UNIVERSITY OF ZIMBABWE



RESEARCH TOPIC

FOSTERING COMPETITIVENESS THROUGH COST MINIMISATION STRATEGIES: EVIDENCE FROM INDIGENOUS PAINT MANUFACTURERS IN ZIMBABWE.

BY

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MBA

:

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DECLARATION

I, the undersigned do hereby declare that this dissertation is a result of my own original research and that no part has been presented for examination in any other university.

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Date 14 September 2020

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DEDICATION

This dissertation is dedicated to my family

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Abstract

In this study, the researcher aimed at fostering competitiveness through cost minimization strategies evidenced by indigenous paint companies in Zimbabwe. To address this, the researcher determined the impact of these strategies on competitiveness. The strategies examine are budgetary control, Quality circles, Value analysis, Kaizen costing and Just in time philosophy. Literature review was done to determine cost minimization strategies and the study model was established. Study hypothesis was developed and proposed research model was established based on existing body of literature. The researcher adopted an explanatory research design to explain the relationship between cost minimization strategies and competitiveness. The data was collected from 20 paints companies and 100 respondents were randomly selected from these companies and online survey questionnaires were used to collect data from respondents. Stata was used to analyze data through regression analysis. The results indicated that every unit increase in Budgetary Control, Value Analysis, Quality Circles and Just in Time, there is unit increase in competitiveness score respectively, holding all other variables constant. All these relationships are statistically significantly different because the p-value assorted with each one of them are small. However, the effect of Kaizan Costing on costing is insignificant since the pvalue associated with it is very large. The results found also suggest that the overall average cost minimization scores are not affected by company size and the same applies to period of operation. The study also gives management and policy makers cost minimization strategies that should be implemented to enhance competitiveness of indigenous paint manufacturing companies in Zimbabwe.

List of Acronyms

ANOVA Analysis of Variar	ice
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JIT Just in Time

ZIMSTAT Zimbabwe Statistics Agency

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CHAPTER ONE

Introduction

1.1 Introduction

In a normal business environment, the major determinant which suggests whether the business is competitive is the cost. In most cases where the total cost of production exceeds the income received, the probability is very high that the business will close down (Mugano 2018). In order for management to make rational decisions, it is important to analyze the cost minimization strategies to protect the competitiveness of products being manufactured.

Zimbabwe is characterized by a quite number of paint manufacturers and these companies are operating in a very dynamic environment where competition is robust in paint manufacturing companies (Institute of Chartered Accountants of Zimbabwe congress 2013). This chapter seeks to illustrate the background of the study so as to depict the problem at hand. The chapter describes the statement of the problem, research objectives, research questions, research hypothesis, rationale of the study, scope of the research, dissertation outline and a summary.

This study seeks to identify cost minimization strategies that are being used by paint manufacturing companies in Zimbabwe and their impact on competitiveness. The goal of these strategies is to reduce the overall production cost so that the company will charge competitive prices (Castelan, 2018).

1.2 Background of the study

Researches on economic growth of Zimbabwe such as (Munhupedzi and Chidhakwa, 2017) and (Sikwila 2013) points out that during the period between 2009 and 2015 dollarization brought about stability in the economy, a marginal increase in GDP and an arrested inflation. This economic stability created an avenue for indigenous paint manufactures to expand their operations and others being formed. For example Ledger Paints became a registered company in 2009, even though Chroma Paints and Nash Paints were formed in 2001 and 2007 respectively (Institute of Chartered Accountants of Zimbabwe congress, 2013), they expanded their operations during dollarization era through opening branches in almost all major towns in Zimbabwe. To date there are more than 15 indigenous paint companies in Zimbabwe. However

soon after dollarization era, economy instability started to exert more pressure on competitiveness of paint companies as cost of production started to increase.

Zimbabwe has been seen as high cost country in relation to ease of doing business and this is due to several cost drivers (Mugano, 2018). Generally costs are the major factor to determine product price and services and this makes Zimbabwe products more expensive as compared to the region. Numerous suggestions have been put forth on how interest rates should be reviewed, the way under which ZIMRA should deal with tax payable among many other initiatives being done to address major cost drivers.

Zimbabwe National Statistics Agency (2019) states that the value of exported products manufactured in Zimbabwe has continued to decline between the period of 2013 and 2019 as a result of high uncompetitive costs for Zimbabwean manufactured products. Most of the exports (85%) focus mainly on Tobacco, Cotton and Minerals. The 2018 manufacturing sector report postulates that the scrapping of SI 122 resulted in a stiff competition from imported products mainly from South Africa thus affecting local industries. More so, foreign currency shortages which have worsened in 2019 after the introduction of mono-currency system has negatively impacted the production costs resulting in some companies scaling down and others even closed their production lines.

The confederation of Zimbabwe Industries (2017) postulates that the total cost of production in the manufacturing sector is 45% to 55% higher compared to SADC region and the major costs being transport, interest rates, taxes, water and labor among many others. According to the research conducted by CZI, electricity and water alone were constraining capacity utilization by 3.21%.

This does not spare paint companies in Zimbabwe. The volumes of chemical division of Nash Paints have declined by 5% and this is mainly as a result of difficulties being faced by manufacturing companies in Zimbabwe (<u>www.nashpaints.co.zw</u>). On another note, Astra Paints which is the biggest rival of Nash Paints is reported to have majored with Kansai Plascon Africa Limited (2013) which is a South African company in a bid to scale up its operations to meet production costs. It is against this background that most of the products being produced by indigenous paint manufacturers in Zimbabwe attract high selling prices due to high

manufacturing costs in Zimbabwe thus making them uncompetitive in both local and export markets. The difficulties being faced by indigenous paint manufacturers in Zimbabwe has resulted in key customers resorting to import paint products from South Africa and Egypt.

1.3 Problem Statement.

The paint manufacturing companies are failing to produce more goods for both local and export markets and also those products being produced locally are facing stiff competition from imported products. The paint manufacturing sector is characterized by low capacity utilization and also low contribution to national GDP. Power shortages, high labor cost, high regulatory requirements by the government are exerting more pressure on the total manufacturing costs resulting in high total production costs. The total production costs create a miss match between cost and competitive selling price.

As a result of stiff competition and high production costs, some indigenous paint companies are closing their operations, downstream their production capacity, charging high prices, reduced profitability and dwindling market share. Nash Paints closed its J Nyerere branch in November 2019 and its production capacity dropped by 10% in by end of 2019 due to high production and rental costs (Nash Paints Annual report 2019). In addition there are no theoretical studies undertaken to study these paint companies in Zimbabwe in addressing the cost minimization strategies to enhance competitiveness.

1.4 Research Objectives

1.4.1 Main Objective

The main objective is to examine the impact of cost minimization strategies on competitiveness of paint manufacturers in Zimbabwe

1.4.2 Specific Objectives

To achieve the main objective, the following specific objectives will be researched

- 1. To investigate how budgetary control affect competitiveness in paint manufacturing companies.
- 2. To investigate how value analysis affect competitiveness in paint manufacturing companies
- 3. To investigate how Quality Circles affect competitiveness in paint manufacturing companies.

- 4. To investigate how Just In Time philosophy affect competitiveness in paint manufacturing companies
- 5. To investigate how Kaizan Costing affect competitiveness in paint manufacturing companies

1.5 Research Questions

1.5.1 Main Research Question.

The main research question that the study seeks to answer is:

What is the impact of cost minimization strategies on competitiveness of indigenous paint manufactures in Zimbabwe?

1.5.2 Specific Questions

The main research question will be addressed through the following sub questions:

- 1. How budgetary control affect competitiveness of paint manufacturing companies?
- 2. How value analysis affect competitiveness of paint manufacturing companies?
- 3. How Quality circles affect competitiveness of paint manufacturing companies?
- 4. How Just in Time philosophy affect competitiveness of paint manufacturing companies?
- 5. How Kaizan costing affect competitiveness of paint manufacturing companies?

1.6 Research Hypothesis

The main research hypothesis of the study is that there is a positive relationship between cost minimization strategies and competitiveness of Paint Manufacturing companies in Zimbabwe.

Hypothesis 1

Budgetary control has a significant positive impact on competitiveness

Hypothesis 2

Values analysis has a significant positive impact on competitiveness

Hypothesis 3

Quality Circles has a significant positive impact on competitiveness

Hypothesis 4

Just in Time philosophy has a significant positive impact on competitiveness

Hypothesis 5

Kaizan costing has a significant positive impact on competitiveness.

1.7 Significance of the Study

The research seeks to identify cost minimization strategies and how they impact the competitiveness of its products. The study makes a contribution to the existing body of knowledge of cost minimization literature adding new strategies that affect competitiveness of paint companies. The development and validation of conceptual framework for cost strategies will benefit other academics in the same study area. The methodology used in this study contribute in enhancing the validity of cost minimization strategies on competitiveness and increase the generation of the research through appropriate sampling procedure. In addition, having established the strategies, the research plays an important role in giving recommendations to managers on the most appropriate strategies that can be implemented to deliver customer value in this turbulent environment. The findings of this research will also practically benefit other paint manufacturers in Zimbabwe who are facing the same business environment.

1.8 Scope of Research

The research is going to be carried out in Harare a Southern African country known as Zimbabwe at ten (20) indigenous paint companies. For the purpose of this study, top management and staff members will be selected from ten selected paint companies because that sample play a significant role in the provision of financial statements and market intelligence in determining the cost minimization strategies being used in paint manufacturing sector. The selected study population has direct contact with financials as well as manufacturing environment and therefore their information is very useful in this study.

1.9 Research Outline

Chapter one:

Introduces the research study and outlines the research aim. The research also provides the statement of the problem, research objectives, research questions, research hypothesis, and significance of the study and scope of the study.

Chapter two:

Provides related literature on cost minimization strategies and their impact on competitiveness of Zimbabwean paint companies. It provides empirical literature guided by the objectives and research questions of the study. The chapter provides definitions of key terms and also viewpoints of other researchers in the same area of study. It constitutes models and theoretical frameworks introduced by other authors.

Chapter three

Provides the research methodology. It focuses on the research design, research philosophy, population and sampling, data sources, data analysis, ethical consideration, validity and reliability and research limitations.

Chapter IV

Provides research findings, data interpretation and discussion on findings through primary data collected through questionnaires and interviews. Data findings will be presented through bar/pie charts and discussions will be included on each and every chart.

This chapter plays an important role in achieving the research aim and objectives of the research.

Chapter V provides a research conclusion and also relevant managerial recommendations including areas of further research.

1.10 Chapter Summary.

The chapter highlighted the background of the study, research problem, research objectives, research questions, research hypothesis, rationale of the study, scope of the study as well as dissertation outline have been fore grounded.

CHAPTER TWO

LITERATURE REVIEW

1.11 Introduction

This chapter explains related literature discussed by other researchers in the field of fostering competitiveness through cost minimization strategies. It contains a detailed critical analysis of contributions by other authors in the same area of research. This chapter starts with definitions of key words in the same area. The literature review also explains the main approaches to the issue of fostering competitiveness through cost minimization strategies. Models and frameworks will be analyzed in a detailed manner. More over this chapter will also identify and explain research gap in the current literature that this research seeks to address.

1.12 Literature Search Strategy

Two main approaches that can be used by a researcher are chronological and thematic approach. According to Turan (2020), Chronological approach is the basis of history hence it is used when a researcher wants to examine the relationship between events or to describe the cause and effect relationship in history. This approach is dominant and it emerged in the United States (Cannadine, Keat, and Sheldon, 2011). This search strategy is important for literature review when a researcher seeks to emphasize on how ideas developed overtime in their chronological order. However the approach is criticized by other researchers due to the fact that the researcher does not depend on his own material synthesis but rather depends on another researcher's organizing principles. A thematic approach focuses on the main concept on literature review and it examines a particular theme or concept (Turan, 2020). The research defines the underpinning theories, concepts or ideas that are important to the research. It is also called funnel approach since it seeks to funnel discrete pieces of information from general concept to more specific studies. In this study the researcher adopts the thematic approach to analyze the concepts and ideas related to cost minimization strategies to enhance competitiveness.

1.13 Definitions of terms

1.13.1 Competition

Competition or competitiveness is defined as the ability by a firm or sub sector of the country to produce and sell goods and services in a defined market in relation to the performance or ability of other firms in the same market (Usenko, 2018). It involves a systematic approach where the company tries to find the best way of taking market share from other firms. However Castelan (2018) defines competition as the efforts undertaken by the firm to increase market share and be the leader in the industry. In other words it is a situation where a business put effort to win customers or clients over other business by offering different products or services.

1.13.2 Cost

A cost is defined as monetary value spends by a company to produce a unit of product (Oluwagbemiga etal 2019). According to Weetman (2018) a cost is a sum of resources given up by the company expressed in monitory value. It is an expenditure incurred by the business to produce or sell products that is an amount paid to manufacture a product, purchase stock or get an asset to be used in the business process.

1.13.3 Cost Control or cost minimization

It is defined as a process that seeks to maintain performance according to set standard (Akeem, 2017). To this end, cost control is very important to an organization through minimizing or reducing unwanted expenses thus it ensures costs are kept within reasonable limits. Clement (2015) postulates that the process of cost control involves the controlling of expenditure through conducting regular comparison between actual with predetermined budgets so that undesirable trends can be corrected. Cost control is key to any organization and thus it is the bottom line of every organization (Adeleke 2017). For an organization to be competitive management should understand key factors that drive competitiveness and cost is one of the factors (Adeleke, 2017).

According to Abdul and Isiaka (2015) cost control is aimed at profit maximization and increased shareholder value. Oyerogba et al (2016) as cited in Abdul and Isiaka (2017) states that an organization with sound cost management structure has high chances of meeting its profit targets through proper cost control. Cost control is important as it regulates and minimizes unwanted expenses.

Akeem (2017) states that there are several benefits of cost control which include efficient utilization of resources, it makes policy making decisions easy, it enhances adequate production and reduces overstocking of products. Maria (2018) states that cost control is important in the following areas:

Labor- This can be classified into three ways that is shorter working hours, basic wages and reduced output. Reducing labor cost in organizations is not easy due to existence of Trade unions and minimum wage legislations. Management should motivate its workers and try to strike a balance between raising labor productivity and labor cost.

Material- The misallocation of materials or resources is one of the primary causes of increased costs. Material wastage must be controlled in order to control costs.

Sales- Overspending on sales promotions may eventually lead to increase in marketing costs therefore an organization should ensure that it not overspending to achieve sales targets. Management should implement budgets for dales for planning and controlling revenues for companies.

According to Alireza and Mahdi, (2017), cost minimization has become a very important tool for manufacturing companies to be proactive for an increased competition. Cost reduction is defined as the achievement of permanent minimization in the unit cost of products produced or services offered without compromising of product quality (Chartered Institute of Management Accountants, CIMA London). Low production costs is viewed as one of the primary way that companies use to compete in a global economy hence cost minimization is an approach used to reduce expenditure.

1.14 Underpinning Theories

1.14.1 Porter's Five Forces Model

The Porter's Five Forces Model provides a detailed analysis of competitive strength of a business. This model was developed by Porter (1985) as a means to organize information of an industry and examine its attractiveness. The five forces are Threats of new entrants, bargaining Power of buyers, Power of suppliers, Threats of substitute and Existing rivalry.

The industry attractiveness is reduced through new entrants as they raise the level of competition in an industry. Threat of new entrants depends mainly on barriers for entry for example high barriers to entry act as a deterrent to new competitors who want to penetrate the market. Capital investment scale, economies of scale and access to distribution channels are the major barriers to entry (Adeleke, 2017). Where there are few barriers to entry in an industry operated by private sector entities, their competition will be intense because many players are able to penetrate the industry. This is the case for paint manufacturing companies in Zimbabwe where law capital investment is required resulting in many players penetrating that industry.

Threat of substitutes can also impact the attractiveness of an industry. It explains buyer's willingness to substitute products. The presence of substitute products with low prices but can perform like any another products, may threaten the viability of already existing entities (Porter, 1985). It is determined by factors such as customer switching costs, price for substitute, customer loyalty, customer relationships and current trends. Threat of substitute effect may be high in paint industry because firms are creative and innovative in providing substitute products.

Suppliers play an important role in business through supplying goods in form of raw materials, parts and components or finished goods. In a situation where there are no barriers to entry a case of Zimbabwe whereby foreign companies could own 100% in form of foreign direct investment (Chuma, 2018), suppliers gain a greater bargaining power thus suppliers will have power to determine prices of inputs that they can supply.

Bargaining power of buyers relates to the buying power of buyers thus it depends customer concentration. The greater the concentration, the greater the negotiation leverage (Porter, 1985).The switching cost has an effect on power of buyers. The buyer has greater bargaining leverage if the switching costs are low. Buyers tend to have power of bargain if there alternative suppliers forcing prices down resulting in a company's profits squeezed to a minimum.

The degree of rivalry explains the competition among business in the industry. The intensity of rivalry depends on the structure of competition. In a market where there is a market leader and smaller organizations following, rivalry tend to be less. When competition becomes more intense, prices will drop, reducing profit margins thus negatively impacts business. An industry characterized by many players which are of the same size is likely to have intense competition. The intensity of competition is also high when businesses have similar strategies and less product

differentiation and in such situations businesses experience low market growth and price competition (Porter, 1985).

1.14.2 Neo-classical Growth Theory

The theory summaries three powerful forces that drive a stable growth and these forces are labor, capital and technology. Neo-classical growth theory states that variation in the total amounts of labor and capital in the manufacturing function leads to equilibrium. It state that these factors influence economic growth (Otekunri, Nwanji, Olowooker, Egbide, Fakile, Lawal, Ajay, Falaye and Eluyela, 2018).

It also states that an economy cannot continue without technological developments therefore technology has a major influence on economic growth. In firms these factors influence the capacity to be competitive and have the impact on material cost, overhead cost and labor cost (Edgide, Adegbola, Bamidele, Sunday and Olufemi, 2019). Companies will have the potential to grow if these costs are well managed, rightly allocated, rightly controlled and ultimately reduced. In a turbulent environment characterized by high inflation rate, a proper strategy must be adopted to ensure that the costs do not exceed set standard.

1.14.3 Going Concern Theory

The going concern theory states that a firm will continue in business for the foreseeable future thus it will not close its operation or having its assets liquidated (The going concern principle, (2017). It explains the ability of the firm to remain competitive and to make money to stay in business without having to go bankrupt. The assumption of the going concern principle is that the entity continuously carrying out its operations in a period which is good enough to meet its obligations as they fall due. The major factor that affects the going concern principle is rising costs as uncontrolled cost may force the business to close its operations (Egbide et al, 2019). Uncontrolled costs negatively affects competitiveness of the firm resulting reduced profitability, thus without profit a company cannot meet its obligations.

1.15 Importance of Cost minimization in business

Cost minimization is key to an organization in competitive industry since there is need to realize reasonable cost. Management achieve set standard through ensuring careful and efficient utilization of resources (Lawal, 2017). Cost control is a function to establish a standard. To this end, cost control and reduction is important in order to regulate or reduce unwanted expenses and

can also increase market demand in terms of market competitiveness. The importance of cost control and reduction is profit maximization. Organizations that implement cost reduction successfully can sell product at lower price than competitors without compromising product quality.

Cost minimization also result in price competitive advantage and a company can become a market leader through increased market share. It is a techniques used in making means of competition feasible (Lawal, 2017). The significance of cost minimization cannot be overstated when a company is failing to maintain profitability. Frequent examination of costs helps the organization to eliminate unnecessary costs. The importance of cost control remain constant either an organization is in good or bad state (Lockey, 2019).

More so the importance of cost control is that it helps management to achieve predetermined objectives. It also provides corrective actions to cost management and act as a starting point for future actions. Furthermore it allows business management to prevent repetitions of past mistakes. Control act as a guide to forecast and decide future course of action whenever there is a variance between standard and actual performance. Cost control also result in unity of action through coordination of business exercises. Organizational competence is achieved through a proper control system. Performance measurement is an important tool of control as it ensures that each individual in the production process maximizes his contribution (Lawal, 2017).

1.16 Understanding requirements needed for effective control system.

1.16.1 Cost control system

Kinney and Raiborn (2017), cost control system is a tool or method designed to regulate and manage organizational costs. Cost control and cost reduction depends heavily on sound and effective cost control system. It is part of a systematic cycle which begins with proper planning through establishing operational targets and objectives. Clement (2015) identified two important aspects of an effective cost control system which includes accounting control and operational control. Operational control is usually achieved through personal observation or close monitoring of operations thus it is usually practiced by small businesses. As the business grows, operational control will be supplemented by accounting control through creating effective system of records which identifies and analyze costs.



Source: Kinney and Raiborn (2017)

Cost understanding. This strategy cannot be achieved if management failed to understand why costs differ between time periods or from the specific budgeted amounts. The process begins when the budget is prepared and the preparation can only be done when one understands the reasons resulting in changes in cost from one period to another. Changes in volumes can also result in change in cost thus a well prepared flexible budget can compensate for such changes. Inflation can result in result in changes in costs enhanced by supplier costs adjustments and changes due to quantity purchased. Management should have an understanding of such changes in order to control costs (Kinney and Raiborn, 2017).

Cost containment. According to (Kinney and Raiborn, 2017),cost containment is a process of minimizing costs increases per unit of variable cost and total fixed cost. This process applies effectively in an organization where it cannot be possible to perform inflation adjustments, as well as tax and regulatory changes in supply and demand considering that these forces occur outside the organization. Therefore cost containment is applicable for costs which are caused by internal factors which include costs arising due to reduced supplier rivalry, quantities acquired and seasonality (Kinney and Raiborn, 2017).

Nowak (2016) states that cost containment as a process of monitoring the expenses required to function an organization or accomplish a project within pre-planned budgetary limitations. It is considered as an important management task that helps to retain costs down to only necessary and intended expenses in order to achieve financial targets.

According to Nowak (2016) cost avoidance is defined cost as a way of minimizing costs by lowering a possible increase in expenditures. This process is implemented where cost containment cannot be applied and it involves finding satisfactory alternatives of not spending money for superfluous goods and services (Kinney and Raiborn, 2017).

Cost reduction. According to Kinney and Raiborn (2017) cost reduction is narrowly related to cost avoidance. The main aim of cost avoidance and cost reduction is to minimize total costs. Cost reduction can be employed at the premeditated stage to ensure that high costs are not adopted throughout the life cycle product or service. This process is then extended to the production level as new opportunities to minimize expenditures arise. The elimination of wastes and unnecessary activities during production assist to cost reduction (Kinney and Raiborn, 2017).

1.16.2 Steps in implementing a cost control system

Kinney and Raiborn (2017) suggested a useful five step method of implementing a cost control system under which management can implement to create an environment that is favorable to control and effectively manage costs. This cost control system involve the following:

The first step is for management to have an understanding of the type of costs experienced by an organization. According to Kinney and Raiborn (2017), it is important to understand the type of costs incurred by the organization. Costs are classified under fixed and variable costs. The various commonly asked questions include: What drives costs? Who made the purchase? And when were purchases made? Jim (2015) reinforced this by saying that an organization should understand and identify its sources of revenue in order to implement an effective cost management system. Lastly the organization must identify overhead costs and all other costs that are not directly linked to revenue generation (Jim, 2015).

The second step is to effectively communicate the need for cost awareness to all employees. Kinney and Raiborn (2017), proposed that employees should be informed about the need for a cost conscious environment and should be aware of the importance of cost control and which costs need to be better controlled.

The third step is employee education on cost control issues. According to Kinney and Raiborn (2017), employees should get an opportunity to suggest ways of controlling costs and also to be encouraged to embrace cost control concepts. Management should then offer some incentives to

employees in the form simple verbal recognition r monetary rewards. Managers must also be flexible enough to allow for changes from the current method of operation (Kinney and Raiborn, 2017).

Jim (2015) reinforced this by encouraging organizations to actively involve employees in making decisions relating to cost control thus there is need for employees to fully understand company objectives and have adequate cost information. More so requesting input employee engagement will not only allow the management to have a better understanding, but rather the process will provide employees more incentive to become part of the organization. Organizations will undoubtedly improve their cost control system if they actively request suggestions from their employees (Jim, 2015).

The next step is to generate reports that specify actual results. According to Kinney and Raiborn (2017) suggested management should generate reports that compare budgets against actual results and calculate the variance. Management will then provide an evaluation detailing the reasons why costs were not controlled in the previous periods. Such analysis will provide insight on cost drivers in order to control activities that drives costs in the future (Kinney and Raiborn, 2017).

The last step is to develop an understanding that the cost control system is a long term process. Kinney and Raiborn (2017) proposed that it is the responsibility of management to develop an understanding that the cost control system is a long term process, thus it should be viewed as a short run solution. Cost decisions should provide against the company's objectives and strategy. For example a company should not buy large amount of stock simply because the supplier has lowered the price as this will lead to unnecessary over stocking. Therefore the company should only buy the amount of stock it needs to satisfy its existing customers (Kinney and Raiborn, 2017). To this end cost management becomes a standard operating procedure. Management and employees must be continuously recognizing opportunities for minimizing or reducing unprofitable work (Jim, 2015).

1.16.3 The effects of weak cost control techniques.

Poor implantation of cost control techniques in an organization may weaken its operational performance. Some of the outcomes of failure to implement cost control include increased labor cost, increased wastages, and increase in repair and maintenance. Decrease in cost with a proportional decrease in labor will automatically increase operational performance. (Oyewo, 2018)

1.16.4 Wastages

Akenbor and Agwor (2015) postulates that poor cost control, results means in inadequate supervision of workers therefore employees may use organizational resources anyhow since there is no one monitoring them and this will obviously results in wastages of resources. Waste is recognized after a comparison between quantities used in the manufacturing process and the final product produced. This form of waste is identified in two forms namely normal waste and abnormal waste thus normal waste is that which is projected and budgeted for before manufacturing take place while abnormal waste is that which surpasses the normal loss resulting in an increase in costs as it may be attributed to negligence of employees(Ankenbor and Agwor,2015).

Olalekan and Tajudeen (2015) points that wastages emanate from poor cost control in the sense that, a firm may purchase more raw materials than what is needed for production and those resources will not be used. Spoilage is another form of wastage where goods produced cannot be sold at a standard price due to damage, and such spoilage is categorized as normal and abnormal. Estimated and anticipated is called normal spoilage and abnormal exceeds the normal thus management should conduct investigations to minimize occurrence of abnormal losses.

1.16.5 Repair and maintenance cost

According to Evans (2014) repairs and maintenance cost occur when management seek to bring the asset in the state it was before and making it running in a good form. Repair and maintenance cost can be repetitive and are already projected for. Those cost which are not estimated for usually occur when there is of lack of supervision or negligence by employees. More so lack of training can also lead to unestimated costs and high stockholding levels. Weak cost control techniques lead to an increase in repair and maintenance costs therefore there is need for management to have a planned maintenance schedule (Evans, 2014).

According to Eti et al (2014), companies with an effective cost control practices have a well implemented maintenance culture resulting in them incurring relatively low repair and maintains costs Benefits of lower maintenance costs are thereby gained from the dependable long-lived plant or assets which requires relatively lower maintenance costs (Eti et al, 2014).

In addition, Gransberg and O''Connor (2015) endorsed implementation of equipment life-cycle cost analysis in organizations help to minimize repairs and maintenance costs especially in manufacturing companies. The equipment life cycle cost analysis is defined as a cost control technique used as one factor of the equipment fleet management process. The process allows management to prepare equipment repair, replacement and maintenance decisions depending on a given period of equipment's economic life. Lack of such cost control technique results in most organizations having difficulties in monitoring repairs and maintenance costs. This will assist management to ensure cost effectiveness of the assets by improving the overall lifecycle value of company assets (Gransberg and O''Connor, 2015).

However, Anjum (2015) suggested other factors which are not linked to weakness of cost control technique. The study points out that such factors cannot be controlled by management in an organization. Such factors include among many others economic fluctuations of spare parts, unexpected damages of assets during the manufacturing process and service costs prices (Anjum, 2015).

1.16.6 High Labor costs

Young and Shields (2016) defines labor costs as amount of outflow incurred by the organization for paying or hiring personnel who then offer their services for the achievement of organizational goals. Labor cost are categorized as one long-term costs which are controllable by an organization since they are determined (increased and decreased) by the same organization. Strategic cost control technique is used by many organization to gain competitive advantage since the main aim of this strategic cost control technique is to reduce labor costs. To achieve this, integration of modern technology is used coordinated by the human resources management and the primary goal being to reduce labor costs (Young and Shields, 2016) Young and Shields (2016) revealed poor cost management leads to increases in labor costs, thus it indicates some loopholes within the cost control techniques. Management should set labor target for a given period of time in order to minimize significance labor variance that will arise. Labor variance normally emanate where management is trying to supplement labor and such practices include inefficient management contracts which leads to additional labor overheads. (Young and Shields,2016).

However, in another study Wile (2014) argued organizational weal controls are not only caused by increase in labor costs but there are other factors. Other factors include efficiency, location and supply and demand. Location impact labor costs in the sense that when a company is operating in an economically depressed location, it is likely to attract labor costs whilst a company operating in a location with highly skilled workforce, it likely to incur high labor costs (Wile, 2014).

1.17 Cost Reduction Strategies

Akeem (2017), identified various cost reduction strategies which are widely used by most companies. Such strategies include value analysis, budget and budgetary control, kaisan costing, quality circles and just in time philosophy. These strategies are developed by the accounts department then the managements are the core of implementation (Akeem, 2017)

1.17.1 Budget and Budgetary control as cost reduction strategy.

A budget is defined as precise financial information (Drury, 2018) which gives a detailed management policy on a stated period. The policy provides a comparison between standard and results actually achieved (Joseph, 2014). The budgets are prepared with the concerning of carrying out long term plan for example a month ahead and they provide information of what the organization is expecting during the budgeted period.

Akeem (2017) defined a budget as a quantitative expression of organizational future plan for a defined period of time. It also include issues such as proposed sales volume, cashflows, costs, assets and liabilities (Charted Institute of Management Accountants (CIMA), 2015)

1.18 Budgetary Control

According to Akeem (2017) budgetary control involves the efficient utilization of resources to achieve previously determined objectives. It is a system where by budgets are designed as well of planning and regulating costs. Budgeting is a way of establishing what the organization wants to achieve and how it will be achieved whereas control ensure that objectives are achieved and the current results obtained do not vary from planned.

1.19 Importance of Budgets and Budgetary Control

Budgetary control reduces wastes and promotes efficient utilization of resources (Agela, 2017). It provides constant monitoring of cost to ensure that costs are kept under check, any variances will be investigated and correct action will be undertaken in order to minimize costs. It also uses budgetary systems aimed to enhance cost control system. According to research conducted by Joseph (2014) concluded that budgetary control positively impact organizational performance. In addition, research conducted by Siyanbola and Raji (2018) on the impact of cost control in manufacturing companies concluded that budgetary control ensures an effective cost control.

However Owusu (2016) argued that budgeting is a complex process especially to small businesses since it requires more time and resources during the preparation time. More so budgets may be set a lower level thus making it easy to be achieved, such a budget will not benefit the organization.

1.20 Value Analysis or Value Engineering

Value analysis is a strategy of conducting a proper analysis of each and every function of each product in order to identify and eliminate unnecessary costs that are associated with the products being produced. This strategy is considered to be a universally used method by manufacturing companies to lower production costs (Leber, Basic, Marvic, and Ivanisevic, 2018). According to Braide (2002) value analysis is an organized analysis of each item of cost which goes into production. The main contribution of Value analysis is to eliminate those characteristics of products or services which do not add real value to customers.

Mahadik (2015) defined value engineering as a systematic approached used to identify the functions of the product, evaluate worthiness of those functions and provide essential function to achieve required function at the lowest overall costs. Value engineering is measured by

establishing the relationship between the product or service function and costs incurred (Abbas, 2015).

The starting point of value engineering is performance investigation and ending with cost reduction (Abbas, 2015). The major aim is to reduce the overall costs incurred in producing goods and services without compromising quality and product performance. In order to successfully implement value engineering, organization must identify factors that affect execution because understanding the effect of each factor will result in a positive view.

1.21 Kaizen Costing

This strategy is derived from two words that is KAI which means "change" and ZEN which means "for better" (Rof, 2012). This a Japanese expression which explains the approach of making upgrades to a procedure in little incremental sums and thus it is considered as appropriate since products will already in the manufacturing process. It is a process of making improvements to production process by small incremental amounts compared to large innovation (Drury, 2018)

Bekcioglu (2016) postulates that kaizen costing is a strategy used to minimize costs through continuous improvements in a product life cycle to achieve cost cutting and is mainly done at the beginning of the production process. In this approach, cutting cost is aimed to make products competitive resulting in profitability.

The purpose of Kaizen costing is to minimize the total production cost and this can be achieved through eliminating digressive leanness from the manufacturing process. All costs and activities which do not add value will be avoided to ensure business achieve its objectives. (Drury, 2018). Every member involved in the production process is given the responsibility to ensure the process is improved and all unnecessary costs are avoided.

1.22 The Just In Time Philosophy

The Just in time technique is an approach used to manage inventory of the exact amount of inventory required at the exact time when needed (Mankazana, 2018). Inventory is defined as goods or materials stored by an organization to achieve production goals. Inventory management is significant to organizations since it ensures assets and stock are well managed and forecasting demand to avoid unplanned procurement of stocks. This technique is cost resource in the

company through building efficiency levels of materials thus generating lower costs. This strategy will enable the organization to be more efficient and keep wastes at lower level, leading to a reduction in inventory costs because materials will arrive only when needed in the production process.

To implement the JIT system, a company should establish a good relationship with suppliers to ensure raw materials are supplied on time. A company should a have a supplier who is reliable so that materials will arrive just in time as they are needed. Mankazana (2018) establish the procedures that companies should consider when implementing the JIT and such procedures are as follows: the supplier should have effective control over the production plant, the supplier should ensure there is a good working relationship with its subcontractors, the supplier should have good communication channel and lastly the supplier should ensure that there is a proper inquiry departments to track order.

The importance of this cost minimization strategy is that there will be a reduction in the amount of space to stock goods and the space can used other important functions that will improve the organization and also improving space for movement. It also avoids investment in unnecessary stock and minimizes the need to replace unused stock. Therefore is used as waste reduction technique. In paint companies in Zimbabwe, this technique plays an important role of reducing cost of storage. Paint colors are matched according to customer request (Color matching) thus color matching is done as per customer specific.

1.23 Quality Circles

It is a recent phenomenon implemented by most organizations which comprise of a group of employees usually between eight and ten meeting regularly discussing on issues such as safety, productivity, quality. The main objective of this technique is to recommend and make improvements and organize strategies that can be implemented to ensure achievement of organizational goals. Quality circles were originally Japanese management technique. It encourages participation of employees on areas that affect their operations. Although this technique is widely common in manufacturing companies, they are also applicable to a variety of business environments. Quality circles if implemented correctly can assist business to reduce costs, increase employee morale and improve productivity. Another importance of quality circles to small business is that is results in greater operational efficiency, improved employee safety and healthy, reduced absenteeism and a better working environment. This will enhance a dramatic improvement in quality and competitiveness of goods and services.

Furthermore quality circles provide a wide variety of benefits to small business and a good example is that it creates a platform for management to be aware of employees' ideas, the need for employee motivation. It also facilitates communication between employees and management resulting in increased commitment. It improves employee motivation through participating in decision making and such initiatives help the business to recruit and retain competent staff. Finally quality circles enhance business competitiveness by improving quality, promoting innovation and reducing costs.

1.24 Literature synthesis and conceptual framework

1.24.1 Contradictions in the research area

Various research studies were carried out on cost control strategies and their impact on competitiveness. A study by Siyanbola and Raji (2018) on the impact of cost control on manufacturing industries that cost control has a significant and positive impact on competitiveness of manufacturing companies. The research also argues that budget is considered as the basic tool for achieving effective cost control. This is in line with Akeem (2017) study on the effect of cost control and cost reduction techniques in organizational performance, findings revealed that there is a direct relationship between cost control, reduction and profit. Thus, the study concluded that for an organization to ensure more profit growth there is need to control and reduce cost to an acceptable limit.

Abdul and Isiaka (2015) study on the relationship between cost management and profitability, a study of selected manufacturing firms concluded that the relationship between cost management and profitability is statistically significant. In addition to the above, Oyerogba et al (2014) on their study on the relationship between cost management practices and competitiveness in the manufacturing organizations, findings from the study concluded that there is positive relationship between cost management and the overall competitiveness of a company.

However, Adeleke (2017) study on the Cost management techniques and performance of Nigerian banks as cited by Abdul and Isiaka (2015), findings concluded that the relationship between cost control techniques and competitiveness were not statistically significant citing that cost minimization strategies are not the only factors that enhance competition but there are other factors that drive competitiveness of a company.

The forenamed scholar's research studies were conducted in large organizations. This research is focusing on cost minimization strategies and their impact on competitiveness of indigenous paint manufacturing companies in Zimbabwe which has a different micro and macro environment. There is little research if any that was conducted analyzing the indigenous paint companies thus this research is significant in identifying the cost minimization strategies and their impact on competitiveness of Zimbabwean paint companies.

1.24.2 Research hypothesis.

The main research hypothesis suggests that there is a positive casual relationship between cost minimization strategies and competitiveness of Paint Manufacturing companies in Zimbabwe. The hypothesis will test the impact of independent variables which are budgetary control, value analysis, quality circles, kaizen costing and just in time technique on the dependent variable which is competitiveness.

1.24.3 Proposed Research Model

Previous studies suggest that there are a number of cost minimization strategies that can be adopted to enhance competitiveness and such strategies are kaizen costing, value analysis, budgetary control, quality circles and just in time technique. The researcher will analyze each of the strategies as independent variables and how they impact competitiveness (dependent variable).

1.25 Conceptual Framework





1.26 Chapter Summary

This chapter discussed literature contribution to the research area. The definitions of competition, cost and cost reduction were examined. It has been deducted that there are several cost minimization strategies that various organizations implement so as to enhance competitiveness. However these factors are not universal because businesses operate in different environments. Underpinning theories of cost reduction were discussed followed by cost minimization strategies such as budgetary control, value analysis, Kaisan costing, just in time philosophy and quality circles. Lastly the researcher discussed the contradictions of literature in the research area, proposed research model was presented and the chapter concluded with the conceptual framework explaining the independent and depended variables of the research study.

CHAPTER THREE

RESEARCH METHODOLOGY

1.27 Introduction

This chapter explains the research methodology of the study. It presents a recap of the main research objective, other supporting objectives, research questions and hypothesis. The chapter also explains the research philosophies, research design, sampling methods, and data collection procedures, analysis of data and presentation as well as ethical considerations. The quantitative research method was conducted in this research. The main aim of conducting a quantitative research was to provide a detailed analysis on the impact of cost minimisation strategies on competitiveness of paint manufacturing companies in Zimbabwe.

1.28 Recap of Objectives, Questions and Hypothesis

1.28.1 Research Objectives

1.28.1.1 Main Objective

The main objective is to examine the impact of cost minimisation strategies on competitiveness of paint manufacturers in Zimbabwe

1.28.1.2 Specific Objectives

To achieve the main objective, the following specific objectives were researched

- 6. To investigate how budgetary control affect competitiveness in paint manufacturing companies.
- 7. To investigate how value analysis affect competitiveness in paint manufacturing companies
- 8. To investigate how Quality Circles affect competitiveness in paint manufacturing companies.
- 9. To investigate how Just In Time philosophy affect competitiveness in paint manufacturing companies
- 10. To investigate how Kaizan Costing affect competitiveness in paint manufacturing companies

1.28.2 Research Questions

1.28.2.1 Main Research Question.

The main research question that the study seeks to answer is:

What is the impact of cost minimization strategies on competitiveness of indigenous paint manufacturers in Zimbabwe?

1.28.2.2 Specific Questions

The main research question was addressed through the following sub questions:

- 6. How budgetary control affect competitiveness of paint manufacturing companies?
- 7. How value analysis affect competitiveness of paint manufacturing companies?
- 8. How Quality circles affect competitiveness of paint manufacturing companies?
- 9. How Just in Time philosophy affect competitiveness of paint manufacturing companies?
- 10. How Kaizan costing affect competitiveness of paint manufacturing companies?

1.28.3 Research Hypothesis

1.28.3.1 Main Research Hypothesis

The main research hypothesis of the study is that there is a positive relationship between cost minimization strategies and competitiveness of Paint Manufacturing companies in Zimbabwe.

1.28.3.2 Specific Hypothesis Hypothesis 1

Budgetary control has a significant positive impact on competitiveness

Hypothesis 2

Values analysis has a significant positive impact on competitiveness

Hypothesis 3

Quality Circles has a significant positive impact on competitiveness

Hypothesis 4

Just in Time philosophy has a significant positive impact on competitiveness
Hypothesis 5

Kaizan costing has a significant positive impact on competitiveness.

1.29 Research Design

A research design is defined as the blue print that the researcher use for collection and analysis of data (Akhtar, 2016). Therefore it is an overall strategy used by the researcher to integrate variables of the study in a consistent, coherent and logical way thus ensuring that the research problem is addressed. Research design assist the research to test hypothesis. The research can take form of descriptive, exploratory or explanatory (Collis, 2009). A descriptive study does not explain the cause effect but rather it seeks to just describe the variables under study. It assumes that the researcher already knows the variables. Exploratory research is normally carried out in an area where there is less or no previous studies thus it helps the researcher to understand the problem. Explanatory research seeks to confirm or disconfirm, theory thus the research investigate the relationship between variable by conducting hypothesis testing. In this study, the researcher adopted explanatory research to establish the impact of cost minimisation strategies on competitiveness of paint companies in Zimbabwe.

1.30 Research Philosophies

Research philosophy is defined as a beliefs or assumptions about a particular concept or development of knowledge (Saunders 2009). A well detailed and consistent set of assumptions may result in a credible research philosophy. The various philosophies encompasses epistemology and doxology (Saunders 2009). Epistemology refers to what is known to be true whereas doxology refers to what is believed to be true. The purpose of research is now to transform ideas believed into things known that is from doxa to epsteme. There are basically two major research philosophies namely positivist and interpretivist.

The research assumptions that most researcher use are ontological, epistemological and axiological assumptions (Churchill and Sanders, 2007). Ontological assumptions can either be objective or subjective. Objective assumes that there is only truth whereas subjectivism states that there are multiple truths and realities. In this study the objectivism was adopted as the researcher wanted to generalise the findings to all paint companies in Harare thus the researcher will assume that there is one truth regarding the impact of cost minimisation strategies on competitiveness of paint companies. Epistemological assumptions refers to the way data is

obtained from respondents either by close interaction or maintaining a distance to ensure objectivity during data collection. The researcher chose to give respondents their time to provide information freely without researcher's interaction. Lastly axiological assumptions refers to the importance of ethics and values in a research and in this study the researcher considered ethical issues by respecting respondents' confidentiality, minimising researcher's close interaction with respondents and to allow participants to freely provide information without being coerced or forced.

1.31 Research Paradigms

According Rehman (2016) research paradigm is the way of understanding world reality through studying it. It is a system of belief and theoretical framework covering assumptions of ontology, epistemology, methodology and methods. There are mainly three research paradigms namely positivism, interpretivism and pragmatism. Positivist approach focuses on facts that are gathered using quantitative methods thus knowledge is only valid when acquired objectively. Interpretivism explains that knowledge us contextual thus a researcher draws meaning through interpretivist and positivist positions.

The researcher adopted the positivism paradigm since the study is a quantitative research therefore facts and evidence were used to analyse the impact of cost minimisation strategies of competitiveness of paint manufacturing companies in Zimbabwe. In order to enhance credibility of results and also to generalise findings, a large sample was used. The Stata/MP 14.0 was used to enable hypothesis testing.

1.32 Research Approach

There are two broad research approaches namely deductive and inductive reasoning (William, 2007). The deductive research approach is also known as a top-down approach that is, it starts by identifying a theory in the study area and narrows it to a specific hypothesis to be tested. It confirms or disconfirm hypothesis basing on the original theory. The inductive reasoning is a bottom up approach thus the researcher will test hypothesis and develops a conclusion or theories at the end of the research.

The researcher adopted the deductive approach since the main objective is to analyse the effect of cost minimisation strategies on competitiveness of paint manufacturing companies in Zimbabwe. The data collected was statistically analysed used to test the pre-determined hypothesis.

1.33 Research Strategy

Saunders (2009) posits that research strategy is the blue print stating the way the researcher use in answering research questions. Similarly Bryman (2008) defined research strategy as an orientation on how to conduct a research. The appropriate research strategy is adopted based of objectives, research questions, the existing literature on the subject area, time and resources available and underpinning philosophies. Various research strategies are available with distinctive characteristics. Yin (2003) and Saunders et al (2009) identified strategies used by most researchers in the area of business and management and such strategies include surveys, case studies and experiments. For a qualitative research, research strategies include ethnography, archival research, surveys, grounded theory and phenomenology. In this study the researcher used surveys in collecting quantitative data that could be generalised to investigate the impact of cost minimisation strategies on competitiveness of paint companies in Zimbabwe.

1.34 Research Instrument

The research Instrument is the means for data collection and it include the use of structured and unstructured questionnaires, observation, focus groups, structured and unstructured interviews. The researcher decides on the proper research instrument basing on the type of study for example for a quantitative research a researcher may use questionnaires whilst for a qualitative study, a researcher may make use a scale. The researcher should ensure that the research instrument adopted must be valid and reliable (Dainty, 2008).

1.34.1 Structured questionnaires

The researcher used a quantitative research method where data was analysed through the use of structured questionnaires which were distributed through random sampling method to get a maximum response rate. The structured questionnaires allowed the researcher a lower level involvement at the same time enhancing high number of respondents to facilitate generalisation of research findings. The target population consist of respondents with a deeper knowledge on cost minimisation strategies being used by paint manufacturing companies thus the questionnaires were self-administered.

The researcher developed questionnaires starting with the introduction which detailed the purpose of the research followed by a section which states that the data collected will solely be used for academic purposes and it will be treated with confidentiality. The research also developed a questionnaire based on literature and other concepts pretested by other authors. The questionnaire was designed in three major sections that is demographic section, which covers the cost minimisation variables such as, value analysis, budgetary control, quality circles, kaisan costing and just in time philosophy. The last section covers the significance of company size and composition on competitiveness.

The likert scale questionnaires were used ranging from 1 (strongly disagree) to 5 (strongly agreed. The respondents could just select the scale which is in agreement or disagreement to a statement on questionnaire. The justification of the use of likert scale is that it is considered as the appropriate technique for a quantitative research (Bryman, 2008), since it can be managed easily and the data collected can be coded using statistical package such as Stata.

1.34.2 Questionnaire Administration

The researcher used online administration through electronic google form to gather information from the respondents in selected paint companies in Harare. This method was used since it is considered to be cost effective, increase response rate and it permits collection of large amount of information in a shortest possible time. The researcher found emails of respondents online and a constant follow up was conducted to ensure that respondents complete questionnaires and provide feedback within the agreed time frame. English language was also used in questionnaires because the respondents are professionals and they have a basic understanding of English language. More so the researcher pre-test questionnaires by using a small sample of 30 respondents. This was done in order to eliminate some errors.

1.35 Population and Sampling Techniques

The population of this study was the paint industry in Harare both targeting both small and large paint manufacturing companies. The rational for choosing Harare is because it is considered as the business hub in Zimbabwe.

1.35.1 Sample Frame and Size

The sample of this research was drawn from paint companies in Harare both small and large companies. The population comprise of 20 companies in the paint industries. The researcher

randomly selected 100 participants from this population where 5 respondents were randomly selected from each company. The sample size adopted was adopted through constraints such as resources availability, financial support and availability of time for data collection and data analysis. To obtain accurate data, the 95% confidence interval should be accepted.

Sample size calculation

A sample size is the number of participants that should be included in the study in order to answer a research question (Noordzij, Dekker, Zoccali, & Jager, 2011). For a sample size for a cross-sectional study to be calculated, the level of confidence, an estimated prevalence rate and degree of precision are required (Kasiulevičius, Šapoka, & Filipavičiūtė, 2006). In this study, the level of confidence is 95% and the degree of precision 10%. Since the prevalence of local paint manufacturing companies is unknown to the research at the time of the study, a value of 0.5 will be used. This value enables the researcher to produce the largest sample size in comparison to any other prevalence value. The following formula below was used to calculate the sample size (Singh & Masuku, 2014);

$$n = \frac{z^2 p (1-p)}{d^2}$$
$$= \frac{1.96^2 * 0.5 (1-0.5)}{0.1^2}$$
$$= 97$$

- 71

Where n= sample size

z= statistics corresponding to 95% confidence

p= prevalence

d= the degree of precision

Thus, the sample size recruited for the study is 97.

Since the population comprises of 20 companies in the paint industry, a total of 5 respondents from each company are recruited for this study. This bring the sample size to 100 which is

slightly higher than the calculated sample size. The researcher requested for approval form the senior management personnel of each company. Upon approval, 5 participants were randomly selected from all top managerial personnel who happens to be working at the central offices. Because the study was conducted during covid-19 lockdown environment, an electronic google form was used to collect data. The advantage of using an electronic form is that it will prohibit the participant to submit the responses if there are missing responses.

Sampling procedures

Stratified simple random sampling was used to select participants. Since the 20 companies were mutually exclusive, each one of them was considered as a stratum. From each stratum, 5 employees were then selected. The contact person of every company had a list of all eligible employees. All the employee for each company were assigned with a unique number. Excel was then used to randomly select 5 number from all the available numbers.

1.36 Data Analysis Method

The Stata version 14.0 was used to analyse data. The date obtained from questionnaires was edited, coded and captured in the Stata version 14.0. Descriptive statistics, and inferential analysis such as multiple regression, analysis of variance, correlation analysis and hypothesis testing was adopted to analyse quantitative data. Regression and correlation analysis will be used to test the relationship between independent variables which are cost minimisation strategies and the dependent variable which is competitiveness.

Descriptive Statistical Analysis

The researcher will use frequency distributions and percentages in analysing demographics such as age, gender, education level, number of employees, years in operation, and sales contribution.

Normality

The researcher will use Shapiro- Wilk to test normality of data since it is the technique suitable when a researcher is conducting a study with sample size of less than 2000. When using Shapiro-Wilk, if p value is greater than 0.05 (p>0.05) it means data is evenly distributed thus parametric tests can be done but if p value is less than 0.05 (p<0.05) it explains that data is not evenly distributed thus non parametric tests will be conducted.

Correlation Analysis

The researcher will conduct a correlation analysis in order to establish the degree of association between independent and dependent variables. The researcher will look at the main four aspects of correlation analysis namely direction, magnitude, significance and multicolinearity. A detailed analysis of independent variables (budgetary control, Value Analysis, Quality circles, JIT philosophy, Kaisen costing) and their impact on dependent variable (Competitiveness) will be carried out. A significance level of less than 0.05 shows that there is a strong significant correlation between variables.

Regression Analysis

The researcher will also conduct regression analysis to determine the cause and effect relationship that exist between independent and dependent variables.

1.37 Research Credibility

The researcher considered validity and reliability as important aspects for this study to be trustworthy. These aspects are critical since an instrument maybe reliable but not valid in the sense that the instrument may measure the concepts constantly however the variables being measured maybe wrong.

Validity explains how accurate the collected data covers the actual concept or facts under study (Taherdoost 2016). It refers to measuring what is intended to be measured. Validity in research can cover aspects such as content validity, face validity, criterion validity and construct validity (Taherdoost 2016). There are mainly two types of validity namely internal and external validity (Haradhan 2017). Internal validity explains how the research instrument covers the concept or topic understudy and it take the form of face or content validity. To ensure internal validity, pilot study was carried out to ensure that the instrument is actually measuring what it is supposed to measure. More so extensive literature search was conducted and lastly the research supervisor who is an expert in this research area was consulted to ensure that the research is valid. External validity refers to the extent to which the results obtained by the research instrument can be generalised to the entire population (Haradhan 2017). To ensure external validity, the researcher used a sample size of 20 paint companies in Zimbabwe which a representation of the paint

industry therefore the results of this study can be generalised to all paint companies in Zimbabwe.

According to Edwin (2019) Reliability refers to the repeatability of the research instrument. It refers to the consistency of the instruments thus it should produce the same results when it is placed under the same conditions with the same topic. There are mainly two types of estimating reliability namely test/retest and internal consistency. In this study the researcher estimated reliability by measuring internal consistency through Cronbach's Alpha scores. Using this method, the Cronbach's Alpha score should be at least 0.70 for an instrument to be reliable (Edwin 2019). The researcher conducted a pilot study questionnaires and the overall Cronbach's Alpha score was 0.72 indicating that the instrument is highly reliable.

1.38 Ethical Issues

This research was morally and ethically conducted

Ethical issues during design

The researcher ensured that respondents are aware of the purpose of the research and to make an informed consent as to whether or not to participate in the study.

The researcher allowed the respondents to freely participate thus they were not forced or coerced to participate. The rights of those who were not comfortable in participating was respected.

Participants were also conducted during the time they were comfortable and normal working hours were utilised.

Participants were also assured that the information they will provide will be used with confidentiality and with utmost good faith.

Ethical issues during data collection

The researcher was objective during data collection thus he ensured that there was no researcher's interference to ensure that the respondents will give accurate information.

Anonymity of respondents was ensured by making sure that respondents will not give their names thus safeguarding confidentiality.

Ethical Issues during data analysis

The results were analysed in truthful manner thus the researcher retained research objectivity.

1.39 Chapter Summary

This chapter presented a recap of the research objectives and questions. The research design and research approach which were significant to this research was justified. The research population, research instruments and sampling techniques were also discussed. Sampling frame and target population were also outlined. The research assumptions and philosophy, data collection method, data analysis and presentation procedure were discussed. This chapter also presented validity and reliability of research instruments as well as ethical issues. The next chapter present data analysis based on data collected through the use of research instruments. The relationship between variables will be analysed in a detailed manner.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The current chapter discusses the key results of the analysis undertaken. Data analysis was done using Stata version 14. The analysis begin by presenting the descriptive statistics in the form of the response rate, the reliability test, the demographic characteristics of the respondents and the demographic statistics of the paint companies. The researcher then proceed to outline the normality test determine whether the main outcome of the study is normality distributed or not which determine the choice between parametric and non-parametric tests. Reliability test is carried out to determine if the data collected was reliable. Correlation analysis is also presented to determine the relationship between cost minimization strategies and competitiveness of paint manufacturing companies in Zimbabwe. Interpretation of results enabled the researcher to determine the conclusions on the research area.

4.2 Descriptive statistics

This section of the chapter discusses the research response rate, the reliability test results and the demographic characteristics of respondents and the paint companies.

4.2.1 Response rate

The researcher utilized only the online administered questionnaires in the manner explained in the methodology section. Out of a total of 100 questionnaires administrated, all the questionnaires were successfully completed giving a perfect response rate of 100%. Since the population comprises of 20 companies in the paint industry, a total of 5 respondents from each company were recruited for this study. This bring the sample size to 100. The response rate 100% (n=100) is generally high as revealed by other authors such as Saunders et al., 2012. According to Baruch (1999), academic researches which involves senior management, a response rate of at least 35% is good enough whilst Saunders suggests at least a 50% response rate to be good enough to generalize findings. The effectiveness of the sample size (n=100) on a population of 20 paint companies and the response rate for this study is similar to the of Egbide (2019) who surveyed only 40 companies on their research on cost reduction on growth of manufacturing companies in Nigeria. In similar study conducted by Oyedokum (2019) used a sample frame of 23 companies and 115 questionnaires were distributed to these companies on their study of cost control and profitability of selected manufacturing companies in Nigeria.

The 100% response rate and a 100 sample size is acceptable and can produce credible results which can be a full representative of paint manufacturing companies in Zimbabwe. Therefore the response rate obtained provide credibility for the results to be generalized to the entire population of paint companies in Zimbabwe. As a result of excitement and interest of respondents on this study, the researcher was able to obtain a response rate of 100% since the questionnaires were administered online. These responses were then analyzed thoroughly in the following sections.

4.2.2 Demographic characteristics of respondents

This section focuses on the characteristics of respondents in the form of gender, age, position and education qualifications. This part answers Section A of the questionnaire

Gender

By asking gender of respondents, the researcher was keen to determine gender distribution of participants.

Gender	Frequency	Percent	Cumulative Percent
Male	70	70	70
Female	30	30	100
Total	100	100	

Table 4.1 Sex of Respondents

Source: Primary data

Table 4.1 above shows that from the sample used, 70% (n=70) of respondents were males and 30% were females. This implies that the managerial level of the paint industry in Zimbabwe is mostly dominated by males however the 30% (n=30) of females indicates that women are also active in the paint industry. The high percentage of males in this industry might be because painting industry involves mainly manual jobs which involves painting large and big buildings

using scaffolds and ladders. Such kind of manual work is mainly dominated by males even though females are also starting to be actively involved.

Position in the company

Respondents were asked to indicate their position in the paint company for the researcher to determine distribution of owners, managers, supervisors and employees involved in the research.

Job Position	Frequency	Percent	Cumulative Percent
Owner Manager	3	3	3
Manager	11	11	14
Supervisor	21	21	35
Other	65	65	100
Total	100	100	

 Table 4.2 Position in the company

Source: Primary data

Table 4.2 above shows that only 3% (n=3) of the respondents were owners, 11% (n=11) were managers, 21% (n=21) were supervisors and 65% (n=65) were classified under others. The results show that the majority of the respondent are under the others bracket which implies that in Zimbabwe the majority of workers in paint companies are just employees who do not possess any managerial position. This is maybe as a result of labor costs which are associated with managerial positions hence most indigenous paint companies have very few managers so as to reduce wage bill

Number of years held in that position

Respondents were asked to indicate the time spent at the stipulated work position.

Table 4.3 Number of years held in that position

Duration on the position	Frequency	Percent	Cumulative Percent
Less than 1 year	5	5	5
1-3 year	20	20	25
3-7 years	65	65	90
7 – 10 years	6	6	96
10 years and above	4	4	100

Total 10	00 100	
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Source: Primary data

Table 4.3 above presents the time spent at the stated work position. The majority of the respondents, 65% (n=65), said they are in the range of 3-7 years, followed by those with 1-3 years 20% (n=20), then 7-10 years 6% (n=6), less than one year 5% (n=5) and lastly 10 years and above 4% (n=4). This means that the majority of those in management in the paint industry are not more than 10 years on the same position. This it implies that the majority of paint companies were formed after dollarization hence most them have less than 7 years in existence. However the experience of respondents in the paint industry indicate that there is reasonable ground to believe that all respondents fully understand the questions hence their responses will be credible and valid to the study.

Educational Level

The researcher asked the respondents to indicate their highest educational qualifications and results are as shown in Table 3 below:

Job Position	Frequency	Percent	Cumulative Percent
Diploma	52	52	52
Degree	37	37	89
Masters	3	3	92
Doctorate	1	1	93
Other	7	7	100
Total	100	100	

Table 4.4 show Educational level

Source: Primary data

Results indicate that 52% (n =52) of respondents had a diploma, 37% (n=37) had a degree, 3% (n=3) had a masters, 1% (n=1) had a doctorate and 7% (n=7) had other qualifications. Thus at least 93% of the respondents had at least a tertiary qualification. This is so because the industry requires people with better marketing techniques and have knowledge of paint technology. Every year student are graduating in Zimbabwe with diplomas and degrees and therefore the country has high educated populace and literacy rate is high. Thus educated workforce are readily available therefore any position in paint industry is likely to attract a degreed personnel. This is

similar to the study of Jenya and Sandada (2017) who revealed that at least 75% employees in the SME's sector had at least a tertiary qualification.

4.2.3 Demographic characteristics of SMEs

The respondents were also asked about information concerning the company they were working for. The questions included number of employees,

Number of employees

Respondents were asked to indicate number of employees in the company. The aim was to establish size of the business.

Table 4.5 Number of employees

Number of employees	Freq.	Percent	Cum.
Less than 20 employees	10	10	10
20-50 employees	20	20	30
50-100 employees	50	50	80
More than 100 employees	20	20	100
Total	100	100	

Source: Primary data

Table 4.5 shows that most paint companies in Zimbabwe have 50-100 employees (50%). the remaining 20%, 10% and 20% have 20-50 employees, less than 20 employees and more than 100 employees respectively. This distribution indicates that the majority of indigenous paint companies in Zimbabwe are categorized under SMEs in terms of number of employees that paint companies employ

Period of operation

The researcher asked respondents to indicate the period they have been in business with the aim to see how long most of these paint companies have been operating.

 Table 4.6 Period of operation

Period of operation	Freq.	Percent	Cum.

3-7 years	50	50	50
7 – 10 years	25	25	75
10 years and above	25	25	100
Total	100	100	

Source: Primary data

Table 4.6 above illustrates the responses on period of operation the paint companies and it shows that majority of businesses (50%) have been in business 3-7 years, 25% have been operating for 7-10 years and the remaining 20% have been operating for 10 or more years. This analysis indicates that number of paint companies decreases as the number of years in operation increases. This industry is characterized by intense competition hence for a business to continue operating, it needs to develop new competitive strategies and value added products to stay competitive in the market.

The current market being served

The researcher asked respondents to indicate the type of market they do serve.

Table 4.7: The current market being served

The current market	Freq.	Percent	Cum.
Local only (Zimbabwe)	75	75	75
Local and other countries	25	25	100
Total	100	100	

Source: Primary data

Of all the companies, 75% of them are only local suppliers of paints and paint related products. This is because a number of paint companies do not have capacity to compete internationally hence they only supply the local market. Zimbabwe National Statistics Agency (2019) states that the value of exported products manufactured in Zimbabwe has continued to decline between the period of 2013 and 2019 as a result of high uncompetitive costs for Zimbabwean manufactured products.

Most of the exports (85%) focus mainly on Tobacco, Cotton and Minerals. The 2018 manufacturing sector report postulates that the scrapping of SI 122 resulted in a stiff competition

from imported products mainly from South Africa thus affecting local industries. More so, foreign currency shortages which have worsened in 2019 after the introduction of mono-currency system has negatively impacted the production costs resulting in companies failing to export their products. This analysis show that most paint companies are only able to supply the local market.

Descriptive statistics

The main outcome of interest is the cost minimization implementation strategy score variable. This has been operationalized as stamped in the methodology section. However, in the current subsection, the researcher identifies and discuss how different paint companies are implementing cost minimization strategies. The independent variables consist of five dependents namely budgetary control, values analysis, quality circles, just in time and kaizen costing.

The researcher presented the summary of data by extracting descriptive statistics so as to determine mean, standard deviation, minimum and maximum as well skewness and kurtosis. The descriptive statistics was extracted from Stata as shown on Table 4.8 below

Variable	Obs	Mean	Std. Dev.	Min	Max
BUDGETARY_CONTROL	100	4.390	0.361	3.500	5.000
VALUE_ANALYSIS	100	4.146	0.380	3.200	4.800
QUALITY_CIRCLES	100	4.780	0.267	3.833	5.000
JUST_IN_TIME	100	4.344	0.288	3.250	4.750
KAIZAN_COSTING	100	4.615	0.266	3.571	4.857

Table 4.8: Descriptive statistics

Source: Primary data

The Table 4.8 shows the descriptive statistics cost minimization strategies considered in the current study. Budgetary control strategy a mean value of 4.390 with a minimum of 3.5 and a maximum of 5. The standard deviation is 0.361 which is lower than mean which explains that there are relatively small variations in the data. The value analysis strategy has a mean value of 4.146 with a minimum of 3.2 maximum value of 4.8 and a standard deviation of 0.380. The mean value indicates that the impact of value analysis to competitiveness is high as indicated by the standard deviation value which is lower than the mean. The quality circle strategy has a

minimum value of 3.833 and a maximum of 5. This analysis shows that changes in quality circles has the average value of 4.780 which implies that relatively small number of paint companies are affected by this strategy in terms of competitiveness. Standard deviation of 0.267 which is lower than mean indicating that variations in data are relatively low. Just in time philosophy has a minimum value of 3.250 and a maximum value of 4.750 with a mean value of 4.344 and a standard deviation of 0.288 that is smaller than the mean hence deviations in data are relatively small. Kaizan costing strategy has a minimum value of 3.571, maximum value of 4.857, and mean of 4.615 with a standard deviation of 0.266 which means data variations are relatively small.

4.3 Reliability test

The researcher carried out a reliability test to see the internal consistency of the research instrument. Reliability is a measurement procedure with stable results or consistency of the measurement. Reliability measures instrument's consistency thus the amount of errors will indicate the amount of reliability. To this end, if the amount of error is minimal hence the instrument is reliable. The researcher carried out reliability test in order to determine if the study area fulfills the research objectives. Cronbach's Alpha is an indicators used to test reliability of research instrument as supported by Heal and Twycross (2015) who argues that Chrobach's Alpha is the widely used measure of internal consistency with an acceptable threshold of 0.7. If the Cronbach's Alpha is closer to 1 it means reliability of internal consistency is high.

Table 4.9 Reliability Statistics

Cronbach's Alpha	N of Items
0.8613	44

Source: Primary data

Since the results present in the table above shows a Cronbach's Alpha value of 0.8613; which is above the benchmark of 0.7 (Heal and Twycross, 2015), it implies that there is a relatively high internal consistency for the instrument with the study sample.

4.4 Normality test

The researcher carried out a normality test to establish how the data were distributed. In this study, the response of 100 respondents is similar to the sample size of 30 by Stutley (2003), 100 by Rattray and Jone (2007) and lastly 150 by Hutcherson and Sofroniou (1999), thus data from this study follows normal distribution. Hair etal (2014) states that undertaking normality test is a fundamental pre-requisite to determine the most appropriate tools to be used between parametric and non-parametric tests. T-tests and Pearson correlation are most suitable for data which is normally distributed whereas non parametric data can use MannU-Whitneny, Spearman Rho and Kruskal-Wallis. Large sample size usually increase statistical power thereby reducing sampling error (Hair et al., 2014). Ratty and Jones (2007) argued that a large sample size consist of atleast 100 respondents whilst Hutcheson and Sofroniou (1999) suggested a sample size of at least 150 respondents. To undertake this test, the researcher used Shapiro – Wilk.

Variable	Obs	W	V	Z	Prob>z
BUDGETARY_CONTROL	100	0.990	0.816	-0.451	0.674
VALUE_ANALYSIS	100	0.972	2.303	1.851	0.032
QUALITY_CIRCLES	100	0.820	14.844	5.984	0.001
JUST_IN_TIME	100	0.886	9.391	4.969	0.001
KAIZAN_COSTING	100	0.792	17.18	6.309	0.001

Table 4.10: Normality Test

Source: Primary data

The table shows the Shapiro-Wilk test results. Only one cost minimization variable is normally distributed; large p-value (p=0.674>0.05), for consistent sacks, non-parametric tests will be implemented for further inferential analysis.

Tests of Relationships

The researcher used correlation analysis and regression analysis to test the relationship between independent variables and dependent variables. Correlation analysis provide the strength of relationship between variables while regression gives cause and effect relationship between the variables.

Correlation analysis

The table below shows the correlations between cost minimization strategies and competitiveness

	BUDGETARY CONTROL	VALUE_ANALYSIS	QUALIT CIRCLES	JIT	KAIZAN~COSTING	Competitiveness
BUDGETARY CONTROL	1					
	100					
	0.4790	1				
VALUE_ANALYSI	0.4786	1				
	100	100				
	100	100				
QUALITY_CIRCLES	0.3097	0.7447	1			
	0.0017	0				
	100	100	100			
JUST_IN_TIME	0.194	0.5696	0.7139	1		
	0.0531	0	0			
	100	100	100	100		
KAIZAN_COSTING	0.2873	0.5327	0.5496	0.5685	1	
	0.0038	0	0	0		
	100	100	100	100	100)
Competitiviness	0.5093	0.7994	0.7633	0.6547	-0.061	. 1
	0	0	0	0	0.394	
	100	100	100	100	100	100
*. Correlation is significant	nt at the 0.05 level (2-taile	ed)				
**. Correlation is signification	ant at the 0.01 level (2-tai	led)				

The data was unevenly distributed hence Spearman's correlation was used. The relationship between variables is determined by looking at the significance, direction and strength on the correlation coefficient. When analyzing correlation, if the coefficient value is closer to -1 it implies that there is a strong relationship between variables, the value closer to +1 it implies that there is a strong positive relationship whilst a value of 0 means no relationship exist between variables. The meaning of a positive relationship is that as the independent variable increases the depended variables also increases. The relationship is weak if the coefficient lies between (0<0.299), the relationship is moderate if (0.3<0.499) and if (p>0.5) the relationship is strong.

The results from the table above indicate that there a strong positive and statistically significant relationship between budgetary control and competitiveness (r=0.5093; p-0.000). This means that as budgetary control increases competitiveness of a company also increases. There is a strong positive and statistically significant relationship between value analysis and competitiveness (r=0.7994; p=0.000). This implies that as value analysis increases, competitiveness of paint companies also increases. There is a strong positive and statistically significant relationship between quality control and competitiveness (r=0.6547; p=0.000). There is a strong positive and statistically significant relationship between quality control and competitiveness (r=0.7633; p=0.000). The results mean that as quality control strategy increases, competitiveness of paint companies of increases. The results also shows that there is a weak negative and statistically insignificant relationship between Kaizan costing and competitiveness (r= -0.061; p=0.394. This means that an increase in Kaizan costing does not necessarily result in competitiveness.

Model summary and Anova table

Source	SS	df	MS	Number of obs	=	100
				F(5, 94)	=	61.15
Model	17.36927	5	3.473854	Prob > F	=	0.001
Residual	5.339913	94	0.056808	R-squared	=	0.7649
				Adj R-squared	=	0.7523
Total	22.70918	99	0.229386	Root MSE	=	0.23834

Table 4.13

Source: Primary Source

R-Squared is the proportion of variance in the competitiveness which can be predicted from the cost minimization strategies included in the model thus it explains the variance of dependent variable which is explained by the independent variables. This value indicates that 76% of the variance in competitiveness can be predicted from budgetary control, value analysis, quality circles, just in time, and Kaizan costing.

Adjusted R –Squared is a more accurate measure which removes sampling errors and bias. The results show adjusted R-Squared of 0.7523 thus model indicates that 75.23% of variance in competitiveness can be predicted by budgetary control, value analysis, quality circles, just in time and Kaizan costing therefore the multiple regression model has a strong predictive value.

Overal fit of the model

Number of obs – This is the number of observations used in the regression analysis. Thus, for this model, all the 100 respondents were included in the model. Furthermore, since the F statistic is large, F(5, 94) = 61.15, and the p-value associated with this F value is very small (F61.15, p=0.001<0.05), we can safely conclude that the cost minimization strategies included in the model reliably predict the competitiveness. The ability of each individual independent variable to predict the dependent variable is addressed in the table below where each of the individual variables are listed.

Regression model

		Std.			95%	Confident
` Competitiveness	Coef.	Err.	t	P>t	Interval	
BUDGETARY_CONTROL	0.278	0.078	3.580	0.001	0.124	0.433
VALUE_ANALYSIS	0.516	0.106	4.850	0.000	0.305	0.727
QUALITY_CIRCLES	0.498	0.162	3.080	0.003	0.177	0.820
JUST_IN_TIME	0.399	0.127	3.140	0.002	0.146	0.652
KAIZAN_COSTING	-0.184	0.118	-1.550	0.124	-0.418	0.051

Table 4.14: Regression Model

Constant	-3.481	0.551	-6.320	0.000	-4.574	-2.388
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Source: Primary data

The values in the column coef tell us about the relationship between the independent variables and the dependent variable. These estimates tell the amount of increase in competitiveness scores that would be predicted by a 1 unit increase in the predictor score. Note: For the independent variables which are not significant, the coefficients are not significantly different from 0, which should be taken into account when interpreting the coefficients.

So, for every unit (i.e., point, since this is the metric in which the tests are measured) increase in Budgetary Control, Value Analysis, Quality Circles, Just In Time, there is a unit increase in competitiveness score respectively, holding all other variables constant. The results indicate that budgetary control has a positive and statistically significant impact on competitiveness (p=0.001<0.05. This implies that 1 standard deviation in the implementation of budgetary control will results in 0.278 standard deviation increase in competitiveness holding all other factors constant.

Value Analysis also showed a positive and statistically significant impact on competitiveness (p=0.000<0.05). This implies that 1 standard deviation increase in value analysis will result in 0.516 deviation increase in competitiveness holding other factors constant. Quality circles also showed a positive and statistically significant impact on competitiveness (p=0.003<0.05) which implies that 1 standard deviation increase in quality circles will result in 0.498 standard deviations *ceteris paribus*. Just in time showed a positive and statistically significant effect (p=0.002<0.05) on competitiveness, *ceteris paribus*. All these relationships are statistically significantly different because the p-value assorted with each one of them are small.

However, the effect of Kaizan Costing on costing is insignificant since the p-value associated with it is very large (p=0.124>0.05). The results showed that the Kaizan Costing strategy has a negative but statistically insignificant effect on competitiveness of paint manufacturing companies (p=0.124>0.05).

Overally, the results shows that cost minimization strategies that is budgetary control, values analysis, quality circles and Just In time philosophy has strongest impact on competitiveness of paint manufacturing companies. These findings are supported by the study conducted by Edgibe

(2019) where the results indicates a positive statistical significance between cost minimization strategies and expansion of manufacturing companies. The study further recommends manufacturing companies to effectively implement value analysis and other cost reduction strategies in order to minimize material costs.

4.5 Discussion of findings

This research seek to indicate the impact of cost minimization strategies on competitiveness of paint manufacturers in Zimbabwe.

4.5.1 Hypothesis Testing and Comparing findings to literature

In this study, the main hypothesis was that there is a positive relationship between cost minimization strategies and competitiveness of paint manufacturing companies in Zimbabwe. The results obtained from this study indicated mixed results that is negative and positive impact of cost minimization strategies on competitiveness. As shown on the analysis above, for every unit (i.e., point, since this is the metric in which the tests are measured) increase in Budgetary Control, Value Analysis, Quality Circles, Just In Time, there is 0.278, 0.516, 0.498, 0.399 unit increase in competitiveness score respectively, holding all other variables constant. All these relationships are statistically significantly different because the p-value assorted with each one of them are small therefore the hypothesis was accepted. This is in line with the study conducted by Egbide (2019) which indicated a positive relationship between cost reduction strategies and competitiveness of selected manufacturing companies in Nigeria. Furthermore Oyedokun (2019) also support these findings as three models turned positive in analyzing the impact of cost minimization strategies with profitability in manufacturing companies.

The first specific hypothesis was that budgetary control (independent variable) has a significant positive impact on competitiveness (dependent variable). The results indicated that there is a positive and statistically significant impact of budgetary control on competitiveness (p=0.001<0.05). These results supported the hypothesis statement hence the hypothesis was accepted. According to research conducted by Joseph (2014) concluded that budgetary control positively impact organizational performance. In addition, research conducted by Siyanbola and Raji (2018) on the impact of cost control in manufacturing companies concluded that budgetary control.

The second specific hypothesis was that values analysis has a significant positive impact on competitiveness. The results indicated that value analysis has a positive and statistically significant impact on competitiveness (p=0.000<0.05). Therefore the hypothesis statement was accepted. These results are supported by the study of Braide (2002), Leber, Basic, Marvic, and Ivanisevic, (2018), Mahadik (2015) who concluded that value analysis strategy is considered to be a universally used method by manufacturing companies to lower production costs hence it affect competitiveness positively.

The third specific hypothesis was that Quality Circles has a significant positive impact on competitiveness. The results indicates that there is a positive and statistically significance between quality circles and competitiveness (p=0.003<0.05) hence the researcher accepted the hypothesis statement H3. Quality circles in paint companies assist to reduce costs, increase employee morale and improve productivity. Another importance of quality circles to paint companies is that it results in greater operational efficiency, improved employee safety and healthy, reduced absenteeism and a better working environment. The H3 is also supported other studies conducted by Agela (2017) and Owasu (2016) whose results indicated that quality circles if implemented properly will result in manufacturing companies gaining competitive advantage.

The fourth specific hypothesis of the study was that Just in Time philosophy has a significant positive impact on competitiveness. When correlation analysis was done, Just in Time philosophy revealed a positive and statistical significant between JIT and competitiveness (r=0.6547; p=0.000). The researcher therefore accepted the hypothesis statement H4. This is in line with the results from Mankazana (2018) which indicated that JIT strategy result in cost reduction hence it impact positively competitiveness of manufacturing companies in developing countries.

The fifth specific hypothesis of the study was that Kaizan costing has a significant positive impact on competitiveness. From the correlation analysis there is a weak negative and statistically insignificant relationship between Kaizan costing and competitiveness (r= -0.061; p=0.394). The researcher therefore rejected the hypothesis statement H5. This is contrast with the results obtained by Bekcioglu (2016) and Drury (2018) which indicated a positive impact of Kaizan costing on competitiveness.

4.5.2 Managerial Implications

It is evidenced that cost is one of the major determinant of competitiveness of business. From the research findings paint companies should adopt cost minimization strategies in order to enhance competitiveness. These strategies are critical to the success of the business. This study shows that budgetary control, quality cycles, value analysis and Just in time philosophy are important strategies to enhance competitiveness in paint companies in Zimbabwe. These companies are operating in a dynamic environment where competition is intense hence the need adopt strategies that minimize costs for business success.

Paint companies should conducting a proper analysis of each and every function of each product in order to identify and eliminate unnecessary costs that are associated with the products being produced. There is also need to reduce the amount of space to stock goods and the space can used other important functions that will improve the organization and also improving space for movement thus avoiding investment in unnecessary stock and minimizes the need to replace unused stock. Paint colors should be matched according to customer request (Color matching) thus color matching is done as per customer specific. Paint companies should also prepare budgets detailing the cash flows and all costs to be incurred over a period of time. The budgets are prepared with the concerning of carrying out long term plan for example a month ahead and they provide information of what the organization is expecting during the budgeted period.

The government of Zimbabwe is playing a very important role to ease of doing business in attracting investment. Several initiatives are being put in place and such initiatives include among many others, dealing with tax payable for example recently it has been reviewed from 15% to 14.5%. More so other initiatives include government subsidies to manufacturing companies, how to deal with interest rates and also relaxing import restrictions on raw materials from other countries. These policies are being put in place to address major cost drivers. Paint companies should take advantage of these policies so as to minimise their operating costs to enhance competitiveness. This can be achieved through cutting unnecessary costs, regularly reviewing expenses, using cheaper methods of advertising such as social media platforms, buying bulk raw materials to take advantage of bulk discounts among many others.

The regression equation

Competitiveness= -3.481+0.516VA+0.498QC+0.399JT+0.278BC

Statistically significant factors were used to come up with a regression model. The constant Beta explains that even if variables in this study are not available, competitiveness can still be present in paint companies. The regression shows that 1 unit increase in Value Analysis results in 0.516 increase in competitiveness. The major aim of Value Analysis is to reduce the overall costs incurred in producing goods and services without compromising quality and product performance. In order to successfully implement value analysis, management must identify factors that affect execution because understanding the effect of each factor will result in a positive view.

The empirical regression also shows that a 1 unit increase in quality circles results in 0.498 increase in competitiveness. Quality circles if implemented correctly in paint companies can assist business to reduce costs, increase employee morale and improve productivity. Another importance of quality circles to paint manufacturing companies is that it results in greater operational efficiency, improved employee safety and healthy, reduced absenteeism and a better working environment. This will enhance a dramatic improvement in quality and competitiveness of paints and paint accessories.

The study also shows the significant role of Just in Time and budgetary control. The regression model explains that a 1 unit increase in Just in time and budgetary control will result in 0.399 and 0.278 increase in competitiveness respectively. JIT avoids investment in unnecessary stock and minimizes the need to replace unused stock and therefore is used as waste reduction technique. Paint colors are matched according to customer request (Color matching) thus color matching is done as per customer specific.

4.6 Tests of Independency

The researcher used Mann-Whitney U and Kruskal-Wallis H to test the significant difference for non-parametric test.

Mann-Whitney U test

Kruskal-Wallis equality-of-populations rank test

A1	Obs	Rank Sum
MaLe	70	3201.00
Female	30	1849.00

chi-squared = 6.312 with 1 d.f. probability = 0.0120

The table above provide information for Mann-Whiteney U test with equality of populations (male and female) with sums of ranks and p-values for the tested groups. The statistic and asymptotic significant are shown. From the results shown above (p=0.0120<0.05) it can be concluded that the opinions between males and females on competitiveness are statistically significant.

4.7 Chapter Summary

This chapter presented findings through data analysis and the main purpose of this study was fostering competitiveness through cost minimization strategies. Data was analyzed using STATA 11. Demographic data was presented and the impact of independent variables on competitiveness was explored. Relationship between variables was analyzed through correlation analysis and regression analysis was done to determine cause and effect relationship between cost minimization strategies and competitiveness. Hypothesis testing was also carried out where H1, H2, H3, H4 were accepted whilst H5 was rejected.. The researcher also presented managerial implications of the findings.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introductions

This study is focusing on fostering competitiveness through cost minimization strategies evidenced through paint companies in Zimbabwe. The previous chapter discussed the research findings and the major aim was to identify the impact of cost minimization strategies on competitiveness of paint companies. To this end, this chapter discusses the conclusions and recommendations for paint companies. The study limitations, research methodology and implications for future research are also presented in this chapter.

5.2 Achievement of research objectives

The main objective was to examine the impact of cost minimization strategies on competitiveness of paint manufacturers in Zimbabwe

To achieve the main objective, the following specific objectives were addressed

- To investigate how budgetary control affect competitiveness in paint manufacturing companies.
- To investigate how value analysis affect competitiveness in paint manufacturing companies
- To investigate how Quality Circles affect competitiveness in paint manufacturing companies.
- To investigate how Just In Time philosophy affect competitiveness in paint manufacturing companies
- To investigate how Kaizan Costing affect competitiveness in paint manufacturing companies

To achieve the main research objective the researcher used regression analysis to establish relationship between cost minimization strategies and competitiveness. The findings shows that there is a strong and positive significant relationship between budgetary control and competitiveness (p=0.001<0.05). This implies that the main and first specific objective was met and it can be concluded that budgetary control strategy is very significant to paint manufacturing

companies in enhancing competitive advantage. There is a positive and statistically significant relationship between value analysis and competitiveness (p=0.000<0.05). The researcher can safely conclude that the second specific objective was met and value analysis is critical to paint companies in gaining competitive advantage. There is a strong positive statistically significant between quality circles and competitiveness (p=0.003<0.05). This means that quality circle strategy is a predictor of competitiveness hence it can be concluded that quality circles are very critical in the survival of paint companies in Zimbabwe. There a positive and statistically significant relationship between JIT and competitiveness. Therefore the fourth objective was met and the researcher can conclude that JIT strategy is a predictor of competitiveness among paint companies in Zimbabwe. There is a negative statistically insignificant relationship between Kaizan costing and competitiveness (p=0.124>0.05), it can be concluded that the last objective was met and Kaizan costing does not affect the competitiveness of paint companies in Zimbabwe.

5.3 Conclusions

5.3.1 Answers to research Questions

The study aimed at determining the impact of cost minimization strategies on competitiveness of paint companies in Zimbabwe. The study results indicated mixed findings as other strategies were positive and others negative that is, Budgetary control, values analysis, quality circles, and JIT showed positive impact whilst Kaizan costing shows negative impact. Therefore the main hypothesis which states there is a positive impact between cost minimization strategies and competitiveness was partially accepted.

Research Question 1

How budgetary control affect competitiveness of paint companies?

In addressing this question. The researcher used regression analysis to the test the relationship between budgetary control and competitiveness and the results revealed factor was positively and statistically affecting competitiveness of paint companies. To this end, the hypothesis H1 that budgetary control has a significant impact on competitiveness was accepted. These findings are supported by Joseph (2014), Siyanbola and Raji (2018) on the impact of cost control in manufacturing companies. This means that implementation of budgetary control strategy will improve competitiveness of paint manufacturing companies.

Research Question 2

How value analysis affect competitiveness of paint manufacturing companies?

The results revealed a positive and statistically significant relationship between value analysis and competitiveness. Therefore the hypothesis H2 that value analysis has a significant positive impact on competitiveness was accepted. The results are consistent with Braide (2002), Leber, Basic, Marvic, and Ivanisevic, (2018), Mahadik (2015) who concluded that value analysis strategy is considered to be a universally used method by manufacturing companies to lower production costs. This means that value analysis will reduce unnecessary costs of paint companies thereby gaining competitive advantage.

Research Question 3

How quality circles affect competitiveness of paint companies?

The results indicated that there is a positive statistically significant relationship between quality circles and competitiveness. The hypothesis statement H3 that quality circles has a significant positive impact on competitiveness was accepted. This is in line with the findings of by Agela (2017) and Owasu (2016) whose results indicated that quality circles if implemented properly will result in manufacturing companies gaining competitive advantage. The results shows that paint companies employ quality circles in order to gain competitiveness.

Research Question 4

How Just in Time philosophy affect competitiveness of paint manufacturing companies?

The fourth specific question was answered through regression analysis where the results revealed that JIT affect competitiveness positively. The hypothesis H4 that JIT has a significant impact on competitiveness was accepted. This is in line with the findings of Mankazana (2018). This means that JIT strategy play a critical raw in minimizing unnecessary costs such as storage costs and over stocking.

Research Question 5

How Kaizan costing affect competitiveness of paint manufacturing companies?

The results of the study revealed that kaizan costing does not affect competitiveness of paint companies hence the hypothesis H5 statement that Kaizan costing has a positive significant impact on competitiveness was rejected. This is contrast with the results obtained by Bekcioglu (2016) and Drury (2018) which indicated a positive impact of Kaizan costing on competitiveness. From the results it means that even though paint companies may implement Kaizan costing, however the strategy will not provide competitive advantage.

5.3.2 Contribution of the study

The research contributions in this section will be presented under theoretical, practical, policy and methodological contributions.

5.3.3 Theoretical contributions.

The study adds value to the body of knowledge on competitiveness of paint companies through cost minimization strategies. Scholars and future researchers can make use of findings in this study as basis for future research. Even though there is growing literature on cost control minimization strategies (Egbide 2009, Obara 2004, Ismaila et al 2009 and Diallo 2008), it seems that there is no consensus on the widely used strategies for example Oyedokum (2019) found out that cost minimization strategies has a positive significant impact on profitability of manufacturing companies where as Egbide (2019) focused much on Value Analysis.

The study also contributed the cost minimization framework for indigenous paint manufacturers which has not been previously tested. To this end, the study plays a significant contribution to literature by identifying, testing and validating the relationship between cost minimization strategies and competitiveness of paint manufacturing companies in Zimbabwe.

Therefore the modified model shown below can be used as theoretical contribution of this study.





Figure 5:1. Final cost minimisation framework

Source: Primary data

5.3.4 Methodological contribution

The practical use of survey strategy and a positivist approach in collecting data is used as methodological contribution. These techniques may be useful for other studies on fostering competitiveness through cost minimization strategies. The instrument used passed reliability and validity tests with Chrobach's apha =0.8613>0.7). To ensure equal participation, simple random sampling was adopted and data was collected across all registered paint companies in Harare, Zimbabwe.

5.3.5 Empirical contribution

Research findings from this research are important and can be used by the government, policy makers and regulators in understanding the real challenges being faced by paint companies in Zimbabwe and also in coming up with appropriate policies that are conducive for Paint companies to operate at lower cost thus enhancing their competitiveness. For paint companies to operate effectively in this competitive environment they should continuously assess and monitor their expenses to remain profitable.

5.3.6 Practical managerial recommendations

The researcher provided recommendations to paint companies in Zimbabwe and government that can be helpful in survival of paint companies in the face of competition.

- Paint companies should prepare cash flow budgets and pays expenses according to projected cash flows.
- > They should also hire attaches to minimize wage/salary bill
- Paint companies should also use cheaper methods of advertising such as facebook, instagram and twitter.

- They should also borrow capital from financial institutions such as banks to take advantage of fluctuating exchange rates.
- Paint companies should use superior paint technology such as tinting machines and software
- Paint companies should also provide an environment which encourages creativity and innovation which results in new product development.
- > They should also train employees so that they become competent and reduce mistakes
- They should also create marketing relationship strategies which makes customers to become partners.

5.3.7 Practical policy recommendations

- The government should provide legislations which protects paint companies for example providing a favorable import duty for their raw materials so that they can manufacture and offer a competitive price to customers.
- Government should also facilitate formation of paint companies' council where they can have an opportunity to discuss their challenges with government for sustainable solutions.
- Government should also offer tax subsidies to stimulate growth of paint companies in Zimbabwe.
- Regulatory frameworks should be put in place by the government to encourage growth of paint companies.
- Government should also offer loans and grants that can help undercapitalized paint companies. These grants can be offered at a concessionary rates and payable over a well-defined period of time e.g 12 months.
- Government should also offer consultancy services through the ministry of industry and commerce. These consultancy services will help to train and provide business opportunities that paint companies can enjoy in Zimbabwe.

5.4 Generalization of findings

The study targeted paint companies in Harare. Therefore the findings can be generalized to paint companies that did not participate. However the results cannot be generalized to entire paint companies in the country because the study was only carried out in Harare thus it is very possible

that the environment is different in other regions of the country that would provide results which are completely different from the ones obtained in this study.

5.5 Limitations of the research

The researcher used a small sample size of given large number of participants in the paint industry. Due to time constraints, the researcher obtained 100 responses which was adequate for this research however a bigger sample could have provided additional information which was going to be useful for this study. Some participants were not willing to provide their information giving different reasons such as no time to respond to questionnaire, no data bundles, fear to provide sensible information thinking that it would affect their business operations.

Even though the questionnaire were sent to the right respondents it is important to point out that not all participants provided accurate and precise information which may lead to misleading results. Quantitative research method also limited respondents to clearly provide their own opinion or depth information thus a mixed method was critical. More so this study is only limited to Harare thus making it difficult to generalize results to those paint companies outside Harare since they are operating in different business environments. Despite the limitations highlighted above, the researcher is quite sure that the findings of the study are god enough to draw valid conclusions.

5.6 Areas for further research

This study focused on a sample of paint companies in Harare thus the results can be generalized in paint industry and the business environment in Zimbabwe. The future studies may focus on paint companies in other countries and compare the results. This study examined the impact of cost minimization strategies on competitiveness of paint companies in Zimbabwe and such strategies examined are budgetary control, quality circles, value analysis, just in time philosophy and Kaizen costing, however there are other factors that have an impact on competitiveness of these paint companies. This study highlights the cost minimization strategies but did not explain the insights of factors that leads to adoption of such strategies. Therefore future studies can be carried out in analyzing factors that leads to adoption of cost minimization strategies.

5.7 Chapter summary

This chapter discussed study conclusions and practical recommendations. The conclusions of this study focused on cost minimization strategies and their impact on competitiveness of paint manufacturing companies in Zimbabwe. Therefore, recommendations explained in this study are strategies that paint companies can adopt to remain competitive from both domestic and international competition.

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Questionnaire

Research Topic: Fostering competitiveness through cost minimisation strategies: Evidence from Indigenous Paint manufacturers in Zimbabwe.

Please indicate your answer by putting a tick or x in the box.

SECTION A: DEMOGRAPHIC INFORMATION

A1. Please indicate your gender. Male [] Female []

A2. Please tick to indicate your job position from categories below?

 Owner Manager []
 Manager []
 Supervisor []

 Other (Please specify) []

 A2. Number of years held in that position

 Less than 1 year []
 1 – 3 year []
 3 – 7 years []
 7 – 10 years []
 10 years and above []

A4. Highest Education Level

Diploma [] Degree [] Masters [] Doctorate [] Other (specify) ------

SECTION B: Composition of firm

The following statements measure composition and size of the company. Please indicate your answer by putting a tick or x in the box

B1. Number of years in operation

```
Less than 1 year [ ] 1 – 3 year [ ] 3 – 7 years [ ] 7 – 10 years [ ] 10 years and above []

B2. Number of employees
```

```
Less than 20 employees [] 20-50 employees [] 50-100 employees [] more than 100 employees []
```

B3. The current market you are servicing

Local (Zimbabwe) [] Local and other countries [] Other (specify).....

SECTION C: COST MINIMISATION STRATEGIES

The following section relates the cost minimisation strategies you have adopted to ensure survival of your business, you are required to rate your responses from strongly disagree to strongly agree 1= strongly disagree 2=disagree 3=moderately agree 4=agree 5=strongly agree

Please tick only one number for each statement

To what extent do you agree with the following statement?

Item	Cost minimisation Strategies							
No								
C1.	Our company prepare budgets to	Strongly	1	2	3	4	5	Strongly
	minimise costs	disagree						agree
C2.	Our company regularly review	Strongly	1	2	3	4	5	Strongly
	expenses e.g monthly	disagree						agree
C3.	Our company pays expenses according	Strongly	1	2	3	4	5	Strongly
	to projected cash flows	disagree						agree
C4.	Our company always cut unnecessary	Strongly	1	2	3	4	5	Strongly
	costs	disagree						agree
C5.	Our company do revaluation of	Strongly	1	2	3	4	5	Strongly
	complex expenses	disagree						agree
C6.	Our company do proper analysis of	Strongly	1	2	3	4	5	Strongly
	each and every function to eliminate unnecessary costs	disagree						agree
C7.	Our company hires attachés to	Strongly	1	2	3	4	5	Strongly
	minimise wage/salary bill	disagree						agree
C8.	Our company use alternative sources	Strongly	1	2	3	4	5	Strongly
	of energy such as solar	disagree						agree
C9.	Our company borrow capital from	Strongly	1	2	3	4	5	Strongly

	financial institutions to take advantage	disagree						agree
	of fluctuating exchange rates							
C10.	Our company use cheaper methods of	Strongly	1	2	3	4	5	Strongly
	advertising such as social media and	disagree						agree
	word of mouth							
C11.	Our companies get raw materials from	Strongly	1	2	3	4	5	Strongly
	cheaper suppliers e.g from South	disagree						agree
	Africa							
C12	Our company has multiple suppliers to	Strongly	1	2	3	4	5	Strongly
	enable price comparison.	disagree						agree
C13.	Our company buy raw materials in	Strongly	1	2	3	4	5	Strongly
	bulk to take advantage of bulk	disagree						agree
	discounts							
C14.	Our company is located near	Strongly	1	2	3	4	5	Strongly
	customers to reduce costs of deliveries	disagree						agree
C15.	Our company focus on quality	Strongly	1	2	3	4	5	Strongly
		disagree						agree
C16.	We turnover inventory faster	Strongly	1	2	3	4	5	Strongly
		disagree						agree
C17.	Our company use Just in Time to	Strongly	1	2	3	4	5	Strongly
	reduce cost of holding stock	disagree						agree
C18.	Our company use Fist in First Out	Strongly	1	2	3	4	5	Strongly
	principle (FIFO)	disagree						agree
C19.	Our company cut production costs e.g	Strongly	1	2	3	4	5	Strongly
	we sell left over paints and used	disagree						agree
	buckets							
C20.	Our company outsource weaknesses	Strongly	1	2	3	4	5	Strongly
	e.g production of costly tonners	disagree						agree
C21.	The company has automated time	Strongly	1	2	3	4	5	Strongly
	consuming tasks	disagree						agree
C22.	Our company effectively manage time	Strongly	1	2	3	4	5	Strongly
		disagree						agree

	e.g block out destructions such as							
	social media							
C23.	Our environment encourages creativity	Strongly	1	2	3	4	5	Strongly
	and innovation	disagree						agree
C24.	Our company uses business premises	Strongly	1	2	3	4	5	Strongly
	which are cheaper in rentals	disagree						agree
C25.	Our company pays employees	Strongly	1	2	3	4	5	Strongly
	according to productivity	disagree						agree
C26.	Our company always cut down on	Strongly	1	2	3	4	5	Strongly
	unnecessary meetings	disagree						agree
C27.	Our company train employees so that	Strongly	1	2	3	4	5	Strongly
	they become competent and reduce mistakes	disagree						agree
C28.	We have modernized our marketing	Strongly	1	2	3	4	5	Strongly
	methods	disagree						agree
C29.	Our marketing relationship strategies	Strongly	1	2	3	4	5	Strongly
	makes customers to become partners	disagree						agree
C30.	Our company use superior paint	Strongly	1	2	3	4	5	Strongly
	technology	disagree						agree

SECTION D

As a result of the above practices, the following statements show the measures the competitiveness of Paint companies, you are required to agree or disagree with the statements below where:

Strongly disagree =1	Disagree=2	Moderate=3	Agree=4	strongly agree=5
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Item	Measures of Competitiveness	Strongly	1	2	3	4	5	Strongly
No		disagree						agree
D1.	Our profitability is increasing	Strongly	1	2	3	4	5	Strongly
		disagree						agree

D3.	Our company is growing/ expanding	Strongly	1	2	3	4	5	Strongly
		disagree						agree
D4.	Our company is now competitive	Strongly	1	2	3	4	5	Strongly
		disagree						agree
D5.	Our market share is increasing	Strongly	1	2	3	4	5	Strongly
		disagree						agree
D6.	Our product quality is improving	Strongly	1	2	3	4	5	Strongly
		disagree						agree
D7.	Our customer satisfaction level is	Strongly	1	2	3	4	5	Strongly
	improving	disagree						agree
D8.	Our sales volumes are increasing	Strongly	1	2	3	4	5	Strongly
		disagree						agree