



BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

GRADUATE SCHOOL OF BUSINESS

MASTER OF LEADERSHIP AND CORPORATE GOVERNANCE DEGREE

**FACTORS AFFECTING COMPETITIVENESS IN PLASTIC
MANUFACTURING COMPANIES IN ZIMBABWE**

BY

TERERAI MARAIDZA (B211853B)

SUPERVISOR: DR. GILBERT KICHINI

**A DISSERTATION SUBMITTED TO THE BINDURA UNIVERSITY OF
SCIENCE EDUCATION IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR A MASTER OF LEADERSHIP AND CORPORATE
GOVERNANCE DEGREE QUALIFICATION**

BINDURA, ZIMBABWE

DECEMBER 2022

APPROVAL FORM

The undersigned certify that they have read and recommended to Bindura University of Science Education (BUSE) for acceptance a Dissertation entitled “**Factors affecting competitiveness in plastic manufacturing companies in Zimbabwe**” by **Tererai Maraidza** in partial fulfillment of the requirements for the degree of Master of Leadership and Corporate Governance (MLC).

Tererai Maraidza
Student

Signature: *TMaraidza*

Date: 19/12/2022.

Dr G.Kichini
Supervisor

Signature: *G.Kichini*

Date: 21/12/22.

..... Signature:Date:

GSB Director

..... Signature:Date:

Faculty Chairperson

..... Signature: Date:

External Examiner

RELEASE FORM

NAME OF AUTHOR: **TERERAI MARAIDZA.**

TITLE OF DISSERTATION: **FACTORS AFFECTING COMPETITIVENESS IN
PLASTIC MANUFACTURING COMPANIES IN
ZIMBABWE**

DEGREE: **MASTER OF LEADERSHIP AND CORPORATE
GOVERNANCE**

YEAR DEGREE AWARDED: **2023**

Permission is hereby granted to the Bindura University of Science Education Library to produce copies of this dissertation for private, scholarly, or scientific research purposes. The author reserves other publication rights for the dissertation or extensive extracts from it to be printed or otherwise reproduced without the author's written permission.

Signature: *TMaraidza*

Date: 19th December 2022

Permanent Address:

Stand No: 31704
Damofalls Phase 6.
Ruwa
Zimbabwe

E-mail:

maraidza@gmail.com

Cell Number:

+263772967920

DECLARATION

I, **TERERAI MARAIDZA**, do hereby declare that this dissertation is a result of my own investigation and research, except to the extent indicated in the acknowledgments, bibliography, references, and comments included in the body of the report, and that it has not been submitted in part or in full for any other degree to any other university.

Terera Maraidza

19/12/2022

STUDENT SIGNATURE

DATE

Dedication

To my beloved wife Irene, son Frederick, my beautiful daughters Ruvarashe and Sharai, my late wonderful parents and the Almighty God, who gives me strength to do all things in Christ Jesus, Amen.

Acknowledgments

I did this research study on a part-time basis when I was on full-time employment with Corbett and Company. I would like to express my heartfelt appreciation to the managing director, Mr. Jason Corbett, for the support and time allowed throughout the duration of my research study.

The support and guidance from my supervisor, Dr. Gilbert Kichini, was just exceptional, and will never forget it. You are very much appreciated Doc. I should like to thank Dr. Judith Mwenje, the Director of the Graduate School of Business who also happened to be my Business Research Methods senior lecturer. Thank you for your guidance, Doc. You are a great teacher and I appreciate you.

It is very important to recognize the support from the Plastics Manufacturers Association of Zimbabwe (PMA), the National Employment Council for the Plastics Manufacturing Industry (NEC), and the Confederation of Zimbabwe Industries (CZI). You made this research study a success and I appreciate you.

My acknowledgments would not be complete without mentioning my sweetheart, Irene, and our children Frederick, Sharai, and Ruvarashe for allowing me time to be absent as I pursued this worthwhile research study. Today I say to you, I love you from the bottom of my heart and you will always have a special place in my heart.

When everything is said and done, it is the Lord God Almighty who gives me the strength to go beyond my imagination. To you Lord be all the glory and honor. Amen

Abstract

The plastic manufacturing industry in Zimbabwe is a sector of strategic importance to the economy as it supplies critical products to almost every other sector with packaging, agriculture, construction, automotive, and household taking the lion's share of its end-user markets. Globalization and trade liberalization has opened business opportunities but in the same vein, it has also opened a floodgate of competitive pressure to the industry. This study was conducted to investigate internal and external factors affecting competitiveness in the plastic manufacturing industry in Zimbabwe. The study had a total population of 105 plastic manufacturing companies out of which a purposive-convenience non-random sample of 52 plastic manufacturing companies was chosen and investigated using a descriptive cross-sectional research design with an online survey strategy. The study used online questionnaires and interviews as data collection techniques. The SPSS statistics program was used to analyze the data. The study came out with the findings that human capital, remuneration systems, technological development, organizational culture, power supply, financial access, competition pressure, support systems and high wages significantly affect firm competitiveness in plastic manufacturing companies. The study made recommendations of measures that could be adopted to enhance firm competitiveness in plastic manufacturing companies.

Key words: Competitiveness, Plastic manufacturing industry, Porter's diamond model, Porter's five forces model.

TABLE OF CONTENTS

COVER PAGE.....	
APPROVAL FORM.....	1
RELEASE FORM.....	2
DECLARATION.....	3
DEDICATION.....	4
ACKNOWLEDGMENTS.....	5
ABSTRACT.....	6
TABLE OF CONTENTS.....	7
LIST OF TABLES.....	8
LIST OF FIGURES.....	9
LIST OF ACRONYMS.....	10
CHAPTER ONE.....	11
CHAPTER TWO.....	29
CHAPTER THREE.....	46
CHAPTER FOUR.....	52
CHAPTER FIVE.....	65
REFERENCES.....	70
APPENDIX 1: QUESTIONNAIRE.....	74
APPENDIX 2: INTERVIEW GUIDE.....	80
APPENDIX 3: SUPERVISOR REPORT.....	82

LIST OF TABLES

TABLE 1 Plastic industry categorization	14
TABLE 2 Plastic manufacturing processes	14
TABLE 3 Plastics end-user market	17
TABLE 4 Sample frame	47
TABLE 5 Likert scale used	52
TABLE 6 Human capital mean and standard deviation	56
TABLE 7 Remuneration systems mean and standard deviation	57
TABLE 8 Technological development	58
TABLE 9 Organizational culture	59
TABLE 10 Power supply	59
TABLE 11 Financial access	60
TABLE 12 Competition pressure	61
TABLE 13 Support institutions	62
TABLE 14 High wages	63

LIST OF FIGURES

FIGURE 1 Proposed conceptual framework	31
FIGURE 2 Porter's five forces model	36
FIGURE 3 Porter's diamond model	39
FIGURE 4 Gender distribution	53
FIGURE 5 Age group frequency	54
FIGURE 6 Professional qualification frequency	55
FIGURE 7 Work experience frequency	55

LIST OF ACRONYMS

CAGR	Compounded Annual Growth Rate
CZI	Confederation of Zimbabwe Industries
GDP	Gross domestic product
NEC	National Employment Council for The Plastics manufacturing Industry
PMA	Plastics manufacturers association of Zimbabwe

CHAPTER ONE: INTRODUCTION

1.0.Introduction

In this highly competitive world, understanding factors affecting the competitiveness of a strategic industry is the key to the sustainable economic development of a country. The plastic manufacturing industry in Zimbabwe plays a crucial role in driving economic growth as it supports almost every sector of the economy. The focus of this study was on the factors affecting competitiveness in plastic manufacturing companies in Zimbabwe. In this chapter, the researcher gives a background to the study by defining the problem areas that warranted the need for the study. Key areas covered in the chapter are; background of the study, overview of the plastic manufacturing industry in Zimbabwe, statement of the research problem, purpose of the study, research objectives, research questions, assumptions of the study, limitations of the study, scope of the study, justification of the study, significance of the study and the chapter closes with the structure of the research report.

1.1.0. Background to the study

Globalization and market liberalization has subjected plastic manufacturers in Zimbabwe to fierce competition from both domestic and global plastic manufacturers who are also targeting the same domestic and international market. Damiyano et al (2012) states that Zimbabwean companies are facing increasing competition and are struggling to cope both on the exports and imports front in an international economic setting. Mostert (2003) state that some businesses may even be forced to close shop if they cannot compete with the lower prices of foreign competitors. The plastic manufacturing industry in Zimbabwe is a pillar of the economy and a catalyst of economic growth as it supports almost every other sector with critical packaging, inputs and various other products. This scenario mean that an uncompetitive plastic manufacturing industry could have a negative impact on the country's Growth Domestic Product(GDP) and could stand in the way of the Government's vision of attaining a middle-income class status economy by 2030. The study sought to investigate factors affecting competitiveness in plastic manufacturing companies in Zimbabwe and to recommend measures that could be adopted to enhance competitiveness in this critical industry.

1.1.1. Global trends of plastics

The covid-19 pandemic era saw a marked global increase in plastic use for plastic face shields and other related plastic medical products beginning last quarter of 2019 to last quarter of 2021. The closure of borders due to lockdowns gave global, regional and local plastic manufacturers competitive advantage over foreign competitors with many jurisdictions classifying the industry as an essential services provider and thereby allowed to operate with minimal interruptions. The pandemic has since subsided in most economies with almost all borders opened and further unleashing competition pressure to local plastic manufacturing companies.

The global demand of plastic products is set to grow to exponential levels in the medium to long-term buoyed by substitution in mature markets such as Western Europe. The projected marked growth in volumes in emerging markets such as China, Brazil, India, Russia and closer to home, South Africa, is also expected to push demand. The OECD (2022) states that global plastic use is projected to almost triple, from 460 million tons in 2019 to 1231 million tons in 2060. It further points out that plastic use will grow fastest in developing and emerging economies in Africa and Asia with Africa in particular projected to grow 6.5 times. This phenomenon presents an opportunity for growth to global, regional and local plastic processors. Driven by the rising use of plastics in packaging and construction industries, the Expert Market Research (2022) report that global plastic market attained a value of nearly USD\$580 billion in 2020. The market is expected to witness a further growth in the forecast period of 2023-2028, growing at a CAGR of 5% and projected to reach nearly USD\$713 billion by 2026

On the 24th February 2022, Russia invaded Ukraine and this conflict disrupted the supply chain and resulted in regional and local shortage of raw materials. The shortage pushed the prices of raw materials upwards and resulted in importing companies becoming less competitive against their counterparts in developed countries whose supply chain was not affected as much. The third quarter of 2022 saw the market slightly recovering from the shock of the Russo-Ukrainian conflict but as the war rages on, prices of plastic raw materials are likely to remain high as global demand remain high with oil prices remain high due to supply chain challenges being currently experienced. Global environmental pressures on recycling of plastics are gaining momentum worldwide and this constitutes a significant cost to manufacturers of plastics and further reduces already thin margins.

In Zimbabwe, the growth in the poultry, horticultural and construction industry coupled with the increase in capacity utilization of the local manufacturing sector is expected to boost

demand of plastic products in the short to medium term. Load shedding, however, has become a big threat to the competitiveness and viability of the local plastic manufacturing industry. It has become common that power outages of up to fourteen hours are experienced in a single day. Government has reported some measures to close the energy supply gap and we can only hope that these measures will come to the rescue of the plastic manufacturing industry without further delay. Despite these challenges the future prospects for the industry looks bright with the anticipation that new customer preferences will open up new opportunities especially for recycled material.

1.1.2. The local plastic manufacturing industry

The nature of the plastic manufacturing industry is such that it is not easy to precisely define companies that constitutes the industry. This is because big firms involved in another end user sector, for example, automotive battery manufacturing, could have an in-house plastic manufacturing operation for their packaging requirements and this makes that firm ‘a plastic manufacturing company’ in the strictest sense of the word. On the other hand, there could be a small plastic firm whose core business is plastic manufacturing. In this study, a strict approach was used whereby a firm is classified as a plastic manufacturing company if its primary core business is plastic manufacturing. The Plastic Manufacturers Association of Zimbabwe (PMA) and National Employment Council for the Plastic Manufacturing Industry (NEC) concurred with the approach and only firms in the core business of plastic manufacturing fall under their purview. The approach was used to classify companies with the sole purpose of making data analysis simplified. This classification did not include support industries or elements of the supply chain like raw material suppliers.

The industry comprises of one hundred and five processors and has about 1100 employees (NEC 2022). The demographics of the companies are such that 50% of the companies specialize in injection molding followed by 21 % in blow molding, 19% in extrusion, 5% in rotational molding and another 5% in vacuum foaming. 72% of the companies are located in Harare, 8 % are in Bulawayo while 20% are spread in other parts of the country as shown on Table 1 below.

Table 1: Categorization of the plastic manufacturing industry

Manufacturing process	Location				Total	% Of
	Harare	Ruwa	Bulawayo	Other		
Injection molding	44	2	2	5	53	50%
Blow molding	14	2	2	4	22	21%
Extrusion molding	11	3	3	3	20	19%
Rotational Molding	4	1	0	0	5	5%
Vacuum foaming	3	0	1	1	5	5%
Total	76	8	8	13	105	100%

Source: Own diagram

1.1.3. Plastic manufacturing processes

The plastic manufacturing processes prevalent in Zimbabwe may be categorized into five namely, Injection molding, blow molding, rotational molding, extrusion and vacuum foaming. These processes are explained on table 2 below.

Table 2: Plastic manufacturing processes explained

Process Used	Explanation
Injection Molding	Molten plastic is injected at high pressure into a mold. A fast process designed to produce volume of identical products, such as plastic poultry feeders and drinkers, buckets, television components and car parts.
Blow Molding	Molten plastic tube is extruded into a mold into which air is blown to form hollow products such as beverage and chemical storage bottles.
Rotational Molding	Mold is heated in an oven and rotated to ensure an even coating of the polymer material. This process produces road cones, storage tanks and cattle feeding troughs.
Vacuum Foaming	A thermoplastic sheet is heated until it is soft and then attached to a mold. The sheet is sucked into the mold after applying a vacuum and the product is then ejected.

Extrusion Molding

Profile extrusion: Production of a continuous length of plastic with a uniform profile, heated under pressure producing products such as irrigation pipes and strapping

Sheet Extrusion: Similar process to profile extrusion producing sheets of plastic or polymer, such as food wrapping or green house sheeting.

Source: Adapted and modified from SQW Ltd/Rapa Technology

1.1.4. Technological trends in plastic manufacturing

In the plastic manufacturing industry, firm competitiveness is hinged on the state of technology in the manufacturing process and this includes machinery, molds and automation. Advanced technology in machinery and manufacturing processes result in economies of scale, better design, less machine downtime, lower maintenance costs, shorter cycle time, less direct labor costs and very minimal material wastage. All the above factors affect the price and structural competitiveness of a plastic product in plastic manufacturing companies. Over the past two decades, the manufacturing sector in Zimbabwe in general and the plastic manufacturing industry in particular has been going through a myriad of challenges, chief among which has been the shortage of foreign currency and lack of foreign direct investment. The challenges have resulted in the local plastic manufacturing industry lagging behind foreign competitors in terms of manufacturing technology.

The competitive value of the local plastic manufacturing industry's technology may be measured by classifying technologies as basic, key, pacing and emerging. This classification is also informed by the resource- based view which postulates that possession of a strategic resource is a source of competitive advantage for an organization.

The basic manufacturing technology in the Zimbabwe plastic industry

The basic technology is that technology that characterizes almost all plastic manufacturing companies in the whole world especially among start-ups. It is called basic because it is the foundational technology required to be in the plastic manufacturing business. Every start-up in the industry must possess this technology to be in business and therefore is not a strategic resource and offers little or no competitive advantage. The returns prospects are fairly small so is the risk associated with its use. This technology involves the use of basic manufacturing systems in injection molding, blow molding, extrusion and vacuum foaming. Due to its universality, firms employing this technology may find it difficult to compete. Thus, given that Zimbabwean plastic manufacturing companies rely heavily on this technology, they struggle

to compete against companies from emerging and developed economies who use advanced technology.

Key technology in plastic manufacturing

Key technology refers to established and current technology which may not be universally practiced but offering competitive advantage to companies using the technology. This technology has largely driven plastic manufacturing especially in emerging economies like South Africa, China, Brazil, Russia and India. Plastic companies using this technology may be viewed as leaders in their industry and could enjoy high returns prospects. Examples of products manufactured using such key technology would be plastic reinforced with metal to produce a coffee mug or a vehicle part.

Pacing technology

This is state-of-the art technology which is well developed and may be a big source of competitive advantage to firms employing this technology. Firms with the vision of becoming industry leaders would pursue these technologies for future opportunities. The prospects for high returns are high so is the risk. This technology could be found in well developed countries like the United States of America. An example of the use of this technology is the use of micro-molding in the production of tiny medical components for implanting in the body.

Emerging technology

This involves cutting-edge but unproven plastic manufacturing technology still in the infancy stage and requiring further pioneering in manufacturing. The prospects for returns are very high so is the risk. An example of this technology is shape memory plastics which is able to take a different form at a certain temperature and also capable of taking a different form when heated. This technology is found in developed countries mainly in Europe and the United States of America.

1.1.5. End-user market of the plastic manufacturing industry

Plastics possess inherent properties and characteristics which make it the material of choice for almost every sector of the economy. This diversity in the market structure insulates the industry from the effects of demand shock from any particular sector.

A large number of end-user sectors depend on plastics with packaging taking a lion's share of its uses across the globe. The different end-user markets are shown on table 3 below.

Table 3: End-user market for the plastics manufacturing industry

End-user market	Example of products
Agriculture	Poultry feeding equipment, irrigation pipes, green house sheets, seed trays
Packaging	Beverages, water, chemicals, Paint, pharmaceutical
Automotive/Transport	Road cones, car parts, space craft
Construction	Plumping pipes, wheel barrow panes, guttering, roofing sheets
Electronic/Electrical	Socket covers, Iron covers, TV covers
Household	Buckets, plates, plates, water storage tanks, cups
Leisure	Gym equipment, toys, children playing equipment
Medical Equipment	Syringes, bandages, optical frames, dentures

Source: Own diagram

The major end-user markets are explained below:

Agriculture

Zimbabwe is an agriculturally based economy and heavily depends on agriculturally based industries to boost its Gross Domestic Product (GDP). The plastic manufacturing industry supplies poultry feeding equipment to the poultry industry, green house plastic sheeting and handling crates for the horticultural industry, ear tags for the beef industry, strapping for the tobacco industry, fertilizer bags for the chemical industry. Irrigation pipes for farming. Any competitiveness challenges facing the plastic manufacturing may have a direct negative effect on these critical industries of the economy.

Packaging

Plastics inherent features of clarity, hygienic, cost effectiveness and light weight make it the number one preferred packaging for the beverages, pharmaceuticals, chemicals and other various sectors in Zimbabwe. It is widely used for numerous packaging applications including beverage bottles, cooking oil bottles, water storage containers, chemical bottles, medicine bottles and ready to drink bottles

The competitiveness of the plastic manufacturing industry has a direct effect on these end-user market industries as they depend solely on it. The critical importance of the plastic manufacturing sector is also underscored by the fact that it is not economic to import empty plastic bottles as they are voluminous and could mean 'importing' air.

Household

As plastics are highly hygienic, corrosion resistant, cost effective and light in weight they are used for household items like plates, cups, basins, cutlery and various other household items. The plastic manufacturing industry therefore support human life and its competitiveness may have an effect on the standard of living of the people.

Construction

The construction industry depends on the plastic manufacturing industry for black sheeting used in building foundations, construction tools like wheelbarrows and shovels, roofing sheets, window frames and various other uses.

Medical and healthcare

The plastic manufacturing industry supplies the medical and health sector with critical items like blood bags, artificial limbs, dialysis machines, heart valves, syringes and wound dressing. The researcher could not imagine any other material that could be used for these essential medical products except plastics.

1.1.6. Overview of the local plastic manufacturing industry

The phenomenon of factors affecting competitiveness in plastic manufacturing companies is not only prone to developing economies like Zimbabwe but is common across the African continent.

The Plastics Industry in Africa special report (2022) point to the following factors affecting the competitiveness of the plastics industry in Africa and these include domestic production being supplanted by imports, lagging behind developed countries in terms of production methods, the conservative attitude of manufacturers and consumers towards new materials, poor government support (and the strong position of the metals industry) and a shortage of good infrastructure to boost manufacturing.

In June 2016, Government promulgated Statutory Instrument (S.I.) 64 of 2016 which became operational on 1st July 2016. The aim of this piece of legislation was to address the adverse effects of an influx of imports which was threatening the viability of local manufacturing industries including the plastic manufacturing industry. Although this measure went a long way in improving the capacity utilization levels of the local plastic manufacturing industry, it did not achieve anything as far as enhancing the competitiveness of the local manufacturing industry is concerned. The best that was done by S.I. 64 was to afford local industry temporary reprieve from the adverse effects of lack of competitiveness.

Plastics SA (2014), highlights the following factors affecting competitiveness in the plastic manufacturing industry in South Africa and these include no customized incentive programs for the industry, strong competition from imports, high cost of input material, preferential procurement not assisting the industry to grow, uneven playing field with international competitors, specifications used as protectionism, limited level of export readiness, shortage of infrastructure, no or limited local machine manufacturers as all equipment is imported at huge cost, weak tooling sector which is mainly just for maintenance, long distance from attractive

export markets, inland location of production facilities in the case of exports, relatively small local and regional market resulting in many mold changes and short runs, cost of labor, low productivity resulting in inability to compete internationally, cost of electricity and reliability of electricity supply, skills shortage, weak rand undermining competitiveness, trade agreement not supporting local plastic manufacturers, low pace of technological upgrading, lack of innovation entrepreneurs and limited level of export readiness.

The local plastic manufacturing industry has been going through a number of challenges chief among which includes an unstable electricity supply and antiquated machinery. This makes the local plastic manufacturing less competitive when compared to plastic manufacturers from developed and emerging economies who are endowed with a lot of financial resources to address these issues. The need for recapitalization and retooling of the local plastic manufacturing industry is urgent.

In order to address the issue of lack of competitiveness, the plastic manufacturers association of Zimbabwe (PMA) has approached the Confederation of Zimbabwe Industries (CZI), a representative body of local industries to lobby Government for duty relief and affordable financial facility for recapitalization and retooling of the industry. Although the prospects are favorable, there are no positive tangible results achieved to date.

1.2.0. Statement of the research problem

The local plastic manufacturing industry is a key industry and driver of GDP as almost every other sector relies on it for packaging, inputs or otherwise. As stated by the British Plastics Federation (2022), plastic products are widely used in practically every business sector with key beneficial properties. The industry supplies packaging to the beverage, cooking oil and chemical industries, green houses and poultry feeding equipment to the agricultural sector, black-sheeting to the construction industry and utensils to households, just to mention but a few end-user markets. However, the competitiveness of plastic manufacturers has become a global concern. Available literature, for example, Friedman (2005) state that globalization, trade liberalization and the internet has resulted in the levelling of the competitive playing field between economies. This phenomenon has opened a floodgate of competitive pressure for the local plastic manufacturing industry. According to Wu & Parvathi (2017) enterprise competitiveness has become a requirement in modern enterprises. The whole manufacturing industry in Zimbabwe is currently facing a crippling power shortage with load shedding lasting 18hrs in some instances. Although the challenge of erratic power supply is common across

other sectors, the plastic manufacturing industry is unique to other industries in that it uses heavy duty machinery that requires a reliable power supply for its smooth functioning. An erratic power supply introduces a myriad of factors that affect firm competitiveness in the plastic manufacturing industry. The strong dependence of other sectors on the plastic manufacturing industry under-score the urgent need for the investigation of factors affecting competitiveness in this industry as the state of its competitiveness could have a ripple effect on the competitiveness of other sectors and could affect the attainment of the Government's economic blueprint, vision 2030. Although there is a plethora of studies on factors affecting competitiveness in SMEs and other sectors in general, literature review has, hitherto, no research study focusing on factors affecting competitiveness in plastic manufacturing companies in particular. Given that all these studies are not recent anyway with the latest having been carried out in 2020 during the Covid-19 pandemic, they have since been overtaken by events. Furthermore, no research study has ever included power supply, organizational culture and high wages in its investigation. This has created a research gap and hence my research study on factors affecting competitiveness in plastic manufacturing companies in Zimbabwe.

1.2.1. Purpose of the study

The purpose of the study is to investigate factors affecting competitiveness in plastic manufacturing companies in Zimbabwe and to come up with measures that could be adopted to enhance competitiveness in this strategic sector.

1.2.2. Research objectives

The following were the objectives of this study;

- i. To investigate the key internal factors affecting competitiveness in plastic manufacturing companies
- ii. To determine the key external factors affecting competitiveness in plastic manufacturing companies
- iii. To recommend measures to boost competitiveness in plastic manufacturing companies

1.2.3. Research questions

The following were the research questions;

- i. What are the key internal factors affecting competitiveness in plastic manufacturing companies?

- ii. What are the key external factors affecting competitiveness in plastic manufacturing companies?
- iii. What measures can be adopted to boost competitiveness in plastic manufacturing companies?

1.2.4. Assumptions of the study

The assumptions were that respondents could identify internal and external factors affecting competitiveness in plastic manufacturing companies and that data provided by the respondents was accurate and free from error or omissions.

1.2.5. Justification of the research

The local plastic manufacturing industry is a pillar of the economy of Zimbabwe as it supports almost every sector of the economy with critical packaging and various essential inputs. Any adverse change in a factor affecting the competitiveness of this strategic sector will directly have a negative impact on the competitiveness of all other sectors which rely on it. For instance, an uncompetitive plastic manufacturing sector may negatively affect the competitiveness of the beverage sector. This may ultimately affect the competitiveness of Zimbabwe as a country.

Globalization has made competition an undeniable reality for local plastic manufacturing companies. Investigating and publicizing factors affecting the competitiveness of local plastic manufacturing companies could go a long way in enhancing the competitiveness of not only this sector but that of Zimbabwe as a country. In its Global Competitiveness report for the year 2019, The World Economic Forum ranked Zimbabwe at number 127 out of 140 nations (WEF, 2019). The competitiveness of a country is a build-up of the competitiveness of different sectors in the economy and therefore this study could be instrumental in positively contributing to the competitiveness of Zimbabwe as a country.

The factors affecting competitiveness in plastic manufacturing companies must therefore be contextualized to allow for a build-up of measures that could help in enhancing the competitiveness of this and other dependent sectors including the beverage, hotel and catering, confectionary, manufacturing and agricultural sectors. A competitive local plastic manufacturing industry could therefore help in improving the GDP of Zimbabwe and may catapult the attainment of Government's vision of attaining a middle-income economy status by 2030.

This study could be helpful to management of plastic manufacturing companies, policy makers in Government and Industry bodies like the PMA and Confederation of Zimbabwe Industries

(CZI). This study could also make a significant contribution to the current literature on factors affecting competitiveness in plastic manufacturing companies.

1.2.6. Significance of the study

As the world is now a global village, this study may be helpful to senior management officials of plastic manufacturing companies in their quest to enhance the competitiveness of their companies. Given the strategic role and the dependence of other sectors on the plastic manufacturing industry, this study could help Government and policy makers in coming up with strategies and intervention measures which can be implemented to enhance the competitiveness of not only local plastic manufacturing companies in Zimbabwe but all other sectors that depend on its competitiveness. The study may also help the academic fraternity by providing an addition to the existing literature on factors affecting competitiveness in plastic manufacturing companies. This could be useful as a basis for future studies.

1.2.7. Scope of the study

Industry competitiveness is a dynamic process over different time horizons as a result of changes in the linked factors. This study aimed at identifying the internal and external factors affecting competitiveness in plastic manufacturing companies in Zimbabwe. The study was focused on a five-year period (July 2016 to 30th of June 2021), that is, starting from when the Government introduced Statutory Instrument 64 of 2016. The SI aimed at addressing the adverse effects of an influx of imports which was threatening the viability of local manufacturing industries including the plastic manufacturing industry. Focusing on this period therefore was meant to check the inherent competitiveness factors which persisted and gave rise to the influx of imports in the first place. It covered all 105 plastic manufacturing companies in Zimbabwe registered with their industry association. The study focused on the whole industry in order to get a full picture of the sector-wide factors affecting competitiveness.

1.2.8. Limitation of the study

Given the primary research nature of the study, one of the major limitations encountered was access to secondary data from individual firms in the plastic manufacturing industry. This was occasioned by the fact that industry players regarded their data as proprietary and very much linked to their business strategies, and therefore would not want to release it. To circumvent this challenge, the industry association was approached to facilitate access to data. Another limitation is that while studies on industry competitiveness are better done as longer time series

studies, this study relied more on the cross-sectional survey response of companies offering their assessments mainly in retrospect since they were only involved in the study at the end of the five-year period which the study focused on. However, given that, the facilitation of the PMAZ ensured coverage of the entire industry's knowledge of the competitiveness factors, the problem of the study being only an end line assessment was well mitigated by the comprehensive coverage of the study.

1.3.0. Definition of key terms`

CAGR

This is an acronym for Compound Annual Growth Rate. It measures the industry's annual growth rate over time taking the compounding effect into consideration.

Competitiveness

This refers to the ability of a plastic manufacturing company to gain market share on both the domestic and international market in the face of competing firms.

Factor

This refers to a variable that affect the competitiveness of plastic manufacturing companies. A factor may be classified into either internal or external depending on whether such a factor is controlled or influenced by the management of a plastic manufacturing company.

Finance access

The degree to which affordable long-term finance is available to plastic manufacturing companies.

Globalization

IMF (2008) describe globalization as the accelerated integration of economies around the globe especially through the free movement of goods, services and capital across the borders of nations.

GDP

This is an acronym for Gross Domestic Product. It represents the total monetary value of goods and services produced in a given country during a given period

Human capital

According to the OECD (2022), it is a collection of knowledge, skills and various other personal characteristics that make employees more productive.

Independent and dependent variable

An independent variable is the cause of an outcome while the dependent variable is the outcome.

Macro-economics

It is a branch of economics concerned with economy wide activities like employment, Gross Domestic product and inflation

Mediating variable

The mediating variable links the dependent variable with the independent variable and help to explain the link between the two.

Meso-economics

It represents a branch of economics that is in between macro-economics and micro-economics. It is seized with institutional matters that are not covered by micro or macro-economics

Micro-economics

A branch of economics that deals with how supply and demand interact for goods and services in individual markets.

Organizational culture

Robbins and Coulter (2005) describe organizational culture as perceptions, beliefs and values shared by employees in an organization.

Plastics

Plastics are a wide range of synthetic or semi-synthetic materials that use polymers as a main ingredient. This makes it possible for plastics to be molded, extruded or pressed into solid objects of various shapes. Because of their strength and light weight, among other characteristics, plastics are used in a wide range of products (Parker, 2020).

Plastics can be categorized into two families, thermoplastics and thermosets. This classification is according to their characteristics when subjected to heat.

Thermoplastics can be melted, heated and hardened when cooled. These unique characteristics of thermoplastics can be reversed meaning it can be reheated, reshaped and frozen repeatedly.

Thermosets on the other hand go through a chemical change when heated. After heating and forming it cannot be re-melted again.

Remuneration systems

This refers to how employees are rewarded for their services in the plastic manufacturing industry.

Strategic Entrepreneurial Orientation

This refers to behaviors exhibited by managers and it comprises of five elements namely autonomy, competitive aggressiveness, innovativeness, proactiveness and risk-taking. McKenny et al (2018)

Support institutions

A collection of all institutions and organizations that facilitate the competitiveness of the plastic manufacturing industry.

Technological development

Technological development is the state of machinery, automation and innovation in plastic manufacturing companies.

Trade liberalization

It is about the removal of barriers to trade among international borders

1.4.0. Structure of the research report

This chapter provided the background of the study and clearly brought to the fore, the key problem obtaining in the plastic manufacturing industry in Zimbabwe. This was the first chapter of the study. The next chapter, chapter 2, focuses on literature review and reviews relevant literature related to factors affecting competitiveness in the plastic manufacturing industry in Zimbabwe. Chapter 3 provides the research methodology, outlining the research methods, study population, sampling methods used in the study as well as data collection, analysis and presentation techniques. Chapter four presents the research findings and provides an analysis and discussion of the findings while the last chapter, chapter 5, presents the conclusions and recommendations of the study.

1.5.0. Chapter summary

This chapter has now set the tone for this dissertation with a comprehensive introductory background. This introductory background outlines the need to investigate factors affecting competitiveness in the plastic manufacturing industry in Zimbabwe given the reality of globalization and trade liberalization. The key issues in this chapter hover around issues to do with the competitiveness and the strategic role played by the plastic manufacturing industry in the mainstream economy. The chapter also explains why investigating factors affecting competitiveness in plastic manufacturing companies is of critical importance. The next chapter will now focus on literature review.

CHAPTER TWO LITERATURE REVIEW

2.0 Introduction

This chapter discusses the literature relating to factors affecting industry competitiveness with special focus on the plastic manufacturing industry. In this chapter, the conceptual framework is presented in section 2.1. This is followed by the discussion of the theoretical framework in section 2.2. In section 2.3, the review of related empirical studies is presented and this is followed by the identification of the gap in literature relating to factors affecting industry competitiveness in section 2.4. Section 2.5 summarizes the chapter.

2.1 Conceptual Framework

Literature review has many definitions of competitiveness and it is generally agreed by many scholars that there is no one universally accepted definition (Krugman, 1996). These definitions differ depending on whether the focal point is for a firm, industry or country. The World Economic Forum (2016) describe competitiveness as a set of policies, institutions and factors that determine the productivity of a given country. According to the World Bank Group (2016), competitiveness is seen as the sustained ability of enterprises and industry to not only capture the market share but also to grow the market by improving productivity. On the other hand, the OECD (1996) secretariat made a suggestion that competitiveness may be understood as the firms, industries, regions or supranational ability to sustainably generate relatively high factor income and factor employment levels. Sajad Nia et al (2015) state that competitiveness is the firm's success when compared with other firms in the same industry, national and international arena. Competitiveness refers to the company's ability to achieve more sales or customer loyalty than their competitors due to the price, quality or a combination of both factors (Indeed, 2022). Competitiveness of companies is defined as their ability to function in a competitive environment (Sipa et al, 2015; Dzikowska & Gorynia, 2012)

In order to do justice to this study, it is important for the researcher to also define product competitiveness as this is what eventually counts at the end of the day.

Product competitiveness is when a product is able to achieve more sales or customer loyalty than that of its competitors due to the price, quality, customer service or a combination of all these factors.

Product competitiveness can be divided into two, namely price competitiveness and structural competitiveness.

Price competitiveness is when a firm can maintain the quality of its product or service while offering a price cheaper than that of its rivals.

Structural competitiveness refers to a firm's capability to achieve better sales or customer loyalty of its products over its competitors irrespective of the price being charged. This may be as a result of a competitive advantage emanating from a stronger brand, better quality, superior customer service or a combination of all these factors.

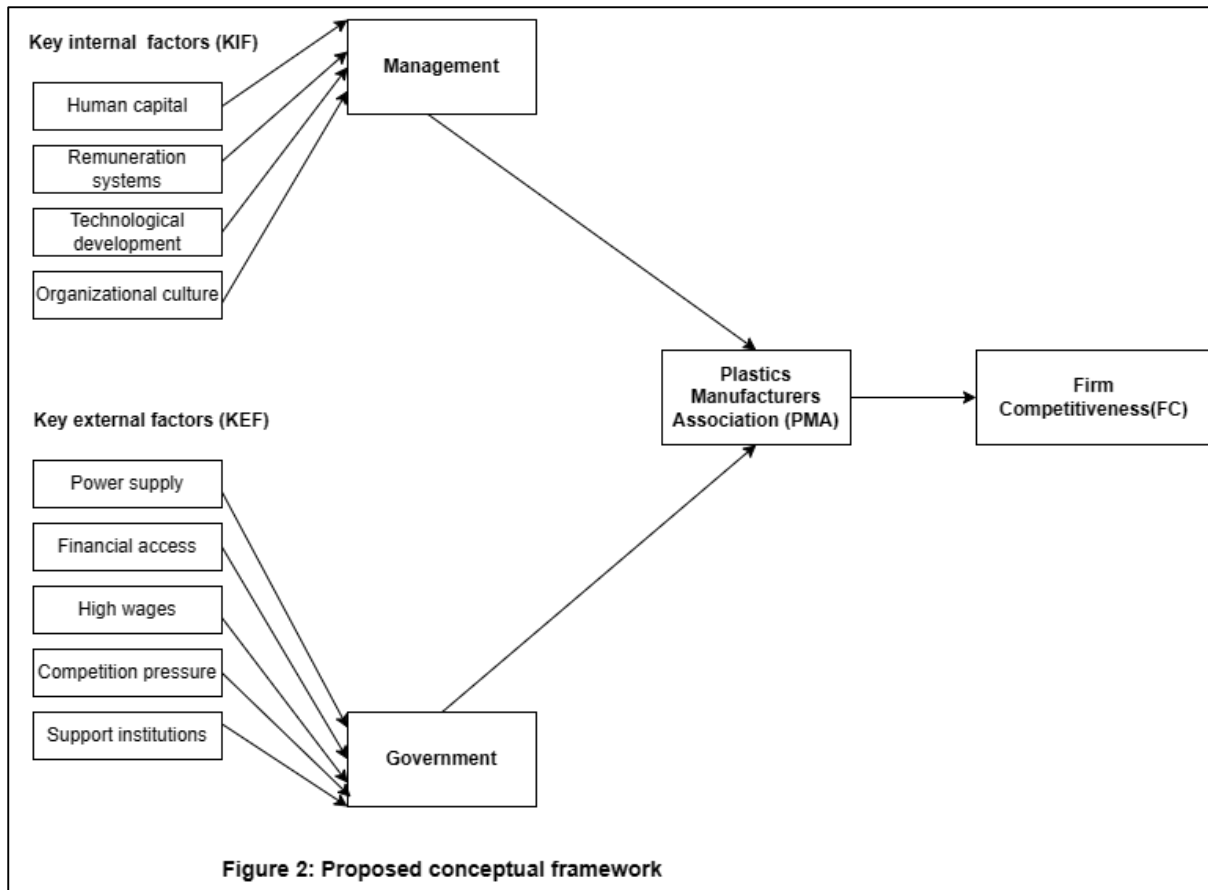
The World Economic Forum (2019) ranked Zimbabwe at number 127 out of 140 countries in its 2019 global competitiveness report. This somehow give an indication that industry competitiveness could be an economy-wide challenge in Zimbabwe. According to Siyakiya (2018), various scholars are of the view that countries don't compete as countries but that, their enterprises do, and it is the Government's responsibility to ensure that better economic environment, institutions and policies exist for efficient operations of enterprises.

Although some factors affecting industry competitiveness are common across different industries, the plastic manufacturing industry deserves a separate analysis due to the critical role played by the industry in the mainstream economy and also the uniqueness of its manufacturing process .Factors that contribute to the uniqueness and critical importance of the local plastic manufacturing industry include that it serves almost every other sector of the economy, it uses heavy-duty machinery which depend on power and skilled technical manpower and that it uses imported plastic raw materials.

Over the past two decades till now, Zimbabwe has been facing a lot of challenges including a crippling power shortage, lack of foreign currency, brain drain and lack of foreign direct investment among others and these challenges have negatively impacted on the competitiveness of the plastic manufacturing industry.

Factors affecting competitiveness in the local plastic manufacturing industry can be categorized into internal and external factors. The researcher's decision for this classification is informed by the resource-based theory. According to the resource-based theory, organizations that own strategic resources have important competitive advantages over organizations that do not have such resources. A strategic resource is an asset that is valuable, rare, difficult to imitate and non-substitutable (Barney, 1991).

The conceptual framework is diagrammatically shown on Figure 1 below.



Source: Own diagram

Key internal factors

Independent variables

Stawaz (2019) state that internal factors relate to an enterprise’s ability to develop its own competitiveness or own competitive advantage. The four key internal factors affecting competitiveness in plastic manufacturing companies in Zimbabwe are human capital, remuneration systems, technological development and organizational culture.

Human capital

The plastic manufacturing industry uses heavy machinery which requires highly skilled technical staff for its maintenance and day to day smooth functioning. The past two decades saw Zimbabwe experiencing brain drain with skilled personnel leaving for greener pastures in South Africa and overseas. This has negatively affected competitiveness in the local plastic manufacturing industry as some machines end up being idle resulting in low productivity levels. In some instances, the quality of a product is compromised as the machine will not be in good working order resulting in above average rejects and wastage rate.

Remuneration systems

The remuneration culture currently obtaining in the local plastic industry is that of time- based fixed remuneration with no relation to employee productivity. This culture is buttressed by a regulatory framework enforced by the NEC that does not consider employee productivity when remunerating employees. Employee remuneration is based on time spend at the work place not on the productivity or performance levels of the employee. This seriously undermines competitiveness as there is no real incentive for employees to be productive. This factor makes local plastic manufacturing companies less competitive when compared to Chinese plastic manufacturing firms for instance as employees are paid on performance with the regulatory framework in support of that phenomenon.

Technological development

The lack of foreign currency driven by low foreign direct investment has resulted in the local plastic manufacturing industry lagging behind in terms of latest technology in machinery and automation. The industry mostly employs basic technology which represents the common technology used by start-up companies throughout the world. This technology poses no competitive advantage and result in local plastic manufacturing companies not able to compete on the international arena. Advanced technology comes with automation and economies of scale. This may enhance product quality and results in reduced product costs and thus positively affecting the competitiveness of the product. Most of the machinery being used in the local plastic manufacturing industry in Zimbabwe is 10 years or older resulting in high operating costs and low productivity. The machines are not automated resulting in high direct labor costs when compared to global competitors in emerging economies like China and India, for example.

Organizational culture

Plastic manufacturing companies in Zimbabwe should have shared beliefs and values of competitiveness in its whole fabric from top management to shop floor workers. Competitiveness should be the responsibility of every employee in the organization. A culture of innovation should be cultivated in the organization. The current scenario in the plastic manufacturing industry is such that competitiveness is fully not part of organizational culture and this is a recipe for disaster when it comes to the global competitiveness of the industry.

Management

Mediating variable

According to John Maxwell (2007), everything rises and falls on leadership. The leadership function in plastic manufacturing companies is carried out by management. The quality of management in plastic manufacturing companies plays a key role in how the internal factors are managed to ensure firm competitiveness. It is the management of an organization that sets the tone of the culture of an organization. The quality of human capital in an organization is a result of the recruitment systems and performance management systems adopted by the management of an organization. Management decides on the remuneration systems to be used in an organization.

Key external factors

Independent variables

Lisowska (2015) state that external factors result from the fact that the company is affected not only by the competitive environment (other enterprises) but also by other macroeconomic, meso-economic and micro-economic environmental factors.

The five key external factors affecting competitiveness in plastic manufacturing companies in Zimbabwe are power supply, financial access, competition pressure, high wages and support institutions. These factors are to a larger extent beyond the control of management but largely influenced by Government policy.

Power supply

The current power supply situation has seen plastic manufacturing companies having to face up to 18 hours of load shedding. The power crisis is exacerbated by the fact that fuel costs are very high making it unviable for companies to run the plant on generator. This has a negative effect on price competitiveness as this result in high operating costs and failure to fulfill customer orders. Erratic power supply result in malfunctioning of electronic components due to power surge and this further add misery to the whole competitiveness matrix. The local plastic manufacturing industry is heavily mechanized and depends on a stable, efficient power supply for its smooth functioning. Load shedding, an unstable power and high fuel prices has resulted in high energy costs choking the local plastic manufacturing industry.

Financial access

Having already highlighted that the plastic manufacturing industry is lagging behind in terms of technology and automation, the need for affordable financial access for retooling and recapitalization cannot be over emphasized. There is no affordable long-term financial facility for companies to purchase up-to-date machinery and production systems. This is one of the main disadvantages faced by local plastic manufacturing companies when compared to companies from emerging economies like China where plastic manufacturing companies have access to long-term affordable financial access.

High wages

The current scenario in the local plastic manufacturing industry is that there is a deadlock on the minimum wages between employers and the trade union for the plastics manufacturing industry. The employer is citing incapacitation to pay the required minimum wage levels while the trade union requires a living wage. The bottom line is that the industry is not competitive enough and therefore suffers from low productivity and a dwindling market share. At the time of writing this study, the researcher discovered that there could be a stalemate in wage negotiations between the trade union and the plastic manufacturers association and the matter could be referred for arbitration.

Competition pressure

The local market is full of cheap quality imported plastic finished goods mainly from China and South Africa and this is negatively affecting the competitiveness of the local plastic manufacturing industry in Zimbabwe. These global competitors have more advantages than local players and this spells disaster to the local plastic manufacturing industry. Some competitors especially those from China have advanced technology and financial muscle to acquire advanced technology and purchase raw materials in bulk. These global players do not have power supply challenges like their local counterparts and therefore the competitive playing field is not even.

Support institutions

The local plastic manufacturing industry suffers from a lack of support institutions to support the local plastic manufacturing industry. There are no local manufacturers of plastic machines

and tools. There is no functional tool and die making support industry and therefore plastic manufacturing companies are forced to rely on imports for its machines, molds, spares and tools. The other challenge is about the shortage of raw material.

In order to have a fully vibrant and competitive plastic manufacturing industry, there is need for support institutions to positively enhance the competitiveness of the industry.

Government

Mediating variables

External factors are influenced by Government policy. A stable power supply is as a result of the policies made by the minister of energy and power development. Plastic manufacturing companies have very little control over this critical factor as the Zimbabwe Electricity Supply Authority is a public enterprise. Financial access is as a result of the policies and interest rates set by the Reserve Bank of Zimbabwe through the Governor and Minister of Finance and Economic development. The competition pressure being faced by local plastic manufacturing companies is as a result of the tariff structure set by the government. This could be the case for manufacturers of plastic poultry feeding equipment who are negatively affected by cheap quality imported manual poultry feeding equipment being imported duty free using tariff code 8436:2900. This is despite the fact that local plastic manufacturing companies have enough capacity to manufacture manual plastic poultry feeding equipment. Support institutions like universities and technical colleges are created by Government.

The role of the Plastic Manufacturers Association of Zimbabwe

The Plastic Manufacturers Association of Zimbabwe (PMA) is the line representative body of the plastic manufacturing industry. All internal and external matters relating to the competitiveness of the industry are handled through this body.

2.2.0. Theoretical Framework

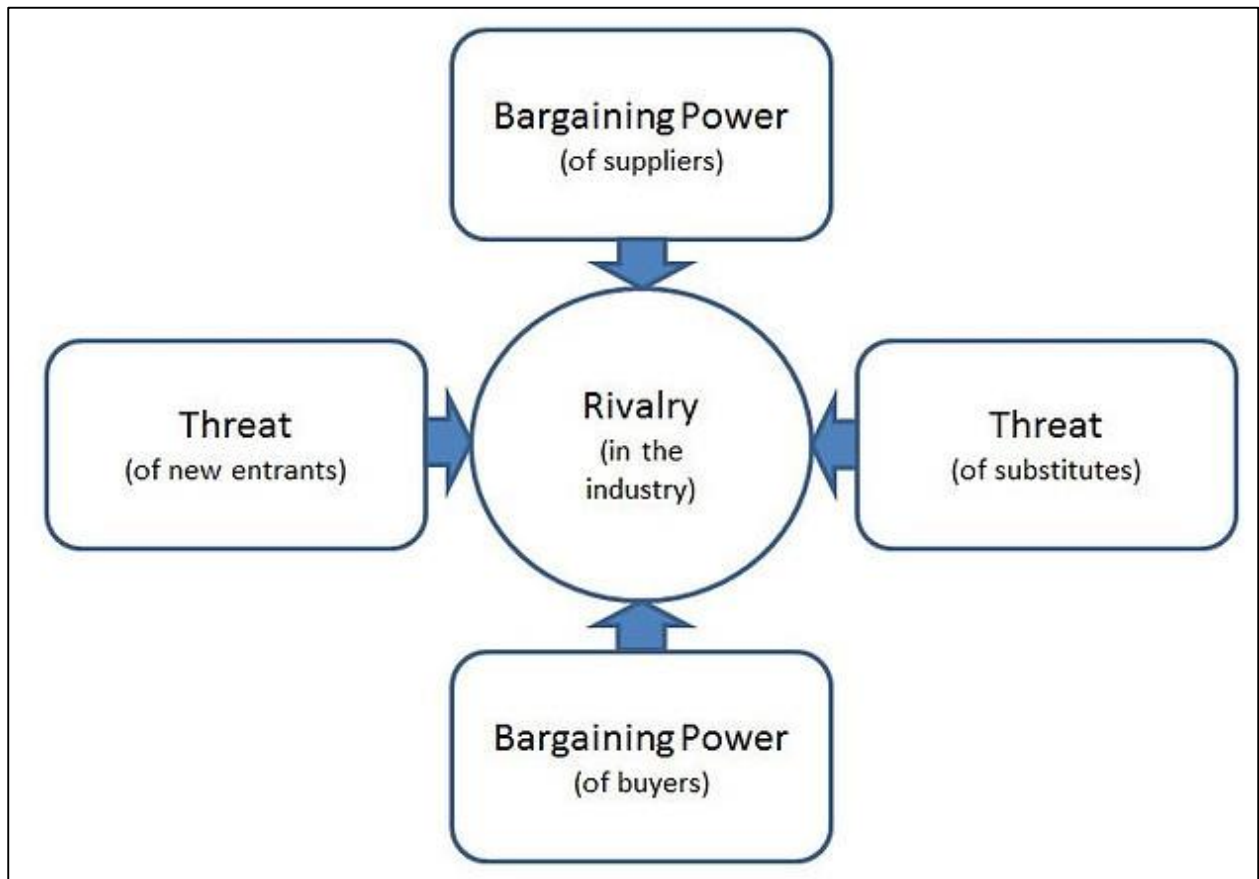
The study was guided by Michael Porter's two models: The Five forces model of competition and the Diamond Model of National Competitiveness.

2.2.1 The Five Forces model of competition

Porter (1979) proposed that there are five forces that determine the competitiveness of an industry. According to this model, the competitiveness of the local plastic manufacturing

industry is influenced by five forces namely, the competitive rivalry in the industry, bargaining power of suppliers, bargaining power of buyers, threat of substitutes and threat of new entrants.

The five forces model of industry competition can be diagrammatically represented as shown on figure 2 below.



Source: www.b2bframeworks.com **Figure 2: Porter's five forces model**

Competitive rivalry

The local plastic manufacturing industry is characterized by very few players across each plastic manufacturing process and competitive rivalry is quite low and this has a negative effect on the competitiveness of the industry. There is just not enough competition to push for innovation and new products in the industry and this results in local companies not able to compete on the global scale. A good example is on rotational molding, where there are only four players specializing in the manufacturing of 5000lt water storage tanks. As the competitive rivalry is very minimal, plastic manufacturers in this subsector wield enormous competitor power over their suppliers and buyers. Manufacturers of water storage tanks are able to charge

exorbitant prices for their tanks and this undermines competitiveness in the industry. The end result is that it is only these plastic manufacturers that benefit through profiteering. This phenomenon explains why South African companies are able to export 5000lts tanks to Zimbabwe and still be able to compete favorably on price and quality though water tanks are voluminous and transport costs are very high as one will be transporting empty storage tanks. A lack of rivalry competition also results in high switching costs for both customers and suppliers of raw materials.

Supplier power

One of the challenges facing the local plastic manufacturing industry is high raw material prices when compared to global competitors from emerging economies. There are not more than 5 raw material suppliers on the local market and this result in raw material suppliers wielding more power to influence raw material prices. Few suppliers mean less overt competition due to attractiveness of collusive behavior which leads to higher raw material costs for local plastic manufacturing companies. This has a negative implication on competitiveness as it results in higher uncompetitive prices. Due to lack of affordable financial access, local plastic manufacturers are not able to import plastic raw materials direct from overseas manufacturers but are rather forced to rely on local importers who are more expensive and inconsistent in their supply.

Buyer power

Due to the current economic hardships being experienced in Zimbabwe, demand for plastic products has decreased and this has resulted in fewer buyers of plastic products. This scenario results in high buyer power over suppliers and this has a negative effect on the profitability of the industry as companies are forced to survive on very thin margins with no funds left for research and development. The pressure on prices further put pressure on the quality and customer service being offered by plastic manufacturing companies and thus undermining their competitiveness.

Threat of substitution

Globalization and trade liberalization has resulted in local plastic products being substituted by imports from global players who have invaded the local market with cheaper products whose quality is even better. This problem is worsened as these imported plastic poultry feeding equipment could be entering the country duty-free using tariff code 8436:2900. This could have

caused misery especially to plastic manufacturing companies specializing in the manufacture of plastic poultry equipment. In some cases, plastic products are substituted with cheaper local substitute metal products. This is the case with plastic poultry feeding equipment where the local market is now full of metal poultry feeding equipment from the cottage industry.

Threat of new entry

The current situation in the country is such that there is very little if any new investment in the plastic manufacturing industry. This is mainly attributed to lack of affordable long-term finance coupled with low levels of foreign direct investment. It is not easy for new players to set up and start a new plastic manufacturing business profitably. The entry barriers to start plastic manufacturing business in the country are very high due to the requirement for a huge capital outlay to buy machinery and tools. This might explain why there are a few domestic plastic manufacturing companies in Zimbabwe. Although the entry barriers to plastic manufacturing are seemingly high, globalization and trade liberalization has introduced a new threat of virtual factories which does remote manufacturing while competing with local players through imports.

2.2.2 Porter's Diamond Model

Porter (1990)'s Diamond Model otherwise known as the Theory of National Competitive Advantage of Industries is a framework of factors that can be used to explain competitiveness in the local plastic manufacturing industry. This framework points to location advantages such as related and supporting industries, firm strategy, structure and rivalry as well as factor and demand conditions. Porter's diamond model can be diagrammatically represented as shown on figure 3 below:

Firm Strategy, Structure and Rivalry

There is need for more players to encourage domestic rivalry in the plastic manufacturing industry. Government can do this by classifying the plastic manufacturing industry as a priority sector. This will go a long way in encouraging new investment in this important sector. It is beneficial to have many players in the plastic manufacturing industry as their internal competitive rivalry will prepare them for global competition. Lack of domestic rivalry in the industry has resulted in local plastic manufacturing companies being less competitive.

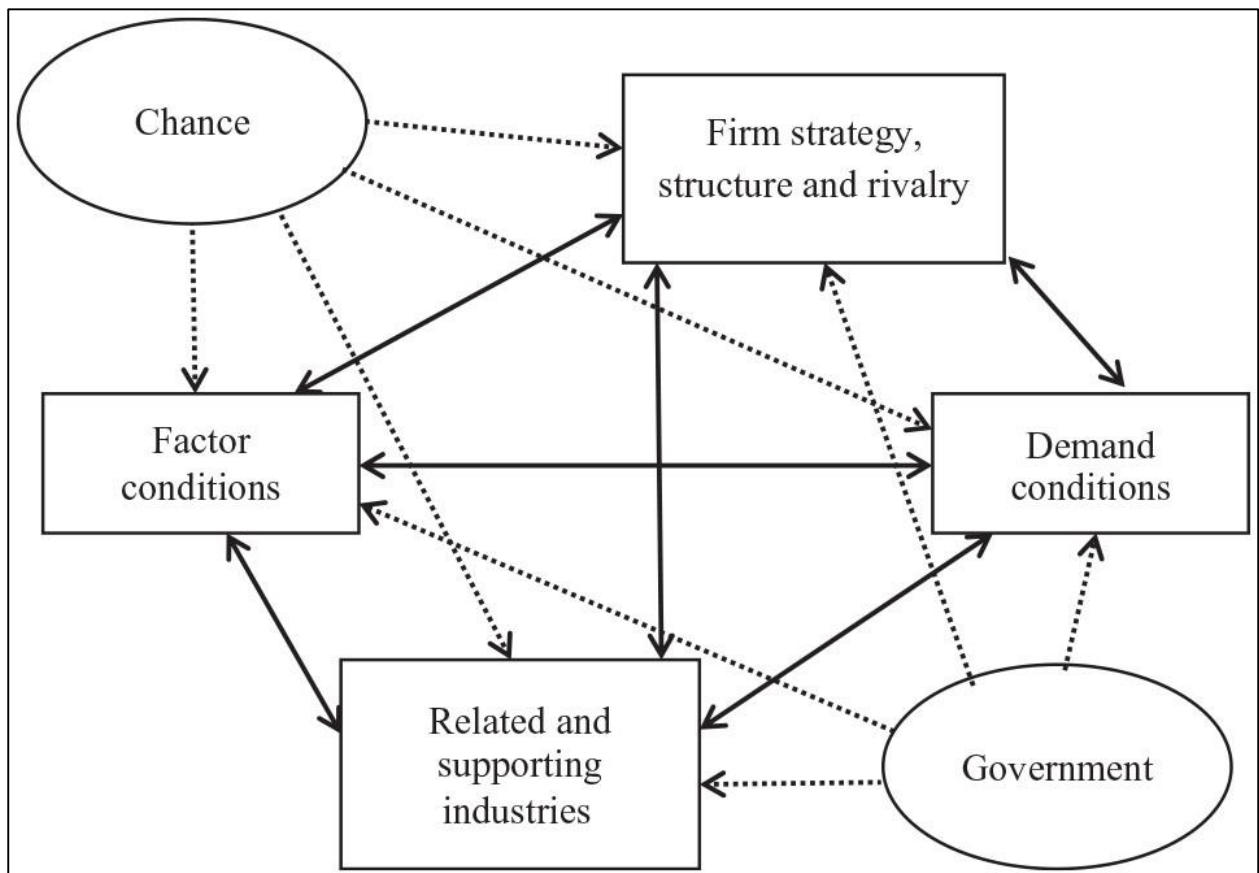


Figure 3: Porter's Diamond Model; Source: www.journals.sagepub.com

Factor Conditions

The current macro-economic situation obtaining in the country makes it very difficult to identify any source of competitive advantage for the industry that could emanate from factor conditions such as capital, natural or human resources. On natural resources, the fact that the country is land-locked result in high freight costs for both imports and exports thus negatively impacting the competitiveness of the industry. The unavailability of capital at competitive interest rates gives local players disadvantage when compared to players from emerging markets like China where long-term capital is readily available at competitive rates. High wages and skilled technical manpower shortage make it more difficult for local plastic manufacturing companies to compete on the international arena.

Demand conditions

The market for the local plastic manufacturing industry can best be described as very unsophisticated and this has a negative effect on innovation and competitiveness. A good example could be the poultry industry where some farmers use homemade metal feeders which may cause diseases in the fowl run. Lack of awareness in the use of sound animal husbandry standards and poverty could help to explain this phenomenon. The expectations of local customers do not push plastic manufacturers to excel and develop unique products.

Related and supporting industries

The local plastic manufacturing industry is not receiving enough support from various institutions as may be necessary and this could be negatively affecting the competitiveness of the industry. In order for the local plastic manufacturing industry to be competitive, it requires a booming tool and die making industry for the provision of spares and technical support. The industry also requires the support of technical institutions like universities for research and development. There is need for more plastic raw material suppliers to support the local plastic manufacturing industry.

The role of the Government in boosting industry competitiveness

Government could do more to support the competitiveness of the local plastic manufacturing industry. It is the responsibility of Government to come up with a regulatory framework that encourages a level playing field between local players and global competitors. Standardization and tariff rationalization are two main areas where Government could play a role in enhancing the competitiveness of the local plastic manufacturing industry. This could help in controlling dumping and illegal border leakages such as plastic poultry feeding equipment products which are entering the country duty-free using tariff code 8436:2900 under 'other plastic items' Plastic poultry feeding equipment especially manual ones are not classified and therefore importers could take advantage of this anomaly and categorize them under other plastic items (8436:2900), which is duty free.

Chance

The era of the Covid-19 pandemic saw a rise in capacity utilization for the plastic manufacturing industry. This was mainly because national borders were closed and therefore no imports were coming into the country. The industry cannot depend on chance factors as its source of long-term competitive advantage.

2.3.0 Review of empirical Literature

This section discusses the observations from related empirical studies on the factors that affect the competitiveness of industries. This discussion follows an objective-by-objective approach.

2.3.1 The key internal factors affecting industry competitiveness

Sanchez-Gutierrez et al (2016) did research for Mexico's Guadalajara SME manufacturing sector using a quantitative approach and came up with the findings that intellectual capital significantly affects enterprise competitiveness. These findings concur with the research findings of Kalita and Chepurens (2020) who researched on Russia's SME manufacturing sector using a quantitative approach and came up with the findings that intangible assets such as management systems bear a considerable positive relationship with the competitiveness of an enterprise.

Ayodotun et al, (2018) did research on Nigeria's SME sector using the quantitative approach and came up with the findings that strategic entrepreneurial orientation has a considerable positive relationship with the competitiveness of SMEs. The findings of that research study highlighted that strategic entrepreneurial orientation is crucial in improving and achieving competitiveness in the SME sector. I agree with these findings and in the plastic manufacturing industry strategic entrepreneurial orientation is a concept that could increase competitiveness by giving managers enough autonomy to make decisions quickly before competitors come in. Competitive aggressiveness will mean every member of the plastic industry will be concerned about being competitive and this will go a long way in enhancing the competitiveness of this critical industry. Proactiveness means the plastic manufacturing industry could focus on anticipating any drawbacks like shortage of raw materials and quickly putting remedial plans in place to ensure that the anticipated shortage will cause minimal disruptions to the industry. The plastic manufacturing industry ought to be innovative in finding cheaper and better ways of fulfilling customer needs. Innovativeness mean that the plastic manufacturing industry could produce products that are required by customers. Innovativeness would mean that the plastic

manufacturing industry invest more in research and development and this requires risk-taking as the returns may take time to be seen. A qualitative research study with almost similar findings was done by Dalimunthe, (2019) and came up with the findings that entrepreneurial mindset and aspects of strategy significantly affect firm competitiveness

In a study of Pakistan's SME sector, Khan et al. (2019) came up with the findings that strategic human resources management systems and practices positively affect firm competitiveness.

2.3.2 The key external factors affecting industry competitiveness

Research done for Thailand's Chinese SME sector by Wu and Parkvithee (2017) found that the external environment significantly positively affects the competitiveness of an enterprise. In this context, the external environment consists of competition, political and legal, cultural and social related. In the plastic manufacturing industry, the intensity of competition will determine the innovativeness of the industry and this will in turn determine its competitiveness. The political and legal framework could determine competitiveness in the plastic manufacturing industry as minimum wages are a function of the legal and political framework. The political and legal factors could also be crucial in whether the industry could be able to access affordable finance for retooling and recapitalization. A qualitative approach was used in this study. In a study of Ghana's non-traditional SMEs sector, Appiah et al. (2019) found that the Government plays an important role in boosting firm competitiveness especially on export possibility. The plastic manufacturing industry relies on the Government in coming up with import duties on imported goods that are being locally manufactured. Thus, the Zimbabwean Government also has a crucial role in promoting the competitiveness of the local plastic manufacturing industry.

2.3.3 Measures to improve industry competitiveness

Some studies on methods that can be used to increase industry competitiveness have also been done for instance, Stancu and Lazarescu, (2006). The common finding is that standardization of products, economy of scale, innovation of products and vertical integration are important measures to improve industry competitiveness. Whether and to what extent standardization of products is a measure that could be used to enhance competitiveness in the context of plastic manufacturing companies in Zimbabwe is thus worth investigating. Standardization of products could play a significant role in curbing the dumping of cheap quality low priced products in Zimbabwe which usually poses a threat to local companies as has been observed with the local textile manufacturing industry as pointed out by Mpofu (2013). Economies of scale result in lower per unit cost and this has a positive impact on the price competitiveness of plastic products. Innovation is what could be required in the local plastic manufacturing industry Kalantaridis, C., & Pheby, J. (1999). The Zimbabwean plastic manufacturing industry could thus come up with new ways of satisfying customer needs and this could push manufacturers ahead of their global competitors. Vertical integration is another measure that could be used by plastic manufacturing enterprises Broedner, P., Kinkel, S. and Lay, G. (2009).

It could go a long way in ensuring that plastic manufacturing companies do not rely on outside companies for its key inputs, thus improving pricing and structural competitiveness.

In a study on strategy to improve competitiveness in small to medium industry in Bali by Jaya and Utama (2019), the findings were that several measures could have a vital impact in improving competitiveness. These include analyzing competitive priority which comprises of innovation, delivery, flexibility, cost and quality, operational standards implementation, human resources quality improvement, applications of modern information technology for product manufacturing and marketing, government assistance on regulations, ensuring good relations with important stakeholders, improvement of banking lending facilities and enhancing the research and development role.

Nguwi (2019) highlighted a lack of productivity as the main source of un-competitiveness in Zimbabwean manufacturing companies. He argues that regulatory protection like S.I.64 which aimed at protecting local manufacturing companies may result in an increase in capacity utilization but may have negative effects on competitiveness in the long-term. This plausible assertion may be supported based on the argument that having 100% capacity utilization on an unproductive machine may not increase competitiveness per se. He further argues that regulatory protection may not enable local manufacturers to export as they may still be uncompetitive. Based on his analysis, certain measures were recommended to increase productivity and competitiveness. These are the need to ensure that machinery and tools are modernized with latest technology, greater automation and information and communication technology investment, skills development through training of hands-on personnel and focus on manufacturing products that can sell beyond the borders of Zimbabwe.

2.4.0. Identification of gap in Literature

The reviewed literature highlighted factors affecting competitiveness in SMEs in general with no single study focusing on factors affecting the plastic manufacturing industry in Zimbabwe in particular. There is no study that focused on categorizing these factors into internal and external factors in the Zimbabwean context. In addition to the above, the available studies have not explored the role of some factors which could be uniquely affecting competitiveness in Zimbabwean plastic manufacturing. This has created a research gap and hence the focus of this research study.

2.5.0. Chapter summary

This chapter presented the conceptual framework and theoretical framework. This was followed by empirical review showing previous related studies. The chapter ended with the identification of the gap in knowledge which the current study is positioned to fill.

CHAPTER THREE RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research methodology of the study. Section 3.1 describes the research design. This is followed up by an explanation of the underlying philosophy of the study in section 3.2. In sections 3.3 to 3.5, the research approaches, population of study and sampling methods and procedures are presented. The data collection methods and instruments are described in section 3.6 followed by an outline of how data were analyzed and presented in section 3.7. In section 3.8, the measures taken to enhance the trustworthiness of the research findings are presented and in section 3.9, some ethical considerations made in the study are described. Section 3.10 concludes the chapter.

3.1 Research Design

This study used a descriptive cross-sectional research design with online survey as the main instrument for gathering data relating to internal and external factors affecting competitiveness in plastic manufacturing companies. Descriptive cross-sectional research design characterizes the frequency of one or multiple factors in a specified population at a single point in time Wang, Cheng, & Chest (2020). One of the advantages of a descriptive cross-sectional design is that it is fast and inexpensive to carry out. One of the main disadvantages of using a cross-sectional research design lies in its inability to establish the cause-and-effect relationships. In this regard, this study could be useful in planning an advanced study in the future.

3.2 Research Philosophy

The researcher adopted the pragmatism philosophy in carrying out this study. A pragmatic research philosophy involves research operational decisions that are deemed to provide the best answers to the questions under investigation.

3.3 Research Approach

The mixed approach was employed in this research study. The mixed approach entails the use of quantitative and qualitative methods to capitalize on the advantages of both methods for the in-depth and comprehensive analysis of the internal and external factors affecting competitiveness in plastic manufacturing companies in Zimbabwe. The quantitative approach was used to understand the statistics when investigating factors affecting competitiveness in plastic manufacturing companies in Zimbabwe.

3.4 Population of Study

The population of the study comprised of 105 plastic manufacturing companies spread across the country with 53 companies engaged in injection molding, 22 companies specializing in blow molding, 20 companies are in extrusion molding, 5 companies do rotational molding and 5 companies doing vacuum foaming.

3.5 Sampling Methods and procedures

3.5.1 Sampling methods

The researcher chose sample participants using a combination of methods. Cluster sampling was initially used so the population could be divided according to the manufacturing processes and location as shown on Table 4. Purposive-convenience non-random sampling was then used to come up with the participants with the objective of at least having 50% of the population in its cluster represented in the sample.

3.5.2 The sample frame

The sampling frame is made up of plastic manufacturers that are conveniently subdivided according to different manufacturing processes and demographical location as shown on Table 4 below. The list of manufacturers was extracted from the Plastic Manufacturers Association of Zimbabwe database as at the end of the third Quarter of 2022.

3.5.3 Sample size determination

A purposive-convenient non-random sample was selected ensuring that each demographic location was proportionally represented in the sample. A sample size of 52 participants or 50% of the population was decided upon after considering a number of factors. Given a population of 105 plastic manufacturers, a sample of 52 participants or 50% of the population, each purposively selected, was drawn.

Table 4: Sampling frame (PMAZ database)

Manufacturing Process	Location				Sample Total	Total Population
	Harare	Ruwa	Bulawayo	Other		
Injection molding	20	1	2	2	25	53
Blow molding	7	1	1	2	11	22
Extrusion molding	7	1	1	1	10	20
Rotational Molding	2	1	0	0	3	5
Vacuum foaming	1	0	1	1	3	5
Total	37	4	5	13	52	105

Source: PMAZ, 2022

3.6 Data collection methods

Data were collected through a combination of desk and field research methods. Desk research involved reviewing published data from industry support agencies as well as from the internet. Primary data was gathered through field research which used a survey questionnaire and interviews as the main methods.

3.6.1 Review of Secondary data sources

Secondary data were gathered through a review of publications by the Plastic Manufacturers' Association of Zimbabwe and the Confederation of Zimbabwe Industries. The former gave industry-specific secondary data on the factors affecting competitiveness while the latter provided data on a country-competitiveness basis. Internet searches were also made in a review of empirical literature on global trends in the plastic manufacturing industry relating to factors influencing competitiveness. The data were deemed necessary as benchmark for comparing the Zimbabwean plastic manufacturing industry's competitiveness with international trends and patterns and the underlying factors.

3.6.2 Questionnaire

The questionnaire was the main data collection instrument in this research. It was targeted at the chief executive officer, managing director or other executives occupying senior positions in plastic manufacturing companies in Zimbabwe and with sufficient knowledge of factors affecting the competitiveness of each selected firm in the industry. As senior executives are typically quite busy, the questionnaire was simplified with 56 structured and 4 non-structured questions. A pilot study done in Ruwa which involved some senior executives in plastic manufacturing firms greatly assisted in fine-tuning the research instrument.

The structured questions with guided responses were mainly used to reduce response time, motivate the participant to read on and reflect. Non-structured questions were used to allow participants to add independent answers where necessary. The instrument was carefully designed such that its main sections corresponded to the main research objectives to ensure that all the relevant data for the study were gathered. The survey instrument was emailed to targeted respondents. Participants were given two weeks to complete and email back the questionnaire.

At the end of the exercise, this structure formed a clear and concise basis for both quantitative and qualitative analysis of the factors influencing competitiveness of firms in the plastic manufacturing industry.

3.6.3 Interviews

The search for an understanding of the factors affecting the competitiveness of the plastic manufacturing firms in Zimbabwe necessitated those interviews be held with the chief executive officers of the PMA, the NEC governing the industry and the Confederation of Zimbabwe Industries (CZI). This helped to contextualize the issue of competitiveness as well as obtain recommendations on measures that could be taken to improve competitiveness of plastic manufacturers in Zimbabwe. Thus, important qualitative information from high-ranking officials was gathered through the interviews, and these were instrumental in bringing out some important data that could not be obtained from the questionnaire.

3.6.4 Data collection procedures

The researcher designed the questionnaire after taking three aspects into consideration, that is, the profile of the target respondents, the objectives to be achieved, the need to quantitatively measure the responses and the need to come up with measures to enhance competitiveness in plastic manufacturing companies. A pilot questionnaire was administered on friends and work mates in a plastic manufacturing firm primarily for testing omissions, ambiguity and clarity. This assisted in fine-tuning the data collection instrument.

The questionnaire was targeted at senior management officials in plastic manufacturing companies and to ensure this objective was achieved, the researcher had to first call the organization in question to identify targeted officials and get the email address and also to explain the purpose of the research. This opportunity was used to explain to the participants the confidentiality of the study and the fact that participation is voluntary. This was done in the third week of the month of November 2022. All the 52 questionnaires were emailed in this period. A two weeks' period was afforded and deemed sufficient time for the participants to respond to the questionnaire and email back given that the data sought was considered quite familiar to the selected respondents given their experience in the plastic manufacturing industry. On interviews, the researcher used different methods of conducting interviews as follows, a one-on-one interview was conducted with a senior official of the PMA, a virtual interview was conducted with CZI official and a telephone interview was carried out with the official from the NEC. This was based on what was convenient with the interviewee.

3.7 Data analysis methods

The study used online survey and interviews as data collection tools. Quantitative statistical tools were the main tools for analysis in this study. Qualitative tools were used for non-structured and open-ended expressions. The study used structured questionnaires to get responses for both research objective 1 and research objective 2. The study used the Likert scale to measure the opinions of the effect of each factor on competitiveness. The scale used ranged from 1 to 5 as follows: strongly disagree (1), Disagree (2), Not sure (3), Agree (4), Strongly agree (5). The SPSS package was used to tabulate the frequency of the responses. The mean and standard deviation of the responses was used to interpret the effect of the factors on competitiveness. On research objective 3, a non-structured questionnaire was used get the opinions of what measures could be adopted to boost competitiveness. The frequency of the suggested measures was tabulated using the SPSS statistical package.

3.8 The trustworthiness of Research findings

In order to improve the trustworthiness of this study, the study focused on senior executives in plastic manufacturing companies as research participants. Only one senior executive was chosen from companies that constituted the sample. The advantage of using this category of participants is that they are well qualified, experienced to clearly understand factors affecting competitiveness and measures that could be used to boost competitiveness in the plastic manufacturing industry. The researcher phoned the participants before emailing the questionnaires or conducting the interviews. The reason for phoning was to give the participants assurance regarding the confidentiality, voluntary participation, harmlessness to and their right to withdraw at any stage without questions asked. The call was also a way of getting the correct email addresses. The researcher also conducted interviews with the PMA and NEC Plastics and this helped to validate the process and results of the study. The questionnaire was structured in such a manner as to make it easy for the participants to respond.

3.9 Ethical considerations

The participants participated in the research study voluntarily and they were clearly notified of this factor. They were asked to remain anonymous and not write their name or any form of identification on the questionnaire. Participants were notified of their freedom to withdraw from the study anytime without being required to give any reasons. Participants were notified

that the data gathered was confidential and was only going to be used for the purpose of the research study only.

3.5.0. Chapter summary

This chapter outlined the research methodology followed including the research design, philosophy, population and sampling procedures, data collection and analysis as well as measures for enhancing research rigor and ethical conduct. The methodology was designed to ensure that data relevant for each objective were well specified and analyzed.

CHAPTER FOUR DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.0. Introduction

In this chapter, the analysis of the data collected is presented with the findings outlined together with their interpretation. The chapter is structured such that the overall response rate is described in section 4.1. This is followed by some descriptive statistics presented in section 4.2. Section 4.3 outlines the data analysis, discussion of findings and their interpretation. Section 4.4 provides a brief summary of the chapter.

4.1 Response rate

The response rate was quite encouraging as out of 52 questionnaires sent out, 49 respondents returned the questionnaires and this represented a response rate of 94%. The timing together with follow-ups could have helped to minimize the non-response rate. The decision to deal with senior management executives who understand the value of an applied research study pertaining to issues relevant to their operations in the industry may have had a positive role in boosting the response rate. The respondents showed a lot of interest and cooperation in responding to the questionnaire and the interviews. The majority of the question items in the questionnaire used a Likert scale to measure responses relating to factors affecting competitiveness in plastic manufacturing companies.

Table: 5 Likert scale used in questionnaire

	Strongly disagree (SD)	Disagree (DA)	Not sure (NS)	Agree (A)	Strongly agree (SA)
WEIGHTS ASSIGNED	1	2	3	4	5

The simple design for the questionnaire and interview guide helped to save time and ignite interest among the participants.

4.2 Descriptive Statistics

Participants' background information, such as gender, age group, level of education and work experience, was gathered using demographic data. Personal information was used to assist contextualize the research findings, but it was not required for the study.

4.2.1. Participants' gender

The gender distribution of research participants is depicted as shown in figure 4 below. The research questionnaire received responses from 49 people. There were 5 ladies and 44 males. Females made up roughly 8 percent of the participants in the study.

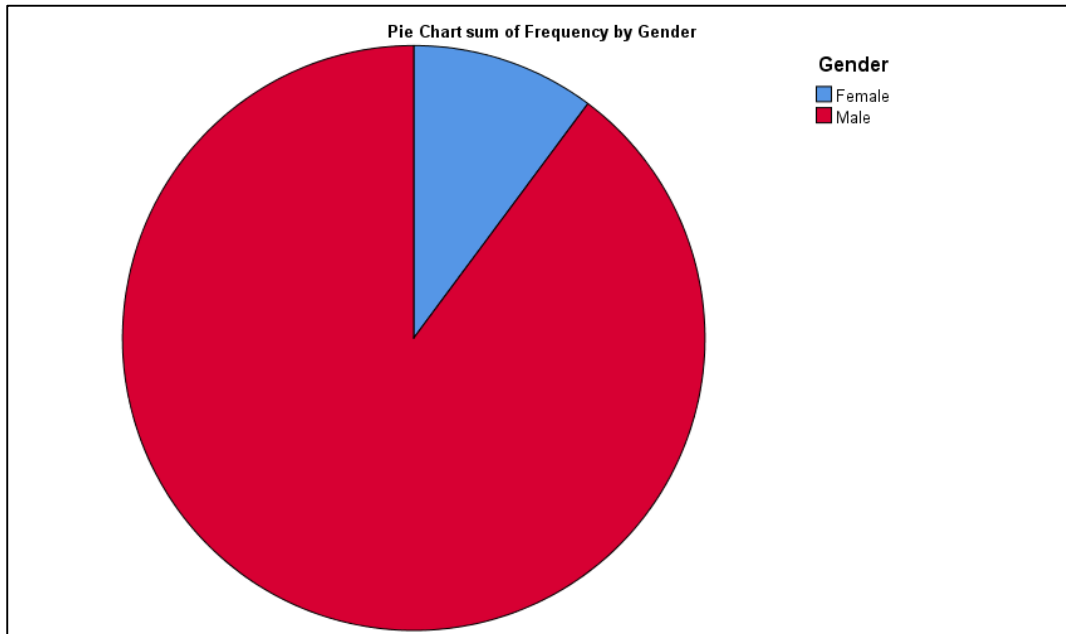


Figure 4: Gender distribution

4.2.2. Age groups

The graph as shown on figure 5 below depicts the participants depending on their age groupings. The participants' ages were used to divide the age groups into eight categories. There were eight age groups: 20-25, 26-30, 31-40, 41-45, 46-50, 51-55, 56-60 and 60 and over. The group of people aged 51 to 55 years old made up the majority of the participants in the study, accounting for 28.6% of the total. The age group of 20-25 years had the least number of participants, accounting for zero percent of the total.

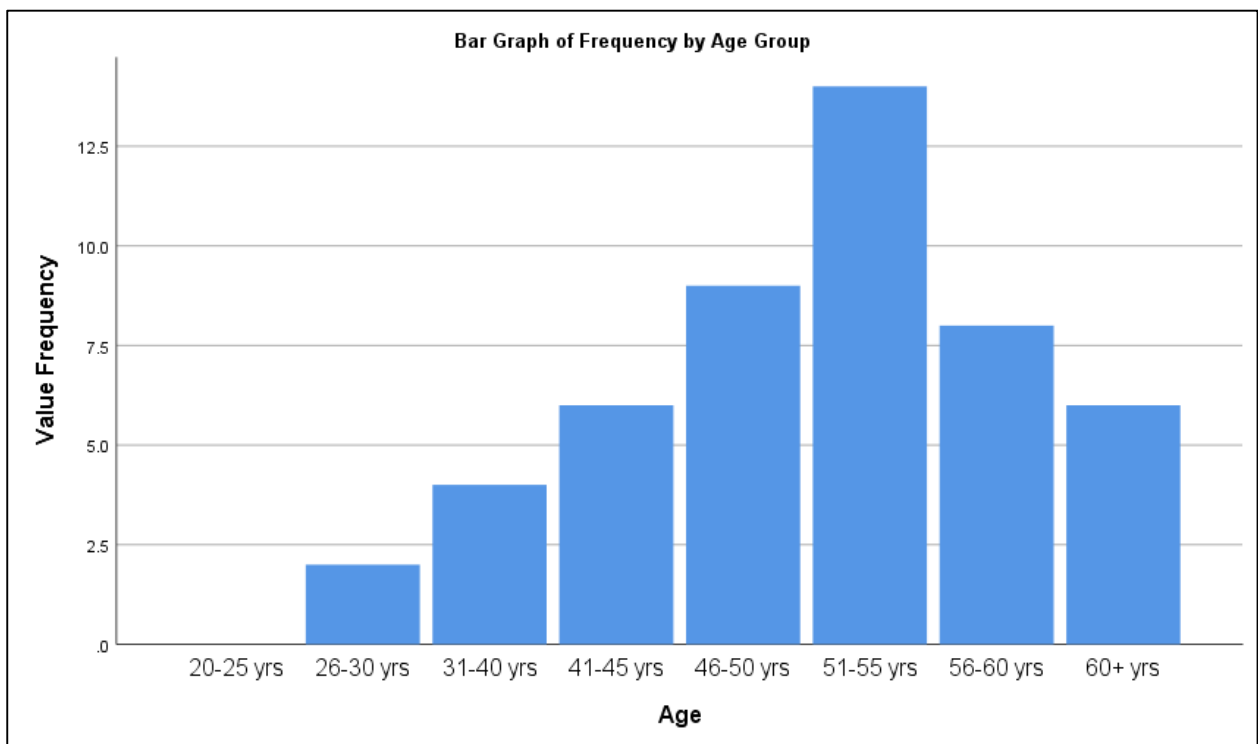


Figure 5: Age frequency analysis graph

4.2.3. Educational level

The research participants' educational levels are depicted in the bar graph shown in figure 6 below. According to the statistics gathered, certificate education was the lowest level of qualification and postgraduate degrees were the highest. Diploma education was the greatest level of schooling for 51% of the participants. 14.3% of respondents had degrees, and 6.1 percent had master's degrees as their greatest level of schooling.

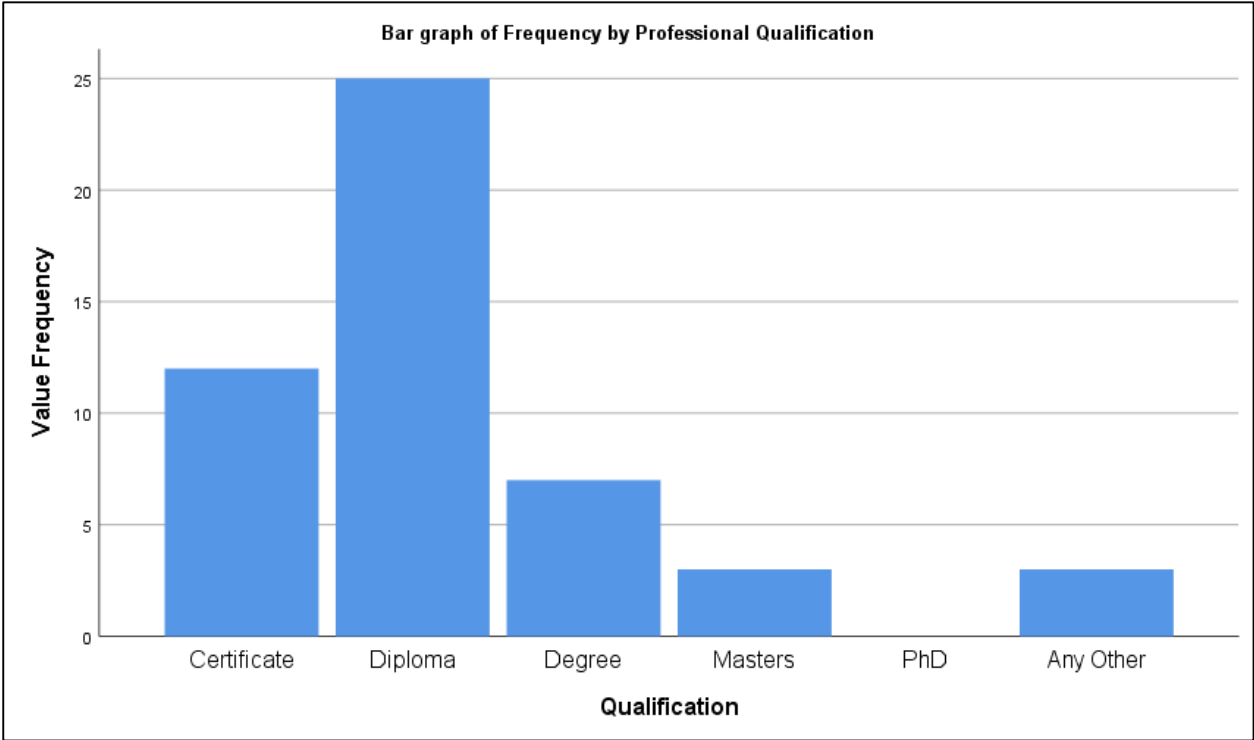


Figure 6: Professional qualification frequency

4.2.4. Position in management

Data collected shows that all the respondents are senior managers for the companies they work for and 75.5% of them understand the meaning of competitiveness. Most of the participants have work experience between 20-25 years with the companies they are working for as shown by the graph in figure 7 below. Also, for the companies they work for only 20.4% have a corporate strategy for competitiveness. A proportion of 30% of the respondents are proud of the quality of their company’s products.

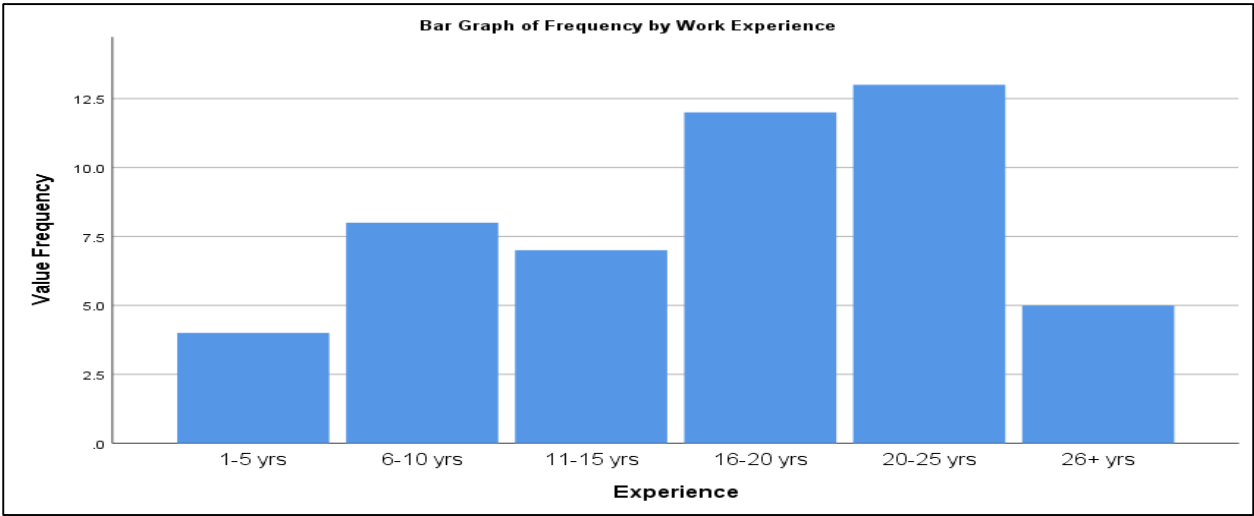


Figure 7: Work experience frequency

4.3.0. Likert scale used in data collection

The data collected on respondents' assessment of the factors affecting firm competitiveness in the plastic manufacturing industry were measured using statements for the variables under consideration using a Likert scale. Responses were categorized as follows: 1- Strongly disagree; 2- Disagree; 3- Neutral; 4- Agree; and 5- Strongly Agree on a scale of 1 to 5. Each statement's mean and standard deviation were calculated, and the mean index for each variable was calculated. The analysis was conducted objective by objective with the presentation of the results following the same pattern as shown below.

The identification of key internal factors affecting competitiveness

4.3.1. Effect of human capital on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions on the effect of human capital on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 1 to 5 as shown in Section C of the questionnaire in Appendix 1.

Table 6: Human capital mean and standard deviation calculations

Statement	Mean	SD
The shortage of skilled artisans significantly contributes to machine idle time	4.34	0.455
We have an unfilled vacancy for a skilled artisan	3.89	0.765
We have at least one broken down machine in our factory	4.45	0.743
We do not have a talent development plan for artisans	4.35	0.453
We do not have a succession plan for artisans	4.39	0.866

Table 6 above shows that the majority of the respondents indicated that human capital has a significant effect on competitiveness in plastic manufacturing companies. With a mean of 4.45 and standard deviation of 0.455 the respondents indicated that they have at least one broken down machine at their workplaces and this is likely being caused by the shortage of skilled artisans which is significantly contributing to machine idle time as indicated by a mean of 4.34 and standard deviation of 0.455. The results show that plastic manufacturing companies in Zimbabwe do not have development plans for artisans as shown by a mean of 4.35.

4.3.2. Effect of remuneration systems on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions on the effect of remuneration systems on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 6 to 10 as shown in Section C of the questionnaire in Appendix 1.

Table 7: Remuneration systems mean and standard deviation calculations

Statement	Mean	SD
All company employees are paid on a fixed-time-basis	4.84	0.956
We have a challenge of low productivity	4.34	0.564
We do not pay any bonus when targets are met	4.39	0.654
We currently have wage arrears.	4.53	0.541
We do not do performance appraisals on our employees	4.45	0.913

According to the findings as depicted on Table 7 above, remuneration systems has an impact on competitiveness in plastic manufacturing companies. With a mean of 4.84 and a standard deviation of 0.956, respondents indicated company employees are paid on fixed time basis and the majority strongly agreed that plastic manufacturing companies are not paying any bonuses when targets are met. Respondents reported they rarely do performance appraisals on all employees, with a mean of 4.45.

4.3.3. Effect of Technological advancement on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions on the effect of technological advancement on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 11 to 15 as shown in Section C of the questionnaire in Appendix 1.

Table 8: Technological development mean and standard deviation calculations

Statement	Mean	SD
The state of our machinery significantly contributes to poor quality products	4.69	0.677
80% of our machines are 10 years old	4.71	0.698
Our cycle times are at least double the normal standard	4.49	0.533
We always have an unaffordable electricity bill.	4.53	0.522
We are not automated	4.71	0.435

According to the findings shown on Table 8 above, the state of machinery contributes significantly to poor quality of products as less maintenance services to the equipment is being carried out, with a mean of 4.69. Also, most of the equipment being use are more than ten years old as shown by a standard deviation of 0.677 and a mean of 4.71 and this have a direct impact on machine efficiency resulting in plastic manufacturing companies having unaffordable electricity bills with a mean of 4.53.

4.3.4. Effect of organizational culture on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of organizational culture on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 16 to 20 as shown in Section C of the questionnaire in Appendix 1.

Table 9: organizational culture mean and standard deviation calculations

Statement	Mean	SD
Competitiveness is not part of our culture	4.63	0.545
Competitiveness is not the responsibility of every employee	3.85	0.456
Our mission statement does not emphasize competitiveness	4.86	0.765
Our remuneration system does not incorporate competitiveness	4.83	0.701
We do not a competitiveness corporate strategy	4.68	0.623

As shown on table 9 above, it can be deduced from the results that most plastic manufacturing companies in Zimbabwe do not have a mission statement that clearly emphasizes competitiveness, with a mean of 4.86. This is also supported by the results that the remuneration systems being implemented by companies does not incorporate competitiveness as indicated by the disagreement by participants with a mean of 1.24 and a standard deviation of 0.701.

Key external factors

4.3.5. Effect of power supply on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of power supply on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 21 to 25 as shown in Section C of the questionnaire in Appendix 1.

Table 10: power supply mean and standard deviation calculations

Statement	Mean	SD
We encounter power cuts for at least 8 hours a day	4.80	0.924
We often have breakdowns due to power surge	4.71	0.453
It is not viable to run the generator due to high fuel prices	1.89	0.455
We have orders which we can't fulfill due to power cuts	4.90	0.876
Power cuts increase material wastage and rejects	4.63	0.456

As shown by Table 10 above, it can be deduced from the results that erratic power supply is a big threat to the competitiveness of plastic manufacturers given that the majority of them are without power for at least 10 hours a day with a mean of 4.80 and a standard deviation of 0,924 especially manufacturing companies are encountering power-cuts for a minimum of 10 hours a day with a mean of 4.80 and a standard deviation of 0,924. The devastating consequences of this phenomenon on the plastic manufacturing industry is underscored by the fact that these companies have orders which they cannot fulfill due to power cuts. It is also noted from the results that erratic power supply result in material wastage and rejects and thus negatively impacting the competitiveness of plastic manufacturing companies. The study shows that those companies which had generators reported that it was not viable to run the plant on generator due to high fuel costs.

4.3.6. Effect of financial access on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of financial access on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 26 to 30 as shown in Section C of the questionnaire in Appendix 1.

Table 11: Financial access mean and standard deviation calculations

Statement	Mean	SD
Recapitalization and retooling are part of our goals	4.90	0.678
We have no cash flow to participate at the forex auction	4.57	0.864
There is no affordable loan facility from our bankers	5	0.748
We once approached our bank for funding and was turned down due to lack of collateral	4.12	0.901
Lack of affordable funding to import raw materials in bulk affect our price competitiveness	4.67	0.351

It can be deduced from the results that although plastic manufacturing companies have goals to recapitalize and yet there is no affordable funding for them to purchase up-to-date machinery and tools. A mean of 5 which shows that all companies testifying that there is no affordable loan facility on the market. This phenomenon may help to explain the impact of the Reserve Bank’s current macro-economic policy whereby interest rates are pegged at 200% per annum. This could be negatively affecting competitiveness as companies are not able to benefit from savings which comes from automation and economies of scale.

4.3.7. Effect of competition pressure on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of competition pressure on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 31 to 35 as shown in Section C of the questionnaire in Appendix 1.

Table 12: Competition pressure mean and standard deviation calculations

Statement	Mean	SD
We have a challenge of dumping of cheap quality Imports	4.78	0.342
We are not able to compete with substitute imports on both price and quality	4.89	0.632
We have a problem of imports leakages at border posts	3.86	0.674
Our products are not standardized	4.51	0.501
Government is not doing enough to level the playing field with global competitors	4.59	0.600

As shown on Table 12 above, It can be deduced from the study results that the problem of cheap imports is negatively affecting the competitiveness of plastic manufacturing companies with a mean of 4.78 and a standard deviation of 0.342 The results also confirms that local plastic manufacturing companies are not able to compete with imports on price and quality

given the state of technology being used and the inability of affordable funding to directly import raw materials from overseas manufacturers.

4.3.8. Effect of support institutions on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of support institutions on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 36 to 40 as shown in Section C of the questionnaire in Appendix 1.

Table 13: Support institutions mean and standard deviation calculations

Statement	Mean	SD
There are no local suppliers or agents of plastic machinery and spares	4.96	0.754
There is no functional local tool and die making industry	4.61	0.428
There are not more than five local suppliers of virgin plastic raw materials	4.92	0.683
There is no Government incentive for plastic manufacturing companies	4.94	0.743
We do not have enough institutions to train plastic engineers	2.94	0.239

It can be deduced from the results that there is no suppliers or agents of plastic machines in the country. This is confirmed by a mean of 4.96 and a standard deviation of 0.754. This means that companies require some funding but the challenge they face is that the majority of these companies shown by a mean of 4.56 and a deviation of 0.56 do not have collateral security and even if they did have collateral, the results show that there are no affordable loans on the market. A mean of 4.92 and a standard deviation of 0.683 show that there are no more than 5 raw material suppliers on the market and this negatively affect the competitiveness of plastic manufacturing companies.

4.3.9. Effect of high wages on competitiveness in plastic manufacturing companies

The SPSS statistics program was used to calculate the mean and standard deviation of responses to questions posed on the effect of high wages on competitiveness in plastic manufacturing companies. The data used was from the tabulated responses of question 41 to 45 as shown in Section C of the questionnaire in Appendix 1.

Table 14: High wages mean and standard deviation calculations

Statement	Mean	SD
Our minimum wages are too high	4.78	0.532
We are at least one month behind in wages arrears	4.16	0.836
We want to approach NEC for wages moratorium	4.39	0.476
Government labor laws are anti-competitiveness	4.78	0.201
Our labor laws urgent need review by parliament	4.84	0.519

As shown on Table 14 above, it can be deduced from the results that a significant number of plastic manufacturers with a mean of 2.70 and a standard deviation of 0.428 are behind in their payment of wages. The majority of companies with a mean of 4.96 are contemplating to approach the NEC for a moratorium to pay below minimum wages. The companies are of the view that labor laws obtaining in the country are anti-competitive and need urgent amendment to align them with the goal of competitiveness. This is confirmed by a mean of 4.94 and a standard deviation of 0.743.

4.4.0. Chapter Summary

In this chapter, the mean and standard deviation of key internal and external factors were tabled. The findings from the participants' responses show that internal and external factors are negatively affecting the competitiveness of plastic manufacturing companies in Zimbabwe. It is apparent from the findings that plastic manufacturing companies are facing a lot of challenges which are undermining the competitiveness of the industry. According to the findings, all the key factors, human capital, remuneration systems, support institutions, technological development, organizational culture, power supply, financial access, competition pressure, support institutions and high wages negatively affect the competitiveness of plastic manufacturing companies. The next chapter will now give recommendations and conclusion.

CHAPTER FIVE

STUDY SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0. Introduction

This chapter provides a summary of the study, the overall findings, conclusions and recommendations. Section 5.1 presents a summary of the study. In section 5.2 an overview of the study findings is given followed by some conclusions made relating to each objective of the study in section 5.3, taking into account the findings from the study and the observations from existing literature. The recommendations are given in section 5.4 with the chapter concluding with some recommendations for further studies outlined in section 5.5

5.1 Summary of the Study

The purpose of the study was to investigate internal and external factors affecting competitiveness in the plastic manufacturing industry. A descriptive cross-sectional research design was used with online survey as the research strategy. Questionnaires and interviews were the instruments used to gather data. A mixed approach involving qualitative and quantitative methods was used.

5.2 Summary of Findings

The research study highlighted the key internal and external factors affecting the competitiveness of the plastic manufacturing industry in Zimbabwe. The study also came up with a cocktail of measures that could be recommended to enhance the competitiveness of the plastic manufacturing industry.

Internal factors are by their nature within the control of management. The research study showed a significant effect of internal factors affecting the competitiveness of plastic manufacturing companies. This phenomenon points to one important issue, that is, the quality of management in plastic manufacturing companies. The findings of the study were that human capital, Remuneration systems, Technological development and organizational culture significantly affect competitiveness in plastic manufacturing companies.

External factors are to a larger extent influenced by the policies of the Government of the day and therefore the extent of the effect of external factors on the competitiveness of plastic manufacturing companies point to how these policies are achieving intended objectives for corrective measures to be taken where necessary.

The position of the plastic manufacturing industry is one of an industry whose competitiveness is heavily affected, albeit in a negative way, by a myriad of external factors. The findings of the research study were that power supply, financial access, competition pressure, support institutions and high wages significantly affect competitiveness in plastic manufacturing companies.

Basing from the results of the research study, the plastic manufacturing industry is in ‘intensive care’ and it is the researcher’s view that only urgent intervention measures may rescue this critical industry from the merciless jaws of global competition.

As globalization and trade liberalization is showing no signs of slowing down, the next generation of Zimbabweans may not have the plastic manufacturing industry to talk about if the powers that be do not take urgent intervention measures to correct the status quo.

5.3 Study conclusions

Objective 1 sought to investigate internal factors affecting competitiveness in plastic manufacturing companies. The conclusion drawn from the research study is that internal factors such as human capital, remuneration systems, technological development and organizational culture significantly affect competitiveness in plastic manufacturing companies.

Objective 2 was to determine external factors affecting competitiveness in plastic manufacturing companies. The researcher’s conclusion is that external factors such as power supply, financial access, competition pressure, support institutions and high wages significantly affect competitiveness in plastic manufacturing companies.

Objective 3 aimed to come up with recommendations of measures that could be employed to enhance competitiveness in plastic manufacturing companies. The study recommended measures to improve competitiveness in plastic manufacturing companies.

5.4 Study recommendations

Study objective	Finding	Study recommendation
Objective 1: To investigate the key internal factors affecting competitiveness in plastic manufacturing companies	The study found that human capital, remuneration systems, technological development and organizational culture significantly affect competitiveness in plastic manufacturing companies in Zimbabwe.	<p>Plastic manufacturing companies are urged to employ strategic human resources practices. The human resources function's objectives and key result areas must be aligned to the corporate strategy of the enterprise. Performance based remuneration systems could go a long way in boosting the competitiveness of plastic manufacturing companies. Performance standards or targets may be established for each and every employee. Government should categorize the plastic manufacturing industry as an essential sector and afford it long-term low interest loans for recapitalization and retooling.</p> <p>Government should introduce incentives for investors who invest up-to-date technology in the plastic manufacturing industry. Management is encouraged to include the goal of being competitive as part of its mission and vision statement</p>
Objective 2: To determine the key external factors affecting competitiveness in plastic manufacturing companies	External factors such as power supply, financial access, competition pressure, support institutions and high wages affect	Plastic manufacturing companies could invest in machines with power saving technology such as servo motors. Companies may also invest in renewable energy such as solar.

	competitiveness in plastic manufacturing companies.	Government could avail loans to plastic manufacturing companies at competitive rates. Government may capacitate technical training institutions such as Msasa Industrial training college with up-to-date machinery for training purposes. Parliament could amend labor laws to allow employees to be paid based on performance.
Objective 3: To recommend measures to boost competitiveness in plastic manufacturing companies	The study came up with a myriad of recommendations which could be used to boost competitiveness in plastic manufacturing companies.	The plastic manufacturing industry could be categorized as a priority sector by Government. This will enable the industry to get preference in accessing resources critical for the competitiveness of the industry.

5.5 Recommendations for further research.

Further studies are recommended to investigate the quality of management in plastic manufacturing companies in Zimbabwe as something linked to competitiveness. The cause-and-effect relationship between internal and external factors and competitiveness could also be another area recommended for further study.

REFERENCES

- Appiah, K., Collins, O., Selassie, H., & Osabutey, E. (2019). The role of government and the international competitiveness of SMEs. *Critical perspectives on International Business*, 15(4), 296-322. <https://dx.doi.org/10.1108/cpoib-06-2018-0049>
- Ayodotun, I. S., Oyebisi, I. M., Maxwell, O. A., Oluremi, O. A., Adebajji, A. W., Hezekiah, F. O., Taiye, B. T. (2018). Examining the moderating effect of entrepreneurs' demographic characteristics on strategic entrepreneurial orientations and competitiveness of SMEs. *Journal of Entrepreneurship, Education*, 21(2), 1-8.
<https://search.proquest.com/docview/2046056028?accountid=63189>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- British Plastics Federation, (2016). The benefits of using Plastic packaging
https://www.bpf.co.uk/about_plastics_packaging.aspx
- British Plastics Federation (2022)
<https://www.bpf.co.uk/press/strategic/manufacturing.aspx>
- Broedner, P., Kinkel, S. and Lay, G. (2009), Productivity effects of outsourcing new evidence on the strategic importance of vertical integration decisions. *International Journal of Operations & Production Management*, Vol.29 No.2, pp.127-150
- Covin, J.G., & Wales, W.J. (2012). The measurement of entrepreneurial orientation. *Entrepreneurial Theory and Practice*, 36, 677-702
- Dalimunthe, R. F. (2019). The effect of entrepreneurial mindset, digital training and supervision on the competitiveness of small and medium enterprises (SME) for women. *Journal of International Women's Studies*, 20(9), 121-131.
<https://search.proquest.com/docview/2335163889?accountid=63189>
- Damiyano, D., Muchabaiwa, L., Mushanyuri, B.E. and Chikomba, C.P. (2012), "An investigation of Zimbabwe's manufacturing sector competitiveness", *international journal of Development and Sustainability*, Vol. 1 No.2, pp.581-598.
- Dzikowska, M., & Gorynia, M. (2012). Teoreyczne aspekty konkurencyjnosciptzedsiedi orstwa-w kierunku koncepcji eklektycznej *Gopodarka Narodowa*, 248(4), 1-30
- Engelen, A., Gupta, V., Strenger, L., & Brettel, M. (2015). Entrepreneurial Orientation, firm performance, and the moderating role of transformational leadership behaviors, *Journal of Management*, 41, 1069-1097
- Expert market research (2022) retrieved from
<https://www.expertmarketresearch.com/reports/plastic-market>
Accessed on 15/09/2022
- Friedman, T.L. (2005). *The world is flat: A brief history of the twenty-first century*. Farrar, Straus and Giroux
- Grandview research (2022), Report overview. Retrieved from
<https://www.grandviewresearch.com/industry-analysis/global-plastics-markets>.

Accessed on 26/11/2022

Indeed (2022): What it means for Business to be competitive. Retrieved from: <https://indeed.com>Home>Hiring resources>

Inter trade Ireland, “A Competitive Analysis of the Polymer and Plastics Industry on the Island of Ireland” Retrieved from: <https://intertradeireland.com/assets/publications/Competitive-Analysis-of-the-Polymer-Plastics-industry-on-the-island-of-Ireland.pdf>

Ion Stancu and Adriana Lazarescu (2006). Methods to increase competitiveness in industry, *Management and marketing journal, University of Craiova, Faculty of Economics and Business Administration, Vol.4(1)*, pages 73-76, November

Kalantaridis, C., & Pheby, J. (1999). Processes of innovation among manufacturing SMEs: The experience of Berkshire. *Entrepreneurial and Regional Development*, 11, 57-78. doi: 10.1080/089856299283290 [Taylor and Francis Online], [Google Scholar]

Kalita, A., & Chepurenska, A. (2020). Competitiveness of small and medium businesses and competitive pressure in the manufacturing industry. *Foresight and STI Governance*, 14(2), 36-50. <https://doi.org/10.17323/2500-2597.2020.2.36.50>

Khan, N. R., Raziq, A., & Ghouri, A. M. (2019). Strategic human resource management and organizational competitiveness in SMEs of Pakistan: Moderation role of regulatory environment and industry characteristics. *Journal of Business & Economics*, 11(2), 51-73. <https://search.proquest.com/docview/2362133411?Accountid=63189>

Krugman, P. (1979b). Increasing returns, monopolistic competition and international trade. *Journal of international Economics*, 9(4), 469-479. [https://doi.org/10.1016/0022-1996\(79\)90017-5](https://doi.org/10.1016/0022-1996(79)90017-5)

Lisowska, R. (2015). External determinants of the development of small and medium-sized enterprises-empirical analysis. *Journal of Entrepreneurship, Management and Innovation*. 11(4) 115-138. <https://doi.org/10.7341/20151145>

Maxwell, J.C. (2007), “everything rises and falls on leadership” (Maxwell in the 21 Irrefutable Laws of Leadership: Follow them and people will follow you. Nashville, Tennessee, Thomas Nelson Inc., 2007, p. 267).

Mckenny, A.F., Jeremy, C.S., Ketchen, D., J., Payne, G.T. & Moss, T.W. (2018). Strategic Entrepreneurial Orientation configuration, performance and the effect of industry and time, *Strategic Entrepreneurial Journal* 10(41) 396-412
<https://doi.org/10-1002/sej.1291>

Memory, N. (2019). Why Zimbabwean products are not competitive: A productivity perspective. Retrieved from <https://www.ipccconsultants.com>

Mpofu, T. (2013), Challenges faced by the clothing sector in Zimbabwe, *Journal of Business and Management*, 13(5), 83-84

Mostert, J. (2003). The impact of globalization on developing countries. Paper delivered at the ESSA conference 17-19 Sept. at Somerset West.

NEC. (2022, November 20). Structure of Plastic manufacturing companies in Zimbabwe. (T. Maraidza, Interviewer)

Nia, H.R.S., Miri, (PMA, 2022)M., Gholani, S., & Eskandari, M.J. (2015). Factors affecting the Competitiveness of the Food Industry by using Porter's Five Forces Model Case Study in Hamadan Province, Iran, *Journal of Asian Scientific Research* (5)4, 185-197.
<https://doi.org/10.18488/journal.2/2015.5.4/2.4.185.197>

PMA. (2022, November 16). Structure and current status of Plastic Manufacturers in Zimbabwe. (T. Maraidza, Interviewer)

Sipa, M, Gorzen-Mitra, I. & Skibinski, A (2015) Determinants of competitiveness of small Enterprises: Polish Perspective, *Procedia Economics and Finance* 27(2015) 445-453
Retrieved from:<https://creativecommons.org/licenses/by-nc-nd/4.0/>
OECD (1995), *Competition policy: A new Agenda* DSTI/IND (95) 14, Paris

OECD (2022), *Global plastics outlook, Economic drivers, Environmental Impacts and Policy options*, OECD Publishing, Paris.

Retrieved from
<https://doi.org/10.1787/de747aef-en>

Parker L. (2020). The world's plastic pollution crisis explained.<https://www.nationalgeographic.com/environment/habitats/plastic-pollution/>
Accessed 23/11/2022

Plastic SA (2014), *Plastic Industry Overview*, Retrieved from
<https://sapt.co.za>
Accessed on 20/11/2022

Porter M.E. (1979). "How competitive forces shape strategy", *Harvard Business Review*, 137-145

Porter, M.E. 1980. *Competitive strategy. Techniques for analyzing industries and competitors*. New York. The Free Press. Retrieved from <https://doi.org/10.1002/smj.4250020110>

Porter, M. E. (1990). *The competitive advantage of nations*, Free Press.
http://economie.ens.fr/IMG/pdf/porter_1990_-_the_competitive_advantage_of_nations.pdf

Porter M.E. Michael, "The five forces that shape strategy", *Harvard Business Review*, vol.86, pp.25-40, 2008

Putu Eka Juliana and Made Suyana Utama (2019), Strategy to improve competitiveness in small, medium industry in Bali, *International Journal of Business, Economics and Law, Vol18* (5), 128-134, February

Robbins SP Coulter M (2005). *Management* (8th ed.), Singapore: Prentice-Hall Inc

Sanchez-Gutierrez, J., Mejia-Trejo, J., Vargas-Barraza, J., & Vaquez-Avila, G. (2016). Intellectual capital, impact factor on competitiveness: Manufacturing industry SMEs in Mexico. *Measuring Business Excellence*, 20(1), 1-11.<http://dx.doi.org/10.1108/MBE-12-2015-0059>

Siyakiya, P. (2018). Analyzing the competitiveness of Zimbabwean Economy against the neighboring countries. *Empirical Economic Review*, 1(1), 1-24

Stawaz.E.(2019)<https://jemi.edu.pl/vol-15-issue-1-2019/factors-that-shape-the-competitiveness-of-small-innovative-companies-operating-in-international-markets-with-a-particular-focus-on-business-advice>

Tuan, V.K. (2020). Analysis of challenges and opportunities for Vietnamese SMEs in the globalization. *Journal of Business Management and Economic Research (JOBMER)*, 4(2), 169185.<https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2FFTR1001.2020.192>

Van, Vliet.V. (2009) Porter Five Forces model explained. Retrieved 21 Nov. 2022 from tools hero: <https://www.toolshero.com/strategy/porter-five-forces-model/>

World Economic Forum, 2019. The global competitiveness report 2019: Retrieved from https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

World Bank Group, 2016. Clusters of Competitiveness
<https://documents1.worldbank.org/curated/en/152521468158381169/pdf/clusters-of-Competitiveness>.

Wang, X., & Cheng, Z. (2020) Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations, 158(1), 565-571
<https://doi.org/10.1016/j.chest.2020.03.012>

Wu, W., & Parkvithee, N. (2017). Promoting international competitiveness for small and medium-sized enterprises (SMEs): A case study of Chinese SMEs in Thailand. *International Review of Management and Marketing*, 7(3), 320-330.
<https://search.proquest.com/docview/1984678393?accountid=63189>

APPENDIX 1

QUESTIONNAIRE WITH SUMMARIZED RESPONSES

Introduction

Tererai Maraidza is a student pursuing the Master of Leadership and Corporate Governance degree at the Bindura University of Science Education, Zimbabwe. He is currently conducting a research study on factors affecting competitiveness in plastic manufacturing companies in Zimbabwe. Your participation and contribution to this study will be very much appreciated. You are kindly requested to attend to the questions provided in this questionnaire. The researcher has an ethical responsibility to ensure that you suffer no harm as a result of this research study and therefore your anonymity and confidentiality are not only of paramount importance but very much respected in this study. Please do not write your name or anything to link the questionnaire to you or your office. If you feel uncomfortable participating in this survey or responding to this questionnaire, feel free to return a blank one.

Thank you in advance for your cooperation.

Section A: Biographical data

Please kindly indicate with a tick (✓) the appropriate answer.

1. Indicate your gender

Male	44
Female	5

2. What is your age group?

20-25 years	0	46-50 years	9
26-30 years	2	51-55 years	14
31-40 years	4	56-60 years	8
41-45 years	6	60 and above	6

3. What is your professional qualification?

Certificate	12	Masters	3
Diploma	25	PhD	0

Degree	7	Any other	2
--------	---	-----------	---

Section B: Position in management

4. Are you a senior manager for the company you are working?

Yes	49	No	0
-----	----	----	---

5. What is your working experience with the company?

1-5 years	4	16-20 years	12
6-10 years	8	20-25 years	13
11-15 years	7	26 years and above	5

6. Do you understand the meaning of competitiveness?

Yes	37	No	12
-----	----	----	----

7. Does your company have a corporate strategy for competitiveness?

Yes	10	No	39
-----	----	----	----

8. Are you proud of the quality of your company's products?

Yes	15	No	32
-----	----	----	----

9. Would you choose to purchase your company's products against those of competitors?

Yes	20	No	29
-----	----	----	----

10. Given the reality of global competition, are the future prospects of the plastic manufacturing industry bright?

Yes	19	No	30
-----	----	----	----

Section C

On the numbered scale indicate your opinion by ticking the extent to which you agree or disagree with the statements. Key: SD- Strongly Disagree; DA- Disagree; NS- Not Sure; A- Agree, SA- Strongly agree

	SD	DA	NS	A	SA
Key internal organization factors					
Human capital					
1. The shortage of skilled artisans significantly contributes to machine idle time	1	3	5	9	31
2. We have an unfilled vacancy for a skilled artisan	5	8	2	7	27
3. We have at least one broken-down machine in our Factory	1	2	2	8	35
4. We do not have a talent development plan for artisans	2	1	9	3	34
5. We do not have a succession plan for artisans	0	3	8	5	33
Remuneration systems					
6. We have a challenge of low productivity	0	0	2	4	43
7. All company employees are paid on a fixed-time-basis	3	4	0	7	35
8. We do not pay any bonus when targets are met	6	5	3	5	30
9. We currently have wage arrears.	1	2	2	7	37
10. We do not do performance appraisals on our employees	3	2	1	2	41
Technological development					
11. 80% of our machines are 10 years or older?	3	2	1	5	38
12. The state of our machinery significantly contributes to poor quality products	1	1	2	3	42

13.	Our cycle times are at least double the standard	3	1	2	6	37
14.	We always have an unaffordable electricity bill.	1	3	2	9	34
15.	We are not automated	2	1	0	3	43
Organizational culture						
16.	Competitiveness is not part of our culture	2	1	3	1	42
17.	Competitiveness is not the responsibility of every Employee	4	3	2	4	36
18.	Our mission statement does not emphasize Competitiveness	5	4	2	3	35
19.	Our remuneration system does not emphasize Remuneration	1	2	1	1	45
20.	We do not have a competitiveness corporate strategy	3	2	0	1	43
Key External factors						
Power supply						
21.	We encounter power cuts for at least 12 hours a day	0	1	2	3	43
22.	We often have breakdowns due to power surge	1	2	1	5	40
23.	It is not viable to run the generator due to high fuel costs	2	1	1	2	43
24.	We have orders which we can't fulfill due to power cuts	0	0	2	1	46
25.	Power cuts increase material wastage and rejects	2	2	1	2	42
Financial access						
26.	Recapitalization and retooling are part of our goals	0	1	1	5	43
27.	We have no cash flow to participate at the forex Auction	3	1	0	6	39
28.	There is no affordable loan facility from our bankers	0	0	0	0	49
29.	We once approached our bank for funding and was turned down due to lack of collateral security	5	3	2	4	35

30.	Lack of affordable funding to import raw materials in bulk affect our price competitiveness	1	1	2	5	40
Competition pressure						
31.	We have a challenge of dumping of cheap quality Imports	1	1	1	2	44
32.	We are not able to compete with substitute imports on both price and quality	0	1	0	3	45
33.	We have a problem of imports leakages at border posts	5	2	15	4	23
34.	Our products are not standardized	4	1	1	3	40
35.	Government is not doing enough to level the playing field with global competitors	0	0	0	1	48
Support institutions						
36.	There are no local suppliers or agents of plastic machinery and spares	0	1	1	2	45
37.	There is no functional local tool and die making industry	2	1	1	2	43
38.	There are not more than five suppliers of virgin plastic raw materials in Zimbabwe	0	0	1	2	46
39.	There is no Government incentive for investing in plastic manufacturing business in Zimbabwe	0	0	1	1	47
40.	We do not have enough institutions to train plastic artisans and engineers	7	3	30	4	30
High wages						
41.	Our minimum wages are too high	1	1	1	1	45
42.	We are at least one month behind in wages arrears	5	3	4	4	33
43.	We want to approach NEC for wages moratorium	4	2	3	2	38
44.	Government labor laws are not conducive to business	1	1	1	1	45
45.	Our labor laws need urgent review by parliament	0	1	1	3	44

46. In your own opinion are Zimbabwean plastic manufacturing companies competitive?

Yes	3	No	43	Not Sure	3
-----	---	----	----	----------	---

47. Can you elaborate more on the state of competitiveness for local plastic manufacturing companies?

Local plastic manufacturing companies are uncompetitive and are losing business to imported products which are cheaper and of high quality (90% of respondents)

48. If your answer to 41 above is no, what do you suggest could be the main factors contributing to lack of competitiveness?

Load-shedding (80%) Ageing machinery and equipment (90%) Lack of skilled manpower (90%) Imports (70%) Lack of funding 90%

49. In your own opinion what internal measures should be used to enhance competitiveness in local plastic manufacturing companies

Latest technology and automation (95%), performance-based remuneration (90%)

50. In your own opinion what external measures should be used to enhance competitiveness in local plastic manufacturing companies

Government must address power issues (99%), RBZ must make affordable funding available recapitalization and retooling (90%) Plastic products must be standardized to curb dumping of inferior products (95%), Government must regulate imports and plug border leakages (90%)

Thank you for your time

APPENDIX 2

INTERVIEW GUIDE

Theme

To get an insight into qualitative issues surrounding the competitiveness of plastic manufacturing companies in Zimbabwe.

Interview preparation

- To first phone the person to book an appointment and introduce myself.
- To secure the appointment and be at the venue in time and well dressed.
- To confirm that I am now coming or send the interviewee an electronic reminder.
- If I am running late because of any unforeseen reason, traffic jam, I must let the interviewee know right away.

Introductory greetings

- My name is Tererai Maraidza and I am a student at Bindura University of Science Education pursuing the Master of Leadership and Corporate Governance Degree.
- To show my student ID card to the interviewee.
- As part of my program, I am required to do a dissertation in partial fulfillment of my degree program.
- My dissertation project is on “Factors affecting competitiveness in plastic manufacturing companies in Zimbabwe”
- To create an environment whereby the interviewee feels free to talk.

Ethical considerations

To give interviewee the assurance that I have an ethical obligation to safeguard him/her against any harm as a result of participating in this research.

- To highlight that all information collected will be treated with strictest confidence.
- You will not be identified by any other means and you will be treated as anonymous in the whole research.
- You are guaranteed of no harm for participating in this research

Main Interview Guide

1. So how are you keeping with work and the family?
2. Is competitiveness a challenge amongst plastic manufacturing companies?
3. How many companies constitute the plastic manufacturing industry?
4. In your own opinion, do you think plastic manufacturing companies are competitive or not?
5. What do you think are the internal factors (within the organization) affecting the competitiveness of plastic manufacturing companies in Zimbabwe?
6. What do you think are the external factors (outside the organization) affecting the competitiveness of plastic manufacturing companies in Zimbabwe?
7. What internal measures (within the company) would you recommend to enhance competitiveness of plastic manufacturing companies?
8. What external measures (outside the company) would you recommend to enhance the competitiveness of plastic manufacturing companies?
9. Do you have any questions to ask me?
10. To thank the interviewee for his/her time

END OF THE INTERVIEW

APPENDIX 3: SUPERVISOR'S REPORT

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF COMMERCE

GRADUATE SCHOOL OF BUSINESS

RESEARCH SUPERVISION CONSULTATION REPORT FORM

STUDENT'S NAME: TERERAI MARAIDZA REG. NUMBER: B211853B

DISSERTATION SUPERVISOR: Dr. GILBERT KICHINI

PROGRAMME: MASTER OF LEADERSHIP AND CORPORATE GOVERNANCE

DISSERTATION TITLE: FACTORS AFFECTING COMPETITIVENESS IN
PLASTIC MANUFACTURING COMPANIES IN ZIMBABWE

DATE	STAGE OF RESEARCH	SUPERVISORS' COMMENTS AND INITIALS
01.10.2022	1. Proposal	Proceed to chapter 1 after effecting corrections <i>Initials: G. K.</i>
19.10.2022	2. Chapter 1	Proceed to chapter 2 after effecting corrections <i>Initials: G. K.</i>
26.10.2022	3. Chapter 2	Proceed to chapter 3 after effecting corrections <i>Initials: G. K.</i>
17.11.2022	4. Chapter 3	Proceed to chapter 4 after effecting corrections <i>Initials: G. K.</i>
26.11.2022	5. Chapter 4	Proceed to chapter 5 after effecting corrections <i>Initials: G. K.</i>
05.12.2022	6. Chapter 5	Proceed to preliminary pages after corrections <i>Initials: G. K.</i>
15.12.2022	7. All together	Proceed to submit <i>Initials: G. K.</i>

OVERALL COMMENTS BY THE SUPERVISOR:

The student complied with all supervision requirements

STUDENT'S SIGNATURE: *T Maraidza* DATE: 19/12/2022.

SUPERVISOR'S SIGNATURE: *G. Kichini* DATE: 15.12.2022