies were the main features of the Programme that were employed in the analysis.

3.6 LIMITATIONS

Some challenges faced during this research included:

- The lack of keeping appointments by Ministry of Agriculture and Cooperatives (MACO) officials. This meant making several trips to the Ministry;
- The resources such as paper, printing services and other logistical requirements were a limiting factor during data collection;
- Long distances between cooperatives and between individual farmers;
- Financial constraints;
- Interpretation of local language which was sometimes used during data collection in some interviews was also a limiting factor.

Despite the highlighted limitations, everything possible was put in done to ensure that the project was carried out without unnecessary delays and impediments.
CHAPTER 4
FINDINGS AND DISCUSSION

4.1 INTRODUCTION

This chapter analyses and discusses the findings of the research. Background information is analyzed and discussed first, followed by marketing linkages and a SWOT analysis is then discussed. The benefits of cooperatives members are discussed at the end.

4.2 BACKGROUND INFORMATION

The major economic activity in Chibombo is farming and the most widely cultivated crop is maize. 50% of the interviewed farmers grow maize alone and the other 50% grow maize plus other off season cash crops such as vegetables. The information from the MACO officers in the district showed that there are over 6000 farmers with 5000 of these farmers participating in the National fertilizer Support Program (FSP) growing not less than one hectare.

4.2.1 Distribution of Farmers by Sex and Age Range

Among the farmers that were interviewed, 71.7% were male while 28.3% were female farmers. 66.7% where born in Chibombo and the rest just moved to the area while 35% of this population was over 45 years with the rest falling below 45 years. The table 2 below also shows the age range of the farmers. It was noted that there are no female farmers between the ages of 20 to 34 years. This may be due to the cultural aspects were the females are expected to be just housewives and there was no female headed household that was captured during the study. The women groups who were interviewed had members aged 34 years and above.
Table 2: Distribution of Farmers by Sex and Age Range

<table>
<thead>
<tr>
<th>Age range</th>
<th>Male (71.7%)</th>
<th>Female (28.3%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>20-24</td>
<td>16</td>
<td>37.2%</td>
<td>Nil</td>
</tr>
<tr>
<td>25-34</td>
<td>11</td>
<td>25.6%</td>
<td>Nil</td>
</tr>
<tr>
<td>35-44</td>
<td>6</td>
<td>14%</td>
<td>6</td>
</tr>
<tr>
<td>Over 45</td>
<td>10</td>
<td>23.3%</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>100%</td>
<td>17</td>
</tr>
</tbody>
</table>

Source: Own Survey Data

4.2.2 Education Background of Farmers

The education background of these farmers is as tabulated in the Frequency and Percentage Table 3 below. As can be observed from the Table, 25% of the farmers have been to college or university and it was reviewed that most of these farmers were over 45 years of age and are mostly retired civil officers. Only 10% had no formal education, this maybe due to the high number of primary schools in the area and Chibombo secondary school. The majority who had been to primary and secondary school form 36.7% and 28.3% respectively of the total number of farmers interviewed. The high level of literacy was pointed out as one of the strength that cooperatives take advantage of in the distribution of market information. This is further discussed under the SWOT analysis below.

Table 3: Distribution of farmers by education

<table>
<thead>
<tr>
<th>Education level</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>22</td>
<td>36.7%</td>
</tr>
<tr>
<td>Secondary</td>
<td>17</td>
<td>28.3%</td>
</tr>
<tr>
<td>College/university</td>
<td>15</td>
<td>25%</td>
</tr>
<tr>
<td>No formal education</td>
<td>6</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Own Survey Data
4.3 PRODUCTION INFORMATION

Maize production in Chibombo District is relatively high as was observed from the statistics. Among the farmers captured by the study, those producing over 200 bags by 50kg bags, 71.4% cultivate more than 5 hectares while 28.6% cultivate between 2-5 hectares. The majority of the farmers cultivate between 2-5 hectares producing 20-200 bags by 50kg. These farmers form 66.7% of the total sampled farmers. 8.3% of the total sample produces between 20-50 bags and 25% produce over 200 bags by 50kg. This high production should indicate the importance of good marketing systems and institutions in the area.

MAIZE MARKETING LINKAGES

4.3.1 Marketing Chain

The main buyers of maize output are milling companies such as National Milling Company (NMC), GBM Milling etc, the Opaque Beer Brewing Companies, Animal Feed Producing Companies, open Market (both local and export) and Food Reserve Agency as buyer of the last resort. The flow of maize and percentage share of the various market participants in the market is as described in Figure 1 below.

When the farmers were asked to describe the output flow, 55% of the farmers said that they sell directly to the general market (i.e. Millers, FRA, and Individuals) unlike the 11.7% who sell through the cooperatives. 33.3% sell to individual business. There are various factors that cause this discrepancy in the market, and only a separate study can be able to reveal this. However education, trust, poverty and various cultural differences could be some of the factors which cause cooperative members to trade directly with the buyers even though this weakens their bargaining powers. Education levels and trust could be associated with poor organization of cooperatives which results in the farmers trading individually in the market. The intermarriages have brought
different cultures together and the lack of reconciliation of the way marketing is done in the various cultures could as well contribute to the observed market flow.

Figure 1: Maize Marketing Linkages and Maize Flow (Percentages) in the Market

Source: Own Survey Data

4.3.2 Distribution of Where the Maize is Sold

Among the maize buyers, 70% do not purchase through cooperative. Only 30% purchase through cooperatives of which 25% identify the cooperatives through the district agriculture office while the remaining 5% go directly to the cooperatives or are approached by the cooperatives leaders on behalf of its members. Table 4 below gives the Frequency and Percentages of these traders. The percent of farmers who said they sell through cooperatives is observed to be high (40%) compared to the 11.7% in the marketing chain above, the difference is accounted for by the farmers who sale directly to FRA. When selling to FRA, the farmers are recognized through their respective cooperatives. (Refer to Table 5 below).
Table 4: Distribution of Farmers who Sale through Coops

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24</td>
</tr>
<tr>
<td>No</td>
<td>36</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
</tr>
</tbody>
</table>

Source: Own Survey Data

Table 5: Distribution of Traders who Purchase through Coops

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>6</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Own Survey Data

The method of purchasing used by 85% of the traders is cash, only 15% use batter system and mostly it is inputs which are battered. The inputs are usually given before the planting season and then an agreement is entered between the farmer and the trader who share the loss in case of crop failure. This is similar to contract farming arrangement the difference is that in this particular case, only inputs (Seed and Fertilizers) are given to the farmer and no technical backup is offered in the package.

Most farmers sell their maize during the period July to December (Refer to pie chart below) directly to the available market; this forms 63.3% of total maize sold, 48.3% of this maize is sold to the millers which represents 65.8% of the total maize sold in this period. Further, the study reviewed that the individuals (brief case business men) form a significant market composition, making up 33.3% of the total market. The point worth noting about these business men is that they buy most of their maize in June (Refer to tables’ 6 & 7 below). During this period (June) the price of maize is usually low, and it is the desperate farmers willing to convert their stocks into cash to meet the daily household needs and pay for their children school fees who fall prey to these individual business men.
4.3.3 Distribution of Selling Period for the Farmers and Purchasing Period for Traders.

Figure 2: Distribution of Selling Period

Source: Own Survey Data

Tables 6: Distribution of Selling Period (Farmers)

<table>
<thead>
<tr>
<th>Month</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>9</td>
<td>15%</td>
</tr>
<tr>
<td>May</td>
<td>1</td>
<td>1.7%</td>
</tr>
<tr>
<td>June</td>
<td>12</td>
<td>20%</td>
</tr>
<tr>
<td>July - December</td>
<td>38</td>
<td>63.3%</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Own Survey Data

Table 7: Distribution of Purchasing Period (Traders)

<table>
<thead>
<tr>
<th>Month</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>April</td>
<td>11</td>
<td>55%</td>
</tr>
<tr>
<td>May</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>Through out the year</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Own Survey Data
4.3.4 Distribution of the Market

Millers claim a bigger share of the total maize sold on the market. They buy 48.3% of the total maize sold in the market. This is probably because meliemeal is the main product from maize. Cooperatives buy 11.7% while others including FRA only purchase 6.7% of the total maize in the market in Chibombo district (from small scale farmers). Individual business men claim a significant percentage of 33.3% of all the maize sold in the market. This picture however would probably be different if the study is extended to other provinces or if the sample size is increased. This is because there are certain areas were FRA and other market participants have a heavy presence and probably claim a bigger market share. The individual business men percentage is high maybe because of Chibombo district location, which is near to the main roads and also to the main market-Lusaka. The table below gives

Table 8: Distribution of Market

<table>
<thead>
<tr>
<th>Market participant</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooperatives</td>
<td>7</td>
<td>11.7%</td>
</tr>
<tr>
<td>Millers</td>
<td>29</td>
<td>48.3%</td>
</tr>
<tr>
<td>Others</td>
<td>5</td>
<td>6.7%</td>
</tr>
<tr>
<td>Individual Buss. men</td>
<td>19</td>
<td>33.3 %</td>
</tr>
<tr>
<td>Total</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Own survey data

4.4 SWOT ANALYSIS

The study carried out a SWOT analysis of the cooperatives in Chibombo District. The is discussed in this section and a summary table is presented in Table 8 below

4.4.1 Strengths

The strengths within the marketing linkages are that, information is readily available about the market for product. Most farmers are aware about the places where they are supposed to deliver their product, probably due to high literacy levels of most farmers. In addition, government through FRA emphasizes to
purchase maize through cooperatives, this therefore is a strength for the cooperatives. This is an advantage especially to the farmers who cultivate 1-2 hectares as they produce a small number of maize bags such that if they go it alone they risk high transaction costs. Further there are specific policy interventions such as the floor price which ensures that that the farmers are not exploited by briefcase businessmen.

4.4.2 Weaknesses

A good number of farmers still prefer to trade on individual basis, there by disadvantaging themselves when negotiating for a high price, since the floor price is only a guide. Further weaknesses in the market include long distances to the market, poor road infrastructures and storage facilities. The other weakness is as a result poor organization of the cooperatives, 55% of the traders interviewed said they do not buy from cooperatives because they are not well organized. The cooperatives officials interviewed attributed this poor organization to financial constraints and low education levels of the members.

4.4.3 Opportunities

Cooperatives opportunities are vast. 70% of the traders interviewed said there are many opportunities that cooperatives can take advantage of such as the liberalized market which has opened up the market, the increasing population which is a potential market and governments emphasis on making Agriculture the engine for economic development. In addition main buyers like the milling companies would prefer to deal with cooperatives which are established institutions and buy from them in bulk instead of dealing with individual farmers. National Milling Company (NMC) one of the major buyers of maize further said they can actually provide transport from the cooperatives to deports and would offer standardization services free to the cooperatives.
Other opportunities are the willingness of the farmers to pay subscription fees. 78.3% of the farmers said if they can see good organization in cooperatives they can pay high subscription fees, either in cash terms or in kind.

4.4.4 Threats

Most of the respondents said the presence of briefcase businessmen who mushroomed following the liberalization of the economy are a major threat. The farmers risk being swindled out of their hard work efforts. They called for a law requiring buyers to be registered in order to protect the farmers.

The above discussion on SWOT is summarized in table 8 below. The information is observed from the cooperatives side and the market side separately because both are separate institutions but they have to operate side by side to achieve efficiency.
<table>
<thead>
<tr>
<th></th>
<th>Cooperatives</th>
<th>Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
<td>- Cooperative Act of 1998 in place;</td>
<td>- Policy framework in place- liberalization;</td>
</tr>
<tr>
<td></td>
<td>- Cooperative training institutions (Katete &amp; coop. college);</td>
<td>- Participation of the private sector;</td>
</tr>
<tr>
<td></td>
<td>- Qualified and experienced staff available;</td>
<td>- Storage facilities exist;</td>
</tr>
<tr>
<td></td>
<td>- Registered cooperatives already existing;</td>
<td>- Marketing information systems avail;</td>
</tr>
<tr>
<td></td>
<td>- Physical structures in available;</td>
<td>- Existing NGO’s network;</td>
</tr>
<tr>
<td><strong>Weaknesses</strong></td>
<td>- Not all staff positions have been filled;</td>
<td>- Poor funding and weak legislation- FRA was not created to be a major buyer in the market;</td>
</tr>
<tr>
<td></td>
<td>- Poorly formed &amp; fragmented coops societies;</td>
<td>- Inadequate marketing extension &amp; private sector capacity to participate in agric. markets;</td>
</tr>
<tr>
<td></td>
<td>- Poor transport &amp; communication facilities;</td>
<td>- Poor rural physical infrastructure- Feeder roads;</td>
</tr>
<tr>
<td></td>
<td>- Disoriented coop education &amp; problems of carry over debt;</td>
<td>- Inadequate agric. credit and inter. information on treaty protocols;</td>
</tr>
<tr>
<td><strong>Opportunities</strong></td>
<td>- Existence of MACO &amp; stakeholders interest;</td>
<td>- Expanding inter. markets through regional trade agreement like COMESA, WTO, AGOA;</td>
</tr>
<tr>
<td></td>
<td>- Increasing population and govt emphasis on coop based agric. system;</td>
<td>- Increased emphasis on out grower scheme;</td>
</tr>
<tr>
<td><strong>Threats</strong></td>
<td>- Political interference and inconsistent govt policies announcements;</td>
<td>- Increased marketing participation;</td>
</tr>
<tr>
<td></td>
<td>- Indebtedness of cooperatives;</td>
<td>- Proposed CMA;</td>
</tr>
<tr>
<td></td>
<td>- Inadequate and inconsistent market information;</td>
<td>- Political regional instability;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Political interference in the market;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- HIV/AIDS threat;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Crowding out the private sector;</td>
</tr>
</tbody>
</table>
4.5 COOPERATIVES MEMBERS' BENEFITS

According to the cooperatives members, the only economic benefit for belonging to a cooperative is acquisition of subsidized fertilizer and hybrid seed, which are distributed through cooperatives. However the cooperatives officials said market information is also made available to all the farmers through community meetings before and after the rain season. In addition, 11.7% of farmers who sale through cooperatives receive grain bags to help in reducing the marketing costs, thereby receiving financial help indirectly. No one offers transportation, storage, insurance and/or help negotiate for a better price on behalf of the farmers.
CHAPTER 5
CONCLUSION AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter highlights the conclusions and recommendations that have been drawn based on the information obtained from the survey.

5.2 CONCLUSION

The conclusions are presented starting with marketing linkages followed by SWOT and ends with the benefits of the cooperatives members.

5.2.1 Marketing Linkages

The most preferred marketing link is the farmer to millers followed by the farmer to individual business men. The other linkages that are there in the market include the farmer to cooperatives and farmer to FRA. It was also established that there are farmers who sale directly to the market, though this only forms a small percentage of the total maize marketed in Chibombo district.

5.2.2 SWOT

5.2.2.1 Strengths
The main strengths of the market include liberalised market, coop Act of 1998 and high education level of farmers. These were the main strengths of the cooperatives marketing.

5.2.2.2 Weaknesses
The weaknesses of the maize market include legislation, poor organisation of coops and poor infrastructure.

5.2.2.3 Opportunities
The main opportunities that were observed in maize market were govt. emphasis on cooperative based agric, regional trade agreements and increasing number of companies using maize as an input.
5.2.2.4 Threats

Political interference in cooperatives and markets, HIV/AIDS and briefcase businessmen are the major threats to the maize marketing.

5.2.3 Cooperatives Members Benefits

The major benefits that accrue to coop members are in form of acquisitions of subsidised input and priority when selling to FRA.

5.3 RECOMMENDATIONS

The following are the recommendations:

- Specific maize commodity policies should be put in place to avoid private individuals from taking advantage of the farmers.
- Inspections of cooperatives to ensure that by laws are being followed should be frequent, say monthly. The district agriculture extension officers should be empowered to carry out this task.
- The organization of cooperatives should be a pre-requisite for any cooperative to be recognized as an institution and
- More storage facilities should be put up by the government in the district to encourage production.

5.4 FURTHER AREAS OF STUDY

The following topics are proposed for further study in order to establish the way maize marketing is done and the way institutions of cooperatives operate:

- Factors affecting the marketing of maize among small scale farmers
- Effects of cultural differences on marketing of maize
- Geographical location of cooperatives and distance from the market factors and how they can be improved upon.
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Canda, S. 1984, Social Economic Impact of the Petauke Cooperative Marketing Union on the peasant economy in the colonial government (1947-1964); Bsc. Agric.

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Food Reserve agency (2004), Marketing Linkages Budget Report

Mule Haantuba and Mukata Wamulume (2004), Rural Producer Organizations and Meat Formulation in Zambia; Business Exchange Programme, Norwegian institute for urban and regional research Gaustadalleen, blindern


Ministry of Agriculture and Cooperatives (2004), Agriculture Marketing Information Center; report.

Ministry of Agriculture and Cooperatives (2003), Agricultural Report.


Nyonzi (1993), Impact of Market Liberalization on the Maize Production and Marketing in Zambia; Bsc. Agric


Zambia National Farmers’ union (2003), Zambian Farmer Magazine; Lusaka, Zambia
APPENDIX 1: QUESTIONNAIRE FOR SMALL SCALE FARMERS

INSTRUCTIONS
In all the sections of the questionnaire please tick (✓) in only one box unless specified and on the questions with spaces, write your responses is clearly and as briefly as possible in the spaces provided.

Example:

When did Zambia get its independence?

(i) 1960 [ ]
(ii) 1968 [ ]
(iii) 1964 [ ]
(iv) 1970 [ ]

SECTION A:

1. Personal details (Background)
   a. What is your sex?
      i) Male [ ]
      ii) Female [ ]
   b. What is your age range?
      i) 15 - 25 years [ ]
      iii) 25 - 35 years [ ]
      iv) 35 - 45 years [ ]
      v) over 45 years [ ]
   c. What is your place of birth?
      i) Chibombo [ ]
      ii) Other [ ]
   d. If you were not born in Chibombo, when did you move to Chibombo?
      i) 1 - 5 years ago [ ]
      ii) 5 - 10 years ago [ ]
      iii) over 10 years ago [ ]
What is your education background?
   i) None  [  ]
   ii) Primary  [  ]
   iii) junior secondary  [  ]
   iv) college/university  [  ]

What is your family background?
   i) Farmers  [  ]
   ii) other business apart from farming  [  ]
   iii) academic family  [  ]

FARMING BACKGROUND

When did you start farming?
   i) 1 - 5 years ago  [  ]
   ii) 5 - 10 years ago  [  ]
   iii) More than 10 years ago  [  ]

What crops are you currently growing?
   i) maize alone  [  ]
   ii) maize plus other crops  [  ]
   iii) others only  [  ]
   If others specify  .................

How much hectarage are you cultivating?
   i) less than one hectare  [  ]
   ii) One hectare  [  ]
   iii) Two to five hectares  [  ]
   iv) More than five hectares  [  ]

Do you use chemical fertilizer and certified seed?
   i) Yes  [  ]
   ii) No  [  ]

If yes, how do you acquire the fertilizer and seed?
   i) Through cooperatives  [  ]
   ii) Other means, specify  ........................................

What are the prices of Fertiliser and Seed?

<table>
<thead>
<tr>
<th></th>
<th>Cooperative</th>
<th>other sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal</td>
<td>ZMK</td>
<td>ZMK</td>
</tr>
<tr>
<td>Top</td>
<td>ZMK</td>
<td>ZMK</td>
</tr>
<tr>
<td>Seed</td>
<td>ZMK</td>
<td>ZMK</td>
</tr>
</tbody>
</table>
33. How many bags of maize did you harvest this year (2005)?
   i) 20 – 50 (50kg bags) [ ]
   ii) 50 – 100 (50kg bags) [ ]
   iii) 100 – 200 (50kg bags) [ ]
   iv) More than 200 (50kg bags) [ ]

   How much of this harvest is served for home consumption?

   ________________________________

SECTION B

MARKETING OF OUTPUTS

When do you start selling your maize?
   i) April [ ]
   ii) May [ ]
   iii) June [ ]
   iv) July to December [ ]

16. Where do you sell your maize?
   i) FRA [ ]
   ii) Millers [ ]
   iii) Open local market [ ]
   iv) Export [ ]
   v) Others, specify.................................

17. Do you take the outputs to the buyers?
   i) Yes [ ]
   ii) No [ ]

18. If answer to question 17 above is Yes, what transport mode is used and the cost?

   Transport mode.................................
   Cost ZMK.................................

17b. If answer to question 17 above is No, explain?

   ____________________________________
18. Do you sell through the cooperatives?
   i) Yes [ ]
   iii) No [ ]

18a. If answer is yes, explain?

18b. If answer to question 16 above is No, how do you sell your produce?

19. Do the cooperatives help in arranging for the following?
   i) Transportation
   ii) Storage
   iii) Insurance
   iv) Price determination
   v) Grain bags

20. If answer to question 17 above is No, what role does the cooperative play in marketing?

21. How would you describe the flow of the outputs?
(If you do not go through cooperatives cross out the word “cooperative”).
   i) Farmer-cooperatives-local district market [ ]
   ii) Farmer-cooperative-provincial markets [ ]
   iii) Farmer-cooperative-export markets [ ]
   iv) Other specify...........................................

21a. What are the marketing costs of the flow you choose in question 21 above?

ZMK..............................................
16. Which market is most profitable in kwacha value per bag?

17. How would you like the flow of outputs to operate?

SECTION C

COOPERATIVES INFORMATION

18. When was your cooperative formed?

19. When did you join the cooperative?

20. How many members does your cooperative have?

21. Is there membership fee?
   i) Yes [ ]
   ii) No [ ]

22. If yes, how much is it?
   ZMK .........................

23. Do you receive any external funding?
   i) Yes [ ]
   ii) No [ ]
29. If Yes, from where?

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

30. What services does your cooperative offer to the members?

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

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

31. What are the benefits of belonging to a cooperative?

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

.................................................................
Appendix 2: Questionnaire for traders

INSTRUCTIONS
In all the sections of the questionnaire please tick ( ) in only one box unless specified and for the questions with spaces, write your responses as clearly and as briefly as possible in the spaces provided.

For example

When did Zambia get its independence? Official use only

(i) 1960 [ ]
(ii) 1968 [ ]
(iii) 1964 [ ]
(iv) 1970 [ ]

SECTION A:

Company profile

1. What is the name of your organisation/company?
   .................................................................

2. When was it formed?
   .................................................................

3. Where do you operate from?
   .................................................................

SECTION B

Maize Marketing information

4. When do you start purchasing maize?
   .................................................................

5. What method of purchasing does your organization use?
   i) Cash [ ]
   ii) Batter system [ ]
5a. If batter system is used, explain the exchanged commodities?


5b. Do you purchase through cooperatives?
   i) Yes  [  ]
   ii) No   [  ]

5a. If answer to question 5 above is yes, how do you identify the cooperative?
   i) through the district agriculture office [  ]
   ii) through advertising [  ]
   iii) other, specify ......................................................

5b. If answer to question 6 above is No, explain?


6. Are you the end user of the maize?
   i) Yes  [  ]
   ii) No   [  ]

6a. If answer to question 7 above is yes, what do you use the maize for?


6b. If answer to question 7 above is No, were do you sale your maize?
   i) Millers [  ]
   ii) brewery companies [  ]
   iii) export market [  ]
   iv) local district market [  ]
   v) inter provincial market [  ]
   vi) other, specify ......................................................
SECTION C

SWOT Analysis of the Market.

8. Is there a government policy that protects your organisation's business?
   i) yes [ ]
   ii) No [ ]

8a. If answer to question 8 above is Yes, specify?

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

9. Are the cooperatives well organised in terms of marketing the maize?
   i) Yes [ ]
   ii) No [ ]

9a. If Yes, explain?

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

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

9b. If answer to question 9 above is No, what do you think is the reason?
   i) level of education of the members [ ]
   ii) narrow market base [ ]
   iii) lack of financial capacity [ ]
   iv) Others, specify ...........................................................

10. What are the major difficulties that you face during maize purchasing?

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

11. What would you suggest should be done about your response to question 10 above?

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

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

12. Do you think cooperatives are helping improve the small-scale farmers market position?
   i) Yes [ ]
   ii) No [ ]
13a. If answer to question 12 above is Yes, explain?

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

13b. If answer to question 12 above is No, explain?

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

14. Do you think the maize marketing is done properly?

i) Yes [ ]

ii) No [ ]

14a. If Yes, Explain?

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

14b. If answer to question 13 above is No, explain?

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

14. Are cooperatives important in maize marketing?

i) Yes [ ]

ii) No [ ]

14a. If answer to question 14 above is Yes, explain?

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

37
15. Are cooperatives marketing strength threatened in the current liberalised economy?
   i) Yes [ ]  
   ii) No [ ]

16a. If answer to question 15 is Yes, explain?

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

16. Are there any opportunities in the maize market that cooperatives can seize?
   i) Yes [ ]  
   ii) No [ ]

16b. If answer to question 16 above is Yes, explain?

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

16c. Do small-scale farmers benefit in the current maize marketing system?
   i) Yes [ ]  
   ii) No [ ]

16d. If answer to question 16 above is Yes, explain?

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

**End of questionnaire**
Appendix 3: COOPERATIVES EVALUATION GUIDE QUESTIONS

1. Name and position of respondent .............................................

2. Do you conduct market seminars for small scale farmers? a) Yes b) No

3. If not what market dissemination method do you employ?

4. Are cooperative member’s farms within reach of each other? a) Yes b) No.

5. What strengths do cooperatives and the market have that you are aware of?

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

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

(e.g. the coop Act, T&D, market infor. avail. workers etc)

6. What weaknesses of cooperatives and the maize market would you point out?

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

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

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

7. In your opinion, what are the opportunities that cooperatives and maize marketing have?

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

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

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

(I.e. anything you think the market and cooperatives should take advantage of)

8. Are there any threats that the maize market and cooperatives are faced with and what are your recommendations to ensure that these threats do not become a reality?

**END**