# SMALL-SCALE MAIZE MILLING BUSINESS OPERATIONS: A CASE STUDY OF LUSAKA PROVINCE

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 requirements for the Degree of Bachelor of Agricultural Sciences

## ACKNOWLEDGEMENTS

My humble and sincere thanks go to my supervisor, Dr. T.H. Kalinda for his untiring guidance rendered to me.

I also wish to express my gratitude to all the lecturers in the department of Agricultural Economics and Extension Education especially Dr.G.Tembo, Mrs. Lubinda, Ms. Banda, Mr. Maimbo, Ms. Hamukwala and Mr. Kuntashula for their tireless contribution to my AGE 500-research project.

I would like to thank the hammer-mill owners and operators for taking their precious time off to be interviewed and fill in the questionnaires during the study and the staff from MACO for allowing me to use the resource centre.

I would like to thank Jones Yengwe and Paul Kapapula for allowing me to use their computer without any conditions attached. To you Jones and Paul I say thanks for being such good friends.

To all my friends that is; Huxwell, Vizevize Nyengani, Kennedy, Malcolm, Shadunka, Chipuluka, Maggie & Oscar, Martha and to all my Classmates, I say thank you very much for being such good friends and for being there for me when I needed you guys.

Last but not the least I would like to say thank you very much to Mother for giving me this education and I owe everything I have attained to you. To my sisters and my brother that is; Zelita, Eliad, Chiluba, and Leah I say thanks for being patient throughout my studies and for supporting me. And to all my relatives thank you very much for being there for me.

I therefore would like to dedicate all this work to my Beloved Mother Esther Nyangu Mbuzi, My Late Dad Keffers Mbuzi, My Sisters, Brother and all My Relatives.

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| | |
|---|---|
| CEO | Chief Executive Officer |
| CTA | Technical Centre for Agricultural and Rural Cooperation |
| FAO | Food and Agricultural Organization |
| GBM | GBM Milling Company |
| GDP | Gross Domestic Products |
| GRZ | Government of the Republic of Zambia |
| ILO | International Labor Organization |
| MAFF | Ministry of Agriculture Food and Fisheries |
| NGO | Non-government Organization |
| SADC | Southern Africa Development Community |
| SAP | Structural Adjustment Program |
| SSMM | Small-scale Maize Millers |
| SPSS | Statistical Package for Social Sciences |
| SWOT | Strength, Weakness, Opportunity, and Threat |
| ZAM | Zambia Agricultural Marketing |

# ABSTRACT

## SMALL-SCALE MAIZE MILLING BUSINESS OPERATIONS: A CASE STUDY OF LUSAKA PROVINCE.

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**University of Zambia, 2005**

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The overall focus of this study was to analyze the small-scale maize milling business operation in Lusaka Province. The objectives were to understand the operational and managerial characteristics, identify the different marketing strategies and to examine the strengths, weaknesses, opportunities and threats affecting the small-scale millers (SWOT analysis). The methodology used in the study was a simple survey in which purposive sampling was used. A structured questionnaire was used to collect information from the small-scale maize millers. This was complemented by secondary information from various sources.

The general findings from the study were that the small-scale maize millers were lacking in education and this was both the employees and the owners. Other findings were that most hammer-mills were owned by the males and most of them had no employees who were trained in such fields as marketing, accounts and production. Most of the hammer-mills were found to be located in Lusaka District and this showed that Lusaka had a high demand of products from the hammer-mills. The marketing strategies which were used were not good at all in the sense that they were inadequate and lacking a professional touch which made them not very effective. Most of them were producing roller and breakfast meal as there basic products. Most of the hammer-mills were repaired by the owner when they broke down. It was also found that the management structure of most small-scale maize millers was very simple in the sense that it only comprised of the owner-children-relatives-workers. In the absence of the owner the children or the relative took charge of the running of the business. Competition from the large scale millers and potential entrants into the industry were said to be the main threats and the weaknesses which was found and that most of them did not have trained personnel and they lack the basic education. Among the opportunities it was found that most of them had different plans on how to expand which showed that they were numerous opportunities in the maize milling business. One of the strengths which they possessed was the owner's equity which most of them had and this meant that most of them were safe from insolvency or liquidation since they did not borrow any money to start the business.

From the above it can be concluded that a lot needs to be done concerning the small-scale maize milling in the sense that their is need to encourage more women to take up maize milling as a business and that the millers need to be trained at least in some of the basic management, planning, accounting, and marketing. The government should provide adequate extension services to target the small-scale maize millers so as to make sure that their needs are met.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Introduction and Background

The agricultural sector in Zambia has gone through some major policy changes that have had considerable impact on its present state of development. Government policy over the years has moved from significantly discouraging the full involvement of the private sector, to the present day one where the state has progressively withdrawn from being a major player to that of being a facilitator. This has seen the establishment of private owned agro-processing businesses in Zambia. Agro-processing businesses are defined as the one that add value to the agricultural products and these include fish processing, livestock, poultry, oilseeds, wheat, and grain milling. This study will focus on the grain milling and will specifically look at the small-scale maize miller's performance in the industry.

The geographical distribution of the agro-processing industries in Zambia suggests that the majority of the small-scale operations are located in Lusaka province and these are basically characterized by grain (mainly maize) milling. Hammer mill operations gained prominence in the post 1991 period, in response to the demand for cheaper maize meal brands (CTA report, 2000).

There is a geographical concentration of the small-scale food processing activities in the urban areas, particularly in the Lusaka and central provinces. This has far reaching implications for the degree to which improvement in the productivity of these enterprises could improve the income levels of the poor, particularly the rural poor. The concentration of agro-processing in maize milling has also introduced a bias that rarely takes into account the agricultural comparative advantage of various regions in the country.

The growing of maize in Zambia is without doubt the country's most dominant agricultural activity. Maize is also the main grain milled in Zambia and as such only maize mills will be considered in this research study. Within the agricultural sector, the liberalization of the maize marketing system was one of the major undertakings of the SAPS and these were aimed at increasing operational, efficiency and competitiveness of the maize milling and marketing sub-sectors.

Food processing is considered to be an important component of the food value chain and adds value to basic agricultural products making them highly differentiated food and industrial products. The processing of maize (zea Mays) is regarded as important because it is the world's most important cereal which is widely used for human consumption, animal feed and industrial purposes. Maize in southern Africa has replaced the traditional starch staple foods (like sorghum, millet, and cassava) in the diet of most households.

Maize is also the most grown and consumed grain in the SADC region, eaten as nshima in Zambia, sadza in Zimbabwe, papa in Botswana, and ugali in Kenya. Within the Small-scale maize milling sector it is remarkable how the number of hammermills has grown the last few years. Generally hammermills are small-scale milling enterprises characterized by providing milling services to their customers. The initial idea was to grind maize which clients brought and which was either produced by them or purchased. Some hammermill businesses are getting involved in commercial milling as well; meaning maize is purchased, ground and sold as mealie meal.

There are approximately 6000 hammermills operating in Zambia (personal communication, ZAM, 1994). The number of hammermills has grown explosively since the introduction of the liberalized maize marketing policies. Commercial maize milling in Zambia has been dominated by National milling, Simba No 1, GBM milling, Chimsoro milling and super fine mealile. National milling controls most of the market share which is the largest share followed by Simba milling and others.

However little is know about the factors affecting the performance of the small scale maize milling in terms of increasing competition in the milling industry and the extent to which it can contribute to employment generation in Zambia.

## 1.2 Problem Statement

Little is known about how the small-scale maize milling business operates in Zambia. Small-scale maize milling has the potential to increase the national income of the country, reduce unemployment levels, reduce poverty and create incomes among the households.

The agricultural sector is basically made up of several components that contribute to the value added of the agricultural sector.

**Table: 1 Shares of Agricultural Value Added by Commodity and Growth Prospects**

| **Commodity group** | **Share of 1993 agric. Value added (%)** | **Projected growth rate (1995-2005) (%)** |
|---|---|---|
| Maize | 45 | 2.5 |
| Oilseeds/legumes | 18 | 7.0 |
| Drought tolerant staples | 12 | 3.0 |
| Industrial crops | 9 | 12.0 |
| Wheat/rice | 7 | 3.5 |
| Livestock | 6 | 3.0 |
| Horticulture | 3 | 15.0 |
| **Total** | 100 | |

Source: Adapted from the Institute for African Studies (1996)

According to the table above it shows that maize contributes the most agricultural value added (45%), followed by oilseeds/legumes (18%) and drought tolerant staples

(12%).However projections show that in future the contribution of maize to the agricultural value added will reduce considerably, to about 2.5% of the total. This raises the question as why it will reduce. This question can only be answered by analyzing how the small-scale maize millers operate their business and suggest ways on how to improve the value adding in terms of the processing. Value adding to maize is mainly due to the milling and more than 50% of the maize is milled by small-scale millers. Therefore this study will analyze the business aspect of the small-scale millers in Zambia.

Marketing goes side by side with competition and this is one big problem that small scale maize millers face. Basically marketing involves the process by which products flow through the system from producers to final consumers. Specifically, marketing may be the physical and economic flow of products from the producer through intermediaries to the consumer; and this involves the many different activities that add value to a given product as it moves through the system. Therefore for maize to move through the system it has to undergo processing among the milling companies. Small scale maize milling is one of the activities which add value to the maize as it moves through the marketing system.

## 1.3 Objectives

### 1.3.1 General Objective

The general objective of this research is to understand, identify and examine how small-scale maize millers operate as a business entity.

### 1.3.2 Specific Objectives

1. To understand the operational and managerial characteristics of the small scale maize milling.
2. To identify the different marketing strategies used by small-scale maize millers and how they can be improved upon.

3. To examine the strengths, weaknesses, opportunities and threats of the small-scale millers (SWOT analysis).

## 1.4 Justification of the Problem

The research will help the policy makers to formulate policies which will enable the small-scale maize millers to operate in a good business environment which will see the rapid growth of the sector. This study will also help the small-scale maize millers in the sense that they will be able to know the kind of factors that affect the milling industry and how to avoid them in order to succeed in the business. The study will also help the government to know were to allocate the resources for development that is; the areas were they are badly needed. It will unveil some information to the potential investors so that they can know how to cope with the factors frequently affecting the performance of the maize millers. The information will also help the donor community, since it has the potential to reduce poverty and contribute to the national development.

## 1.5 Limitation of the Study

There were some limitations experienced during the study and the main ones were limited access to some of the hammer-mills which where located in the outskirts of Kafue and Chongwe districts respectively. Other limitations were none availability of the hammer-mill owners and in place of them either the child to the owner or the person in charge of operating the hammer-mill was interviewed.

## 1.6 Organization of the Thesis

This thesis is made up of five chapters. The first chapter basically outlines the introduction and the background; it also presents the problem statement and the objectives. Chapter two presents the different literature on the small-scale maize millers and outlines what has been done concerning the problems. It reviews the literature on the small-scale maize milling business operations; it also presents the theoretical framework

which was used during the study. Chapter three outlines the methodology which was used and outlines how the respondents were selected, the sample size, the study area, the procedure, and the data collection instrument, it also presents the type of program used to analyze the data. Chapter four is the findings and discussion of the research and this presents the socio-demographics of the small-scale maize millers. It also specifically answers objective one of the survey which outlines the different aspects of the operational and managerial characteristics of the small-scale maize millers, it critically analyses the management and operational aspects of the small-scale millers. It goes on to critically analyse the different marketing strategies used by the small-scale maize millers and it looks at each and every aspect of the marketing techniques which the small-scale maize millers use in their businesses. It concludes by brings out the different strengths, weakness, opportunity, and threats which the small-scale maize millers face in the operation of the businesses. The last chapter which is chapter five is basically the conclusion and the recommendations drawn from the findings and discussion of the study.

# CHAPTER TWO

## LITERATURE REVIEW

### 2.1 Introduction

This chapter basically reviews the different researches which have so far been done on the small-scale maize milling business. This was important in the sense that it clearly showed the researcher which information was lacking concerning the small-scale maize milling business and what needs to done. It reviews the literature from government reports, text books and other unpublished information relating to how the small-scale businesses operate. It also brings out the information on the theoretical framework which was implored during the study

### 2.2 Definition of Small-Scale Business

For the purpose of this study, the official definition of small-scale enterprise is being used. The Small Enterprise Development Act No.29 of 1996 gives guidelines on what a Small-scale business enterprise is. The definition is as follows:

- excluding land and buildings, the investment must not be more than 50 million Kwacha (K), (or US$42,000 at the 1996 exchange rate) for a manufacturing Enterprise, and not more than K 10 million (US$8,300) for the service and trading enterprises;
- The turnover must not exceed K 80 million; and
- The staffing level must not exceed 30 persons.

### 2.3 Agro-Processing

History shows that maize milling was one of the first industries to be modernized. The industry has improved drastically from the first steam mills in London and Philadelphia in late 1700 to the ones of today, making milling one of the biggest sectors in the food industry globally (Toussaint-Samat et al, 1991).

According to David Stokes (2001) he says that closure rates are highest in the early years but chances of survival improve as the business matures. He also says that small firms are much more likely to cease trading than large firms. He goes to say that those that grow are less likely to close than those that do not grow.

More than 60% of the Zambian population derives a livelihood from agriculture. Farm labour in the smallholder sector accounts for 52% of the economically active rural population, which peaked at 2.6 million in 1987/88 but declined to 2 million in 1993/94 because of the disappointing performance of the 1990s. The significance of the smallholder sector contribution to the national economy is not, however, easily reflected, because labour and land productivity within the small-scale farming sector is low. It follows, therefore, that sustainable growth in agriculture with important equity and food security considerations can never occur in Zambia without the raising the status of the smallholder sub-sector. (CTA, Report, 2000).

Agriculture's contribution to total gross domestic production (GDP) was for many years only about 12% and was nearly 20% by the late 1980s. However the contribution of the sector to the economy goes beyond actual agricultural production, because of the many backward and forward linkages it has developed with the other sectors of the economy. The World Bank's Prospects for Sustainable Growth estimates that Zambia's agriculture and food system is responsible for at least 50%of the economy. This includes farm input supply, agro-processing, and food wholesaling and retailing, as well as farming itself. Agro-processing accounts for about half of the country's manufacturing sector contributing about 35% to the economy (CTA, Report, 2000).

According to the study carried out by CTA (2000) on "Small-scale Food Processing sector in Zambia", it was said that the majority of the enterprises were adversely affected by a lack of skills, particularly in the areas of production techniques (which needed to be addressed urgently); management; and sales and marketing, in that order. Most of the respondents in the study reported that the required skills were available locally; implying that what was required to strengthen the production, management, and marketing

capacities of the small-scale operators in agro-processing industries was to harness the already locally-available skills.

Manufacturing firms, particularly those in the small-and medium-scale categories, continue to face liquidity problems and lack of funds for investment From the ILO report of 1987 it says that international and local NGO's are working together in developing countries in order to promote small-scale enterprises. The FAO project concluded that the economic viability of small-scale enterprises depends strongly on managerial skills. A business stands or falls with is management capacity. Of course other circumstantial factors determine overall performance as well. If the size distribution of firms is visualized as a pyramid, the base is extremely broad and the apex very narrow. If success means climbing from the bottom to the top it is rare indeed. The vast majority of businesses do not grow beyond their classification as a small firm. Only a few grow to become medium sized, and even fewer grow into the new, large companies of the future.

The CTA report also stated that in terms of actual processing, the success of small-scale milling enterprises is strongly dependent on management and organization. It also stated that the finance for the acquisition of hammer mills was the main problem. A Food and Agricultural Organization (FAO) study in 1994 found that 58% of the finance used to acquire hammer mills by small-scale enterprise is borrowed although as much as 35% of the respondents in that study obtained the equipment through informal means. This is even more so in the eastern province. When selecting the technology for the hammer mills, electric engines are preferred, however due to lower and running costs, most rural small-scale enterprises use diesel engines (CTA report, 2000). The average enterprise's management structure is very simple. In most cases, the owner of the enterprise manages and combines the functions of production and marketing together (CTA report, 2000).

The limited financial turnover and employment levels of the agro-processing enterprise in Zambia, as well as the death of skills among the employees, have implications with respect to the enterprises' ability to absorb and utilize improved equipment options and, thus, seem to be the most important requirement for these enterprises. Since much of the required skills are available locally within the private sector, what is required then is to

strengthen the production, management, marketing capacities of the small-scale agro-processors (CTA report, 2000).

The role of agro-industries in economic development is often underestimated. These industries aim to improve the quality and increase the value of primary agricultural products. Appropriate technologies are particularly needed for processing food in rural areas of developing countries. Traditional technologies can sometimes be upgraded to enhance the shelf life and consumer acceptance of indigenous foods, as well as developing value added for products with export potential.

FAO has promoted research on the processing of cereals, legumes, roots, and tubers into flours for indigenous convenience foods. In Africa, FAO has helped women's groups improve the handling, storage, and processing of cassava, maize, and other staples, contributing to food security at the village level. In other regions, rice milling has been made more efficient through the rehabilitation of existing mills and the establishment of new processing units. Rice parboiling has been introduced as a means of extending the yield and improving the nutritional value of rice. (FAO Report, 1987)

### 2.4 Sub-Sector Approach to Analyzing Agro-Processing

This research used the sub-sector approach in analyzing small-scale maize millers business. A sub-sector is a vertically linked set of participants who produce related output or group of outputs (Holtzman, 1986). This definition clearly outlines that the small-scale milling industry can be treated as a sub-sector. The sub-sector approach will enable the analysis of the strengths, weaknesses, opportunities and threats that promote or hinder efficiency of a business. Holtzman pointed out that the sub-sector approach is more effective if used in the analysis of salient elements of a sub-sector.

# CHAPTER THREE

## METHODOLOGY

### 3.1 Introduction

This chapter presents the methodology which was used during the survey. It brings out the types of data which where collected, the sampling technique which was used, the data collection instrument used, the study area and the background, the data collection procedures used, the data limitation during the survey and the data analysis of the whole survey.

### 3.2 Study Area and Background

The study area was Lusaka province and this is the capital city of Zambia. It is centrally located; it has more than five districts which include Chongwe, Kafue, Luangwa, Mumbwa, Chisamba, and Lusaka. Lusaka district is the provincial capital. Lusaka province has a population of approximately 2 million and the many languages spoken are Nyanja, sooli, lenje and Tonga. Lusaka province was selected because more hammer-mills were located and easily accessible in Lusaka district. The areas sampled where Kafue, Chongwe, and Lusaka district. Most of the maize grown in Zambia finds its way in Lusaka where there is high demand of maize and its products, so most hammer-mills are located in Lusaka where they process the maize brought in by the traders.

### 3.3 Types of Data Collected

Both primary and secondary data was used in this research. Secondary data was obtained from institutions such as the ministry of agriculture and co-operatives, ministry of commerce trade and industry, and other institutions which were identified as important to the study. The primary data was collected using the structured questionnaire. The study employed a simple survey design. The questionnaire was structured in such a way so as to ask questions which were aimed at achieving the set objectives.

### 3.4 Data Collection Instrument

A structured questionnaire consisting of five different parts was used as the data gathering instrument. The questionnaire aimed at among other things in collecting information on the socio-demographics characteristics and there educational qualification of the hammer-mill proprietors. Before the questionnaire was administered it was tested to confirm its validity. The questionnaire was divided into five different parts. The first part of the questionnaire aimed at capturing the personal characteristics and demographic data of the small-scale maize millers and these included socio-economic, sex, educational level of the proprietors, duration of the business and other necessary information which was solicited. The second part focused on generating information on the strengths, opportunities, weakness, and threats of the maize millers in order to achieve objective three. The third part focused on asking questions pertaining to how the management is structured i.e. the hierarchy. The fourth and the fifth sections basically focused more on the marketing aspects of the small-scale maize millers, it was also looking at what type of marketing strategies they use and how they promote there products. The questionnaire also looked at the life span of the business, the sources of financing available to small-scale maize millers and perceived advantages. (See Appendix 2)

Comparison was made with secondary information. The qualitative approach was used to a large extent complemented by the quantitative approach to obtain an in-depth understanding of the small-scale maize milling business.

The target respondents were the mill owners or the mill operators in cases when the owner was not actively involved in the business. The questionnaires were administered by the researcher himself and no enumerators were used.

### 3.5 Sampling Techniques

Purposive sampling techniques was used to obtain samples. The sample for the study was drawn from various parts of Lusaka province. A purposive sample of 76 hammer-millers was selected for the study. The researcher carried out the interviews with each hammer-mill owner or the person in-charge of the operations.

### 3.6 Data Collection Procedures

The data collection exercise was undertaken over a period of four weeks during the vacation. In terms of the specific procedure, the researcher distributed some questionnaires to the respondents who showed willingness and ability to fill in the questionnaire. At the same time the researchers carried out face-face interviews with the respondents who were willing to take part in the study but were unable to fill in the questionnaires on their own. In most cases the data was collected by interviewing the respondents personally. No enumerators were used during the data collection processes.

### 3.7 Data Limitation

Data collection was limited to the more accessible areas and another limitation was on the financial resources which made it difficult for the researcher to travel to places such as Luangwa, Chisamba, and Mumbwa. Therefore data was only collected from Chongwe, Kafue, and Lusaka districts

### 3.8 Data Analysis

After all the data had been collected and all the questionnaires where in, the data analysis began by arranging the field notes according to salient themes in relation to the objectives. The questionnaires were then coded using the standard system of coding. This was followed by identification, description, explanation, and interpretation of the emerging themes and or conceptual patterns or responses categories in contexts in which they occurred. The findings were counted or enumerated as was fit for a survey. Quotations of significant portions of responses obtained were also used to depict respondents' attitudes in their own words. The statistical package for social sciences (SPSS) was used to analyze the data quantitatively and graphs were shown were necessary and other tables of importance to depict the true responses.

# CHAPTER FOUR

# FINDINGS AND DISCUSSION

## 4.1 Introduction

This chapter presents the main findings of the study and it starts with the Socio-Demographics characteristics of the Small-Scale Maize Millers (SSMM). It brings out the issues concerning gender, level of education, district where the business is located, and date when the business was started operations. These were important during the study in the sense that they helped the researcher to compare some of the variables with one of the Socio-Demographics characteristics of the SSMM. In some sense cross tabs were used to compare the variables. The chapter also analyses all the objectives of the survey as outlined below. It discusses all the business aspect of the small-scale maize milling from marketing to management of the business.

## 4.2 Socio-Demographic Characteristics of Hammer Mill Owners

### 4.2.1 Gender

The table 2 below shows that out of 76 respondents that is hammer-mill owners who were sampled, (65.8%) of the respondents were males who owned the hammer-mills and (34.2% )of the respondents were female hammer-mill owners. Ownership of the hammer-mills is biased towards the males which clearly indicate that out of the 76 respondents 50 were males and 26 were females. The success of any business is dependent on who is heading it. It is generally said that businesses headed by males' stands a great deal of being successful simply because males are considered to be more hardworking than females. Therefore the issue of gender in this study was considered as one of the factors affecting the performance of the small scale maize millers business in Zambia. Gender is considered to be equally important in the development of the country and can affect the performance of any business.

**Table 2: Socio-Demographic Characteristics of the Hammer-Mill Owners**

| Characteristic | Number of respondents | Percentage |
|---|---|---|
| **Gender** | | |
| ➢ Male | 50 | 65.8 |
| ➢ Female | 26 | 34.2 |
| **Level of education** | | |
| ➢ Primary | 48 | 63.2 |
| ➢ Secondary | 13 | 17.1 |
| ➢ College | 9 | 11.8 |
| ➢ University | 6 | 7.9 |
| **District** | | 88.2 |
| ➢ Lusaka | 67 | 7.9 |
| ➢ Chongwe | 6 | 3.9 |
| ➢ Kafue | 3 | |
| **Date business started** | | |
| ➢ Before1990 | 17 | 22.4 |
| ➢ 1990-1995 | 11 | 14.5 |
| ➢ 1995-2000 | 43 | 56.6 |
| ➢ 2000-2005 | 5 | 6.6 |

Source: Own Survey Data

### 4.2.2 Level of Education

It was revealed that most hammer-mill owners, i.e. (63.2%) had gone up to the level of primary education, (17.1%) had gone up to secondary, (11.8%) had gone up to college, and (7.9%) had gone up to university level of education. The level of education of an individual becomes important in the sense that it has a direct impact on the management, operational and marketing of the business. Level of education determines the success of any business. Some studies have been done on the effect of education on the business and they have concluded that lack of education can lead to either failure of the business or stagnant growth of the business.

### 4.2.3 District were the Business is Located

From the respondents interviewed (88.2%) of the respondents had there hammer-mills located in Lusaka district, 7.9% of the respondents had there hammer-mills located in Chongwe district and 3.9% of the respondents had there hammer-mills located in Kafue district. The study showed that most hammer-mill operators were concentrated in Lusaka district and this shows that Lusaka has a high demand of mealie meal from the hammer-mill. It also showed that a considerable share of the market was located in Lusaka district. This is simply because of the high population in Lusaka. Therefore the district and hence the area of the hammer- mill location can affect the performance of the maize millers.

### 4.1.4 Date when the Business Started

Out of all the respondents interviewed 56.6% of the respondents said they started there business between 1995 and 2000, 22.4% of the respondents said that they started their business before 1990, 14.5% said the business started between 1990 and 1995, and 6.6% pointed out that their business started between 2000 and 2005. (See table 2 above)

### 4.3 Operational and Managerial Characteristics of the Small-scale Maize Millers

This section answers objective one which is the operational and managerial characteristics of the SSMM. It analyses the management of the day-to-day operations, people who operate the hammer-mill, repairing of the hammer-mill, and the opening hours and days. Generally the success of the small scale milling enterprise or business depends strongly on its management and organization. Good management skills are the key to the success of any business and therefore can contribute to the increase in profits of the business.

### 4.3.1 Management of the Day-to-Day Operations

The study revealed that 84.7% of the respondents were managing the day-to-day operations of the hammer-mills which means that most decision making was done by the owners themselves and the workers had to follow whatever was delegated to him/her. 11.9% of the respondents said that, they had a manager who was managing the day-to-day operation of the business activities of the hammer-mill, and 3.4% of the respondents said there business were being managed by there children or some sort of a relative. The study also revealed that 56.7% of the employees who operated the hammer-mill had a minimum qualification of primary level education, 33.3% had a minimum qualification of up to secondary level education and 10.1% had a minimum qualification of up to college level. This can be said to be one of the problems hindering the performance of small scale maize millers in the sense that the workers were not adequately trained to operate the hammer-mill and the day to day operation of the business.

Eighty percent of the respondents said 'no' to having any employees who was trained in skills such as marketing, production, accounting, and general management, 20% said 'yes' to have one or two employees who was trained in one of the skills. On comparison, the business with trained employees in the above named skills seemed to be doing fine that is they had a high profit returns per month as compared to the ones which had considerably low profit returns per month.

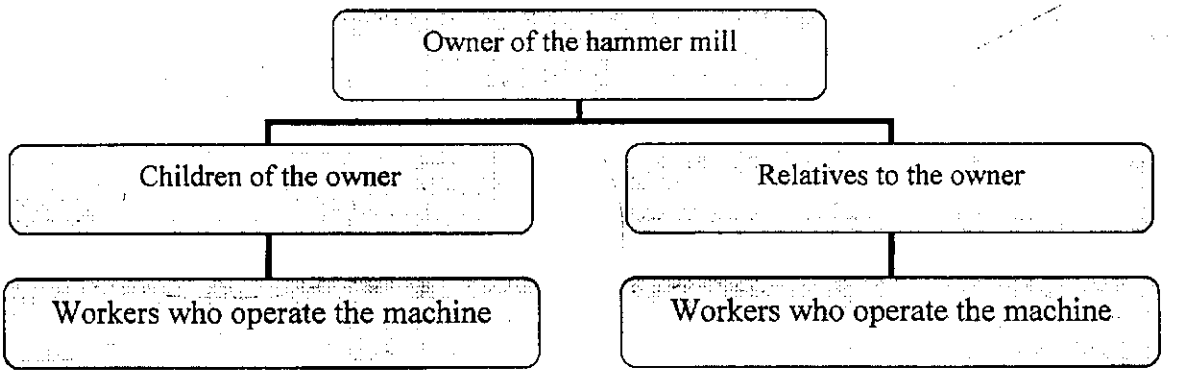
Skills in marketing, production, accounting and general management are very important to any business and these can determine whether the business fails or succeeds. Lack of manpower in such vital skills greatly hinders the performance of any business. The study showed that most respondents lacked such skilled labor hence it was affecting the performance of there businesses.

Ownership of the business is one other factor that affects the performance of any business. The performance of the business will be greatly be affected by who in particular own it and how he/she started it. Therefore in this study it was shown that most hammer-

mills that are 63.2% said that they started the business with their own capital and did not have to borrow from anyone. While 19.7% of the respondents said they borrowed money for there start up capital and 17.1% said there business was started through other means such inheritance, given as a gift and other means.

The basic structure of management which was common to all the small-scale maize millers who were interviewed was that: the owner was the overall managing director, then the children and other relatives and the general worker who operated the machine and did the different kinds of work delegated to him/her.

**Figure 1: Basic Management Structure of Small-Scale Maize Millers**




From the respondents who where interviewed 33.3% of the respondents said 'yes' that they new one or more financial institution that offered loans to the small-scale maize millers and 66.7% of the respondents said 'no' that they did not know any financial institution that offered loans to the small scale maize millers. This correlated with the fact that most small-scale maize millers started there business with there own capital and did not borrow from any financial institution. Those who borrowed there start up capital new one or more financial institution which offered loans to agro-processors.

### 4.4 Operational Aspects

#### 4.4.1 People who operate the Hammer-Mill

The study showed that 38.2% of the respondents said that 2 people operate the hammer-mill on a daily basis that is including the owner. The owner monitors the operation of the hammer-mill everyday and he/she was responsible for daily opening in the morning and closing in the evening. 23.7% said 3 people operate the hammer-mill.7.9% said that 1 person does the operation, 17.1% said 4 people operate the hammer-mill, 11.8% said 5 people operate the hammer-mill and 1.3%of the respondents said 6 or more people operate the hammer-mill.

Depending on how many people operate the hammer-mill, it has an effect on the lifespan of the machine. The more people who operate it, the shorter the lifespan and the less people the longer the lifespan the machine. It was also shown that those hammer-mills which were being operated by more than 2 people had a high incidence of problems and breakdowns.

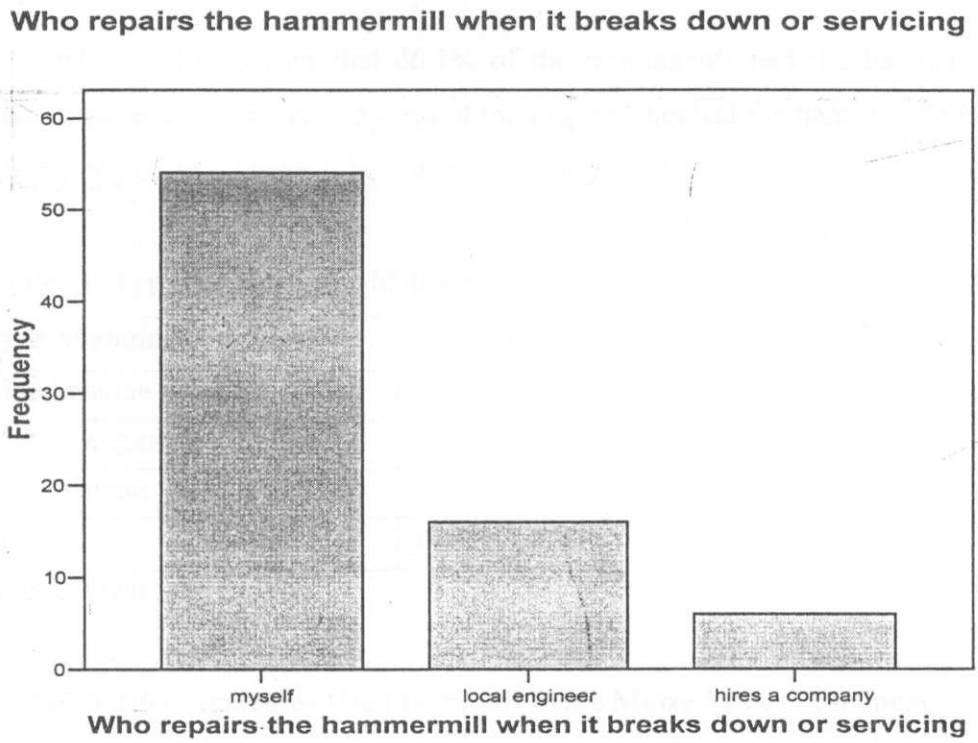
#### 4.4.2 Repairing of the Hammer-Mill

From the total number of the respondents 54 out of the 76 respondents said they themselves repair the hammer-mill when it either breakdown or doing the servicing themselves, 16 of the respondents said they higher a local engineer to do all the repair works and servicing when the hammer-mill breakdown and 6 respondents said they higher a specialize company to the work.

This was found to be one of the things hindering the performance of the small-scale maize millers in the sense that the owners who repaired the hammer-mill when it breakdown had no whatsoever any form of training on how to repair the hammer-mill which meant that all the work done was on try and error basis which renders the machine to susceptible frequent breakdowns.

Figure 2 below shows the distribution of who repairs the hammer-mill when it breaks down.

**Figure 2: Distribution of Who Repairs the Hammer-Mill**




Source: Own Survey Data

### 4.4.3 Opening Hours and Days

Most hammer-mill operators operate during the weekend. This was shown in the study by asking a question to find out whether they opened during the weekend, 52.6% of the respondents said 'yes' they do open during the weekends and 47.4% of the respondents said 'no' they never open during the weekend.

Of the normal operating time during the week and the weekend 76.3% of the respondents said they open the hammer-mill from 08:00hours in the morning to 17:00hours in the afternoon,14.5% said they only open from 07:00-17:00,6.6% open from 08:00-18:00.

This showed that most hammer-mill operated within the stipulated normal operating time. Most respondents said that they open during the weekend from 08:00-14:00hrs which was also considered normal for the weekends.

### 4.4.4 Type of Hammer-Mill Engine

The table 3 below shows that 46.1% of the respondents had the hammer-mills which were diesel engine operated, 51.3% of the respondents had the hammer-mills which were electric engine and 2.6% of them had the hammer-mills which were petrol engines.

**Table: 3 Types of Hammer-Mill Engine**

| Type of engine | Number | Percentage |
|---|---|---|
| Diesel engine | 35 | 46.1 |
| Electric engine | 39 | 51.3 |
| Petrol engine | 2 | 2.6 |
| Total | 76 | 100 |

Source: Own Survey Data

### 4.5 Marketing Strategies Used by Small-Scale Maize Millers Business

This section basically answers objective two which analyses the marketing strategies used by most SSMM and it analyses the weaknesses of the marketing strategies used by SSMM. Marketing is very essential in the growth of the business and business survival in the competitive environment. Therefore businesses have to carefully study the market and make a good marketing strategy which will enable them sell their products effectively. Some of the marketing strategies include; pricing, packaging, place, and promotional.

Therefore this study was aimed at identifying the different marketing strategies employed by the small-scale maize millers and how best they can be improved upon through the findings of the study. The following section looks critically at the marketing aspects of the small-scale maize millers from the study.

### 4.5.1 Advertising of the Products

The respondents were asked whether they do advertise their products and from the responses it was observed that 70% of the respondents said they do advertise their products in one way or the other and 30% said they do not advertise there products. Among the respondents who said they do advertise their products 2 respondents were making a profit of between K500, 000 and K1, 000,000 per month and those who said they do not advertise there products only 20 were making a profit of between K100,000 and K500,000 per month as compared to those who were advertising 39. This showed the effect of advertising on the profits of the business.

A question was asked to find out how they advertised there products, 11.8% of the respondents said they use a radio to advertise there products, 38.2% said they used the newspaper to advertise, and 50% mentioned of other form of advertising such as posters, fliers, and through friend and relative spreading the news that there is a hammer-mill at such a place. This showed that a great number of hammer-mil owners used other forms of advertising which according to them was quite effective for marketing and they said it was cheaper and efficient as compared to newspapers and radios.

### 4.5.2 Packaging of the Products

Packaging is quite important in the marketing of ones products, therefore a question was asked as to find out how most them did there packaging. The survey showed that 56.6% of the respondents used the polythene sacks, 35.5% used sisal sacks, 6.6% used plastics and 1.3% used buckets respectively. This showed that most of the hammer-mill operators preferred polythene sacks as compared to other forms of packaging. Most of them said it was durable and looked so attractive and clean. This was one thing which they used to win customers from the other operators.

**Table: 4 Packaging Materials Used**

| Packaging material | Number | Percent |
|---|---|---|
| plastics | 5 | 6.6 |
| Polythene Sacks | 43 | 56.6 |
| Bucket | 1 | 1.3 |
| sisal sacks | 27 | 35.5 |

Source: Own Survey Data

### 4.5.3 Place Where the Hammer-Mill is Located

Of the 76 respondents, 88.2% were located in Lusaka district, 7.9% were in chongwe district and 3.9% were in Kafue. These were the hammer-mill which the researcher managed to sample during the exercise. Most of them in chongwe and Kafue were not sampled due to either in-accessibility of the areas. However there was a high concentration of hammer-mill in Lusaka district .This clearly showed that there was a considerable high demand and a big market for the mealie meal from the hammer-mills in Lusaka. (See also appendix 1 table 10)

The place of the location of the hammer-mill is important in the sense that it has a considerable influence on the profits and the growth of any business in the industry. However, most hammer-mills which were located in Lusaka district were doing fine and some lines of the customers could be seen protruding outside which was one of the visible indicators the researcher used to determine whether their was a high demand of the milling products in Lusaka. The high concentration of hammer-mills means profits in any market are being shared among the hammer-mill operators. The more the profit margins the more the industry becomes attractive and attracts more players into the milling sector. This was shown in the study from the approximate profit each hammer-mill operator made per month and more than 50% of them made a profit ranging between K100, 000 and K500, 000 respectively.

### 4.5.4 Products

According to the table below out of 76 respondents who were interviewed 54 of the respondents said yes to producing Roller meal, 42 were producing Breakfast meal, 29 were producing Samp, 26 were producing gaga (maize bran), 7 produced chicken feed and 17 produced animal feed respectively among the range of products which they produced. This showed that most hammer-mill operators were producing roller meal that is 30.9% at least produced roller meal while 24.0% at least produced Breakfast meal, 16.6% were producing Samp meal and 14.9% produced gaga (maize bran). A high concentration of producers producing roller meal shows that it has a high demand and the price of the product was cheap and affordable which meant that a lot of low income people found it very cheap to either buy or process roller meal and according to the hammer-mill owners they that roller meal was high in nutrition content as compared to other milling products. Those who were producing breakfast meal had a mill called a diharra which was used to make Samp meal before grinding it into the actual hammer-mill. The table below shows the distribution of the milling products which most SSMM produce

**Table: 5 Tables of the Products from the Hammer-Mills**

| Product | #of hammer-mills | Percentage |
|---|---|---|
| Samp | 29 | 16.6 |
| Breakfast | 42 | 24.0 |
| Roller meal | 54 | 30.9 |
| Gaga (maize bran) | 26 | 14.9 |
| Chicken feed | 7 | 4.0 |
| Animal feed | 17 | 9.7 |

Source: Own survey data

### 4.5.5 Pricing of the Products

According to the respondents interviewed, it seemed as if most of them had almost the same pricing systems. For service milling 20 of the respondents said that they charged not more than K3000 per tin which is more like a bucket, 46.1% respondents said that they charged K2000 for the roller meal, some of pointed out they charged at least more than K10000 including maize from us i.e. the mill operator. Other products were quite difficult to price according to the hammer-mill operator and these varied from time to time and from quantity to quantity for products such as Chicken feed, animal feed and gaga 11 respondents said this.

Pricing is one important determinant in the marketing of different products. Prices will either attract customers or chase away the customers. Good pricing will always attract customers. Therefore 47.4% of the hammer-mill operators talked to say they considered the prevailing market conditions such as prices, demand, and supply of different milling products on the market and 51.3% of the respondents said they do not consider the prevailing market conditions. For the respondents who said that they considered the prevailing market conditions there pricing were quite reasonable and had shown to have more customers than those who never considered the prevailing market conditions. There was a small variation between those who said that they considered the prevailing market conditions and those who said that they do not consider the prevailing market conditions.

Consideration of the prevailing market condition is one of the basic requirements any business entrepreneur has to do before setting up the business. Therefore most small scale maize millers from the survey showed that they did not consider the prevailing market conditions when getting into the business which according to the researcher assumed that it was one thing which was affecting the performance of the business and definitely the growth of the sub-sector.

**Table: 6 Shows the Pricing of the Products**

| Pricing | Number of hammer-mills | Percentage |
|---|---|---|
| K3000 for Breakfast meal | 20 | 26.3 |
| K2000 for Roller meal | 35 | 46.1 |
| More than K10000 with our maize | 10 | 13.2 |
| Other pricing for Service milling for Chicken feed, gaga, & animal feed. | 11 | 14.5 |

Source: Own Survey Data

### 4.5.6 Storage Facilities

Storage facilities are very essential in a business like the hammer-mill business. These are used to store the different products so as to increase the lifespan. Therefore during the survey the respondents were asked to indicate whether they had adequate storage facilities and of the 76 respondents 57.9% of the respondents said that they had adequate storage facilities which were either inform of Storage rooms, pantries, tents, or other forms of storage facilities and 42.1% of the respondents said they had no adequate storage facilities. This had a considerable effect on their business in the sense that some customers would want to leave their maize and pick them later on, but since they had no adequate storage facilities it entailed that they had to go back with there maize back home which was very inconvenience on the part of the customers.

## 4.6 Strengths, Weaknesses, Opportunities and Threats to the Small-Scale Millers. (SWOT Analysis)

This is basically the analysis of the different strengths, weaknesses, opportunities, and the threats facing both the emerging and the already established small-scale maize millers in the sub-sector. This plays a pivotal role in the performance of the maize millers in the sub-sector hence the need for the survey to carry out the SWOT analysis.

Strengths and weaknesses can be said to be endogenous to any form of the business i.e. they are said to emanate from the inside of the business. The strengths and weaknesses of the business depends on the capabilities of the business in terms of production, marketing, efficiency, product quality, packaging, positioning of the business and these tend to have either direct or indirect effect on the business. Therefore the survey asked questions which were aimed to capture information on the different strengths and the weaknesses which the small-scale maize possessed, therefore the following section outlines some of the strengths and weaknesses which were able to be captured by the data collecting instrument.

Opportunities and threats are said to be exogenous to the business which means that they are found outside the business i.e. they emanate from the environment surrounding the business. Therefore the survey examined the environment of the small-scale maize millers to determine some of the opportunities and threats which they faced.

Opportunities and threats have an effect on the performance of the business and hence it was important to ask questions on how the environment had an effect on the small-scale maize millers.

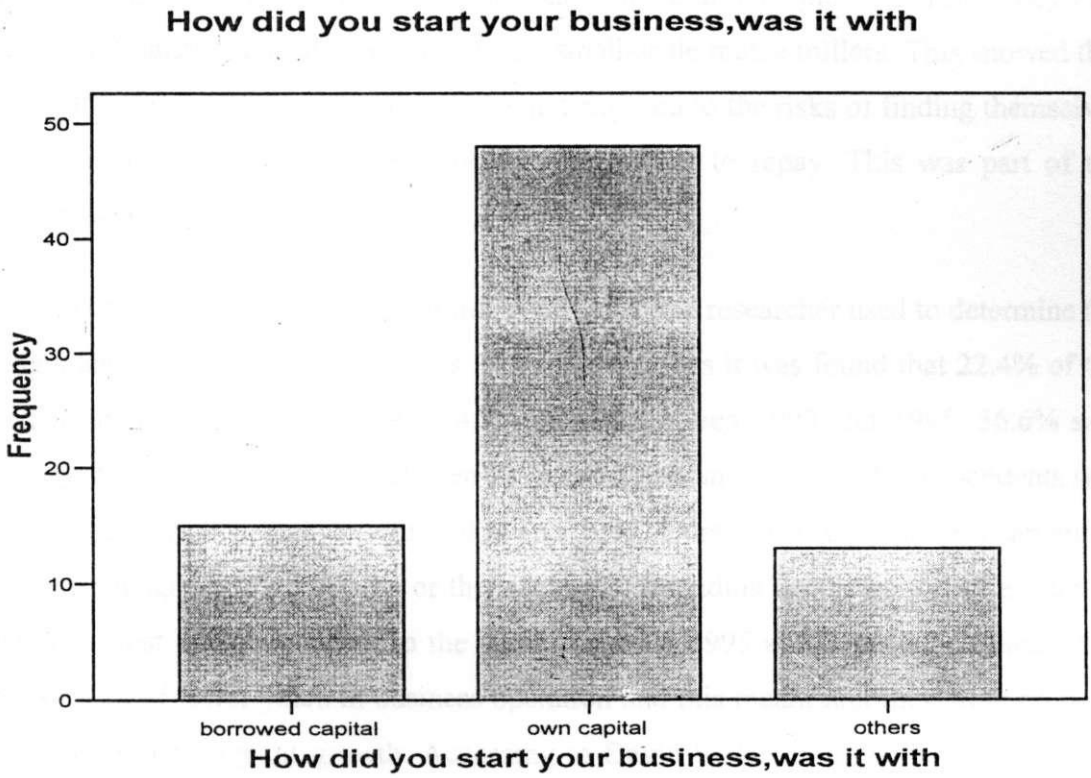
### 4.6.1 Strengths and Weaknesses

Questions were asked to determine some of the strengths and weaknesses which the small-scale maize miller were facing and these included when the business was established, how did one start the business i.e. start up capital, how many hammer-mills one owned, etc. From the findings it was discovered that most small-scale maize millers had strengths in the way they started there business. 19.7% of the respondents said they borrowed money to start the business, 63.2% had there own capital to start the business, and 17.1% started there business through other means which include inheritance. Start up capital shows the strength of any business in the sense that when the business is established on the borrowed capital it stands more likely to be either liquidated or being declared insolvency should the owner fail to honor his/her obligation of the loan on

which the business was founded. Most of them were founded on own capital which indicated that they were strong in terms of financial positions and that a further 17.1% said they started there business through other means such as inheritance which was safe for the survival of the business.

The figure below shows how different respondents started their businesses that the maize milling

**Figure 3: Distribution of how Respondents Started the Business**




Source: Own Survey Data

The table below shows the Knowledge of financial institution

**Table 7: Knowledge of Financial Institution**

| Response | Number | Percent |
|---|---|---|
| Yes | 25 | 33.3 |
| No | 50 | 66.7 |
| Total | 75 | 100 |

Source: Own Survey Data

From the table 7: above, 66.7% of the respondents said they did not know any financial institution which offered loan to the small-scale maize millers and 33.3% said they new one or two financial that offered loans to the small-scale maize millers. This showed that most of the small-scale maize millers were not exposed to the risks of finding themselves in unnecessary loans which they may not even afford to repay. This was part of the strengths which they possessed.

Duration of the business was another indicator which the researcher used to determine the strength and weakness of the business. From the findings it was found that 22.4% of the hammer-mills started before 1990, 14.5% started between 1990 and 1995, 56.6% said that they started there business between 1995 and 2000, and 6.6% of the respondents said they started there business between 2000 and 2005. Duration of the business can either show the strength of the business or the weakness depending on the period of existence. Therefore most business started in the period between 1995 and 2000 which meant that they were 10 or fewer years in business operation and this meant that they were prone to either closure or stagnant growth. According to David Stokes he says that closure rates are highest in the early years but chances of survival improve as the business matures. He also says that small firms are much more likely to cease trading than large firms. He goes on to say that those that grow are less likely to close than those that do not grow. Therefore those businesses which are more than 10 years old that means that they were started in the year before 1990 are more likely to continue growing and that the chances of survival have improved since they started. For these they have a considerable strength

and for those that were less than 10 years had a considerable weakness. The number of hammer-mills which one possessed can be considered to be strength of the business.

The table below shows the distribution of how many hammer-mills owned.

**Table: 8 Number of Hammer- mills Owned**

| Hammer-mills | Number | Percentage |
|---|---|---|
| 1 | 26 | 34.2 |
| 2 | 39 | 51.3 |
| 3 | 8 | 10.5 |
| 4 | 3 | 3.9 |
| Total | 76 | 100 |

Source: Own Survey Data

From table 8 above it shows that 34.2% of the respondents owned at least one hammer-mill, 51.3% of the respondents owned 2 hammer-mills, 10.5% owned three hammer-mills and 3.9% owned four hammer-mills. The ones that owned more had more strength as compared to others who only owned one or two hammer-mills. The profits of these were even more than the ones who owned one or two hammer-mills.

One of the weaknesses which they possessed was that they were at a risk, incase they had financial problems in the business they would not know were to go for financial help and advise in financial matters. Another weakness which the researcher observed was the way the general management was arranged and the personnel in the management. Most of the managements were basic in the sense that they only comprised of the owner, spouse, relatives and general workers. Of these none was trained in the skills such as management, accountancy, and production. Lack of skills in the personnel of the small-scale maize millers was another weakness which these had. A question was asked as to

find out whether they had any workers who were trained in accountancy, production, and marketing.

The respondents were asked if at they had any employees who were trained. This was to see if at all one of their strengths was having the trained employees. It was observed that 80% of the respondents had no employees who were trained in such fields as marketing, production, accounting, & management and 20% of the respondents said they had one or two employees who were trained in such fields. This was the one weakness which was found to be in the small-scale milling business.

### 4.6.2 Opportunities and Threats

These can be said to be exogenous to the business and therefore are said to be in the environment surrounding the business. These are extremely important in the general performance of the any business and can determine how much profit a business makes per month. Questions like do you have any plans to expand your business, are there any opportunities in the maize milling that everyone can have, are there a government policy for the maize millers were asked in order to examine the opportunities and threats in the sub-sector.

The table below shows the distribution of the respondents who' yes' and 'no' to having plans for expansion of the business.

**Table: 9 Plans to Expand the Business**

| Response | Number | Percentage |
|---|---|---|
| Yes | 67 | 95.7 |
| No | 9 | 4.3 |
| Total | 76 | 100 |

Source: Own Survey Data

From the table 9 above it was found that 95.7% of the respondents said they had vast plans to expand there business either by acquiring another hammer-mill machine or by increasing in production from there current production. Expansion is an opportunity which any business can seize. By expanding the business ones profits increases and there by can increase the employment opportunities. When the business expands the industry also expands. When there are opportunities in the industry the more the potential entrants because of the opportunities. These will tend to bring about competition in the milling industry and impose a threat to the already existing maize millers. Other threats in the industry follow the Poter's Five Forces Model which includes: Buyers, Suppliers, Potential entrants, Substitutes, and the Rivalry in the industry competition (Grover, 2003). Other threats which exist include competition from commercial milling companies which are very big in distribution and marketing and are very effective.

# CHAPTER FIVE
# CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

This is the last chapter of the thesis and this basically presents the conclusions and the recommendations drawn from the findings.

## 5.2 Conclusion

From the findings and discussion it can be concluded that most SSMM business were owned by males that is 65.8% of the respondents and 34.2% were owned by females. From this it can be said that less women own hammer-mills which needs to be balanced simply by encouraging more women to venture into hammer-mill business. It was also observed that out of the 76 respondents interviewed 63.2% had attained an education level of up to primary level and only 7.9% had gone up to university level. This showed that most of the hammer-mill operators were ill educated and this was one of the contributing factors to the poor management of the business. Education is one key to success of the business simply because one can easily understand perfectly well how the business operates and make sound decision. Overall it can be concluded that SSMM in Lusaka province lacked a lot of attributes which included, a lack of trained employees, the education levels of most employees was said to be lacking, the knowledge on the financial institutions that offers loans was said to be lacking, education level of the owner of the hammer-mill was also lacking, and other attributes which were said to be important in the general running of the business.

Most SSMM's marketing strategies were said to be inadequate as most of them used other means of advertising which included putting up of posters and distribution of fliers which was not as effective as other means like putting up of bill boards and advertising on television. Therefore more needs to be done in order to improve the mode of advertising. There where more weaknesses and threats which were noticed during the

study and some of them included threats from commercial milling enterprise which had more economies of scale. The weaknesses which were observed by the researcher were mainly the lacking of the trained personnel and the lack of education on both the owners and the employees. The management structure of the SSMM was said to be very simple which the owner-children-relative-worker was basically the order of authority. The owner made all the decisions and was the CEO and the Managing Director at the same time and was also the accountant and the marketing manager. In short the owner is basically everything in the business.

Most of the problems of management of small-scale maize millers emerge from the characteristics which have been observed from the data interpretation. In the first place it is important to note that most small-scale maize millers are not founded on serious business footing, thus they have people with diversity of views, the structure and the workplace environment leads to emergence of several problems-conflicts are inevitable, clash of ideas, personality differences all of which lead to organization ambiguities-these if not well handled can lead to the collapse of the small-scale maize millers or retard there expansion.

As earlier seen most of the small-scale maize millers are run on the family basis creating a situation of owner-children-relative-worker-manager-thus the growth and development is basically engineered by one family head who may lack a clear vision of management of human resources and the finances the business may be run on little or no records at all. The absence of the owner leads to a total halt in the operation of the business. It is common under such situations for the owner/manager to fear delegation of responsibilities to his/her subordinates therefore during his/her absence nothing much can be done or accomplished.

The survey showed that most small-scale maize millers were run by merely experience and observation. Thus the approach to operations of the business is experience oriented with little or absolutely no formal training at all in the area of management. This denies the milling business the key professional touches to modern running of the business.

They basically do not separate ownership from management and always fear to take on trained personnel to manage the business the few who are outward looking and wish to hire the services of professional managers often cannot simply afford the costs involved. The different marketing strategies of the small-scale maize millers can be improved upon through educating the owners the different ways of packaging, how to price, promotion and marketing positioning of the business. It was also observed that the level of education of the owners of the hammer-mills was up to the level of either primary or secondary which means that they were ill educated.

### 5.3 Recommendations

From the conclusions above I can therefore recommend the following that;

- Training should be provided to improve financial management and planning skills of hammer-mill owners/operators, especially for the small-scale maize millers by the government.
- Learning institutions should provide courses in hammer-mill operations and how to repair the machine for in-service.
- The number of selling points of spare parts has to be increased, especially in the out skirts of Lusaka. Each district should have a distribution point at least.
- In the hammer-mill manufacturing industry a shift in production may be needed, from producing complete machines to focusing more on spare parts production and maintenance.
- The diversification of income generating activities at or around the hammer-mill sites should be encouraged by extension agents.
- The government should assign extension staff to monitor and advise the small-scale maize millers on techniques and management skills of operating the hammer-mill.
- The government should establish well monitored, affordable credit facilities for small-scale maize millers willing to invest in commercial milling and to facilitate the growth and expansion

- They should a well established policy framework for the small-scale maize millers to enable them operate efficiently in the business environment. They should some form of protection in form of subsidies and reduced taxes to facilitate the smooth growth.
- Further research will be required on the impact of hammer-mills on the inter-linkages with household food security issues.
- In an economy where capital, technical and managerial skills are scarce, small-scale maize millers would be the ultimate logical step to industrialization.
- Women should be encouraged to start the maize milling business which is said to be profitable and can therefore increase the household incomes thereby reduce poverty.

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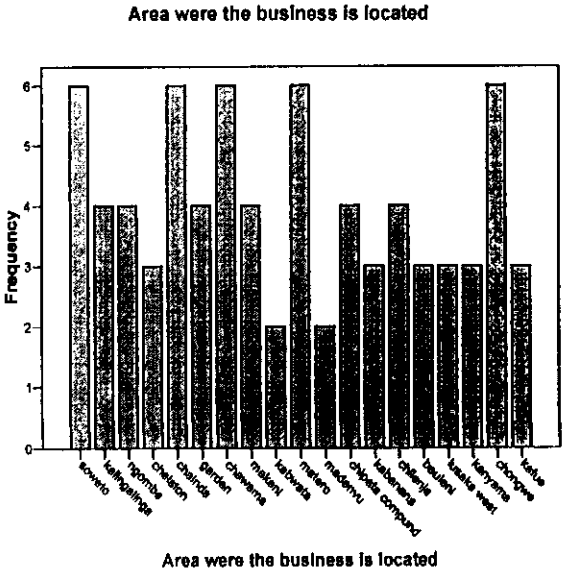
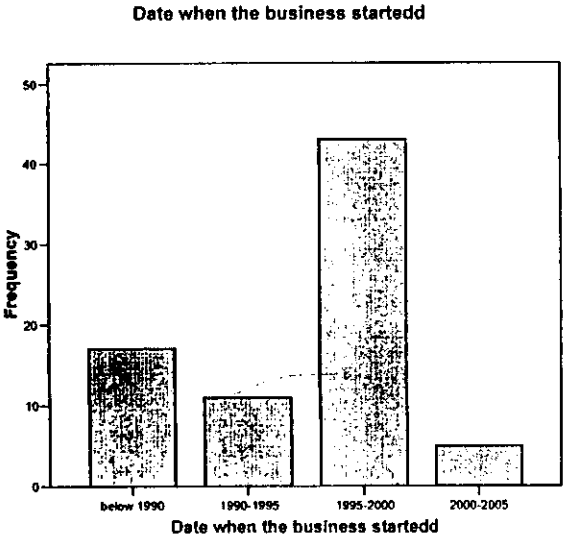
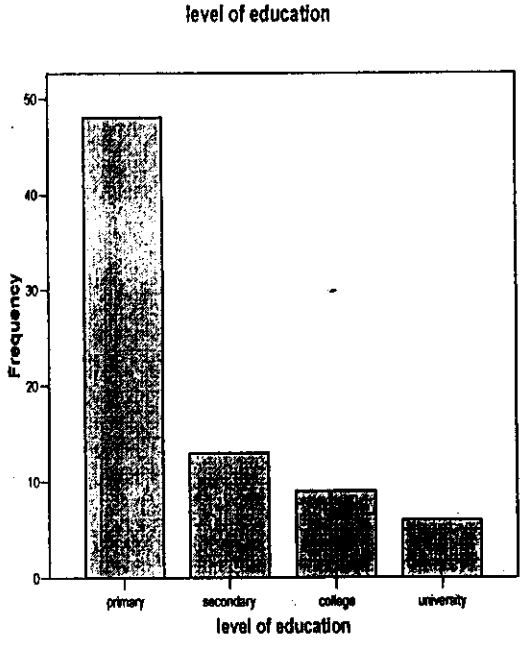
# APPENDICES

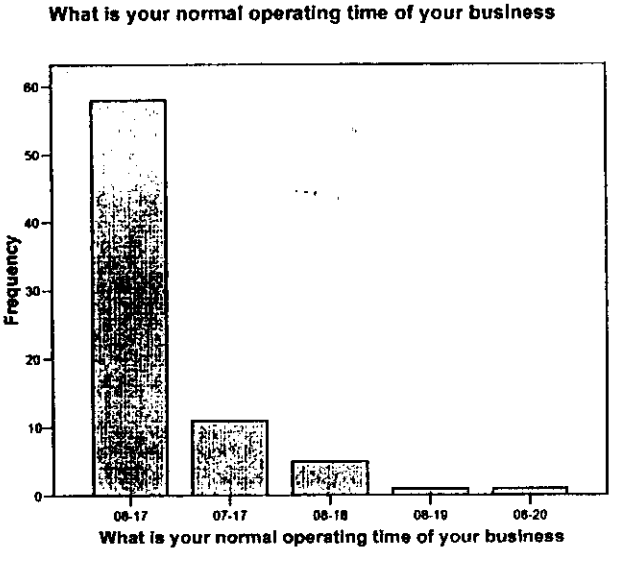
# APPENDIX 1: GRAPHS AND TABLES




Source: Own Survey Data

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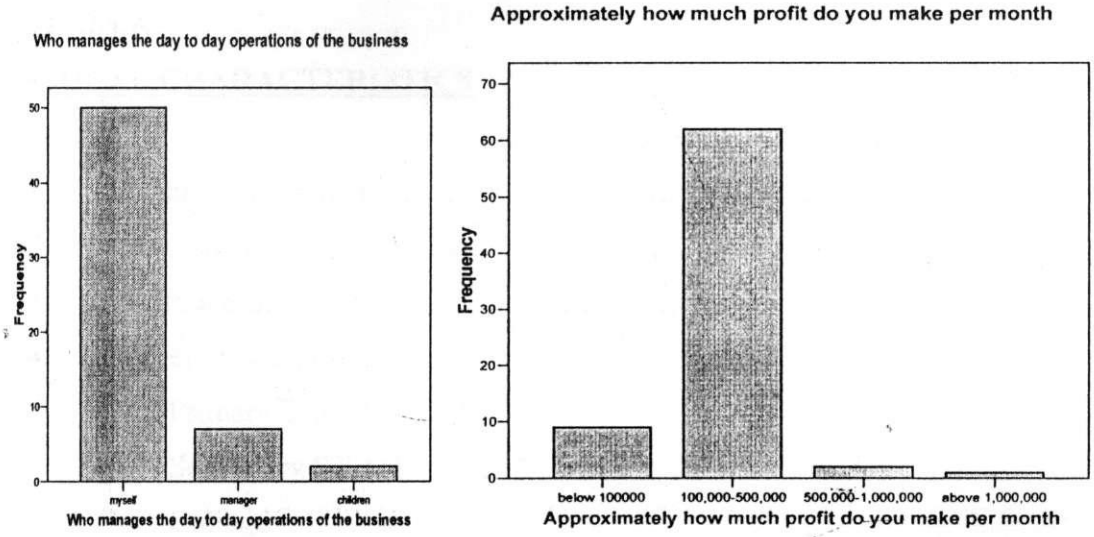


Source: Own Survey Data

**Table 10: Specific Place Were the Business Is Located**

| Area | Number | Percent |
|---|---|---|
| Soweto | 6 | 7.9 |
| Kalingalinga | 4 | 5.3 |
| Ngombe | 4 | 5.3 |
| Chelstone | 3 | 3.9 |
| Chainda | 6 | 7.9 |
| Garden | 4 | 5.3 |
| Chawama | 6 | 7.9 |
| Makeni | 4 | 5.3 |
| Kabwata | 2 | 2.6 |
| Matero | 6 | 7.9 |
| Madenvu | 2 | 2.6 |
| Chipata Compound | 4 | 5.3 |
| Kabanana | 3 | 3.9 |
| Chilenje | 4 | 5.3 |
| Bauleni | 3 | 3.9 |
| Lusaka West | 3 | 3.9 |
| Kanyama | 3 | 3.9 |
| Chongwe | 6 | 7.9 |
| Kafue | 3 | 3.9 |
| Total | 76 | 100.0 |

Source: Own Survey Data

## APPENDIX 2: SURVEY QUESTIONNAIRE

**SECTION A:**

**PERSONAL CHARACTERISTICS**

1. Name of the owner.....
2. Sex.....
3. Marital Status.....
4. Level of education

   Primary School [ ]
   Secondary School [ ]
   College [ ]
   University [ ]
   None [ ]

5. Name of the business.....
6. Area were the business is located.....
7. Districts were the business is located.....
8. Date when the business started.....
9. Indicate the type of milling you do?

   Domestic i.e. home consumption [ ]
   For business i.e. selling [ ]
   Commercial [ ]
   Service [ ]

10. What type of milling products do you produce? Indicate what is applicable.

    Samp [ ]
    Breakfast mealie meal [ ]
    Roller mealie meal [ ]
    No. one meal [ ]
    Chicken feed [ ]
    Animal feeds [ ]

Others specify.....

11. How many hammer-mills do you own?.....

**SECTION B:**

**OPERATIONAL ASPECT**

12. The hammer-mill that you have is it?

    Diesel engine [ ]

    Electric engine [ ]

    Petrol engine [ ]

    Other specify.....

13. How many people operate the hammer-mill .....

14. What is your normal operating time of your business.....

15. Do you open during the weekend?

    Yes [ ]

    No [ ]

16. If yes what time do you open and close during the weekend?.....

17. Do you any institution that offers courses on how to operate a hammer-mill?

    Yes [ ]

    No [ ]

18. If yes which institution offers such courses?.....

19. What type of problems do you normally experience concerning the operations of the hammer-mill?.....

    .....

    .....

20. How many employees do you have?.....

21. Who repairs the hammer-mill when it breaks down or maintains it?.....

**SECTION C:**

**MANAGERIAL ASPECT**

22. How did you start your business?

.....

.....

23. Do you know any financial institution that offers loans to the small-scale agro processors?

Yes [ ]

No [ ]

24. If yes which financial institution do you know?

.....

25. When starting the business, did you get a loan or you had your own capital?

.....

26. What is the minimum qualification of your employees?

Primary school [ ]

Secondary school [ ]

College [ ]

University [ ]

Others specify.....

27. Have you ever received any help from the government?

Yes [ ]

No [ ]

28. If yes what type of help did you receive from the government?.....

.....

.....

29. Do you have any plans to expand your business?

Yes [ ]

No [ ]

30. If yes how would you expand your business?

..... .....

31. Who manages the day to day operations of the business?

.....

32. Approximately how much profit do you make per month?

.....

33. Do you have any employees who are trained in such fields as marketing, production, accounting and management?

Yes [ ]

No [ ]

34. If yes how many employees are trained in the above professionals?

.....

.....

**SECTION D:**

**MARKETING ASPECT**

35. Do you encounter any difficulties in marketing your products within Lusaka?

Yes. [ ]

No [ ]

36. If your answer to question 35 is 'yes', then indicate the problems that you have encountered when marketing your products?

a. lack of good domestic transportation [ ]

b. poor product handling facilities [ ]

c. lack of information on emerging domestic markets [ ]

d. Low product prices [ ]

e. others (specify).....

37. Do you have adequate storage facilities for your products?

Yes [ ]

No [ ]

37. If your answer to question 37 'yes' what type of storage facilities do you have?.....

.....

38. Do you have access to marketing information on milling products?

Yes [ ]

No [ ]

39. If 'yes' how would you rate the information got on product marketing?

Very good [ ]

Good [ ]

Fairly good [ ]

Poor [ ]

Very poor [ ]

40. Are there any other problems you face when accessing market information?

Yes [ ]

No [ ]

41. If your answer above is 'yes', then what are the major problems that you face in accessing the market information?.....

.....

.....

.....

42. Do you advertise your products?

Yes [ ]

No [ ]

43. If the answer to question 42 is 'yes' then how do you advertise your products?

Radio [ ]

Television [ ]

Newspapers [ ]

Others (specify).....

**SECTION E:**

**STRATEGIC MARKETING**

44. Do you sometimes seek the help of the commodity exchange when marketing your products?

    Yes [ ]

    No [ ]

45. If the answer to question 44 is 'yes', then how would you rate there services?

    Very good [ ]

    Good [ ]

    Fairly good [ ]

    Poor [ ]

    Very poor [ ]

46. Before producing the milling products do you usually consider the prevailing market conditions such as prices, demand and supply of the milling products?

    Yes [ ]

    No [ ]

47. Who are your main customers of your milling products?.....

    .....

    .....

48. What prices are your customers paying for your milling products?

    Breakfast meal.....

    Roller meal.....

    Samp.....

    No one meal.....

    Chicken feed.....

    Others (specify).....

49. What is your standard measurement of the Maize for service milling and other products?.....

    .....

50. How do you package your products and what materials do you use?.....

.....

51. What are the major costs which you usually incur in the packaging of the milling products?.....

.....

52. Suggest any ways which the government can use in order to improve marketing of the milling products and any help the government can render to you as small-scale maize millers?.....

.....

.....

.....

.....

53. From your own observation of your business what have been the main factors affecting the performance of your hammer-mill and the business as a whole? Please list them according to the importance.....

.....

.....

.....

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.....

.....

.....

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END OF QUESTIONNAIRE THANK YOU VERY MUCH