MUNHUMUTAPA SCHOOL OF COMMERCE

GRADUATE SCHOOL OF BUSINESS

INFLUENCE OF PRODUCT QUALITY ON CUSTOMER SATISFACTION IN THE MOBILE PHONES INDUSTRY: A CASE OF JERERA'S WARD NINETEEN (19) MOBILE SMART PHONE USERS IN MASVINGO

BY

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DECLARATION

I, Mildret Chudu hereby declare that this dissertation entitled **"Influence of product quality on customer satisfaction in the mobile phones industry: a case of Jerera's ward nineteen (19) mobile smart phone users in Masvingo"**, is the result of my own investigation and research, except to the extent indicated in the acknowledgements and references and by acknowledged sources in the body of the report, and that it has not been submitted in part or full for any other degree to any other University or College.

_____ ___21/11/23____

Student Signature Date

DEDICATION

I dedicate this dissertation to the unborn child, my son, husband, sisters and parents for their support, inspiration and encouragement they rendered me during the course of this research.

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I would like to thank God for enabling me to prepare this dissertation. My acknowledgement also goes to my supervisor Dr C. H Basera for his selfless support and guidance he rendered me on this dissertation. I would also want to thank Jerera ward nineteen (19) residents for their unwavering support, it would not been possible without their support. Finally my sincere gratitude goes to unborn child, my son, husband, sisters and parents for their encouragement and support.

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ABSTRACT

The purpose of this study was to investigate the influence of product quality on customer satisfaction in the mobile smartphones industry. The study also sought to determine the relationship between product quality variables (performance, features, reliability, conformance, durability, aesthetics, serviceability and perceived quality) and customer satisfaction. The study used a sample size of 384 and 231 questionnaires were successfully completed and returned. Stratified sampling design was used. The study adopted descriptive research design and quantitative data analysis was conducted using SPSS. The results revealed that product quality had positive influence on customer satisfaction. The also shown that product quality variables (performance, features, reliability, conformance, durability, aesthetics, serviceability and perceived quality) have positive significant relationship with customer satisfaction. This was revealed through regression analysis which showed positive coefficients and p-value of 0.000 at 5% confident level. This study concluded that product quality influence customer satisfaction and if the products are of low quality then customers would be dissatisfied and lead to lower profitability and poor sales volumes in companies. Basing on the findings it was then recommended that smartphones companies or manufacturers improve the quality of their products to ensure customer satisfaction. Further research was also recommended in order to address the limitation of this study, further research can be conducted using different customers in order to increase the validity of its findings.

Key Words: product quality, customer satisfaction, performance, perceived quality

TABLE OF CONTENTS

RELEASE FORM.....i

APPROVAL FORM.....ii

DECLARATION.....iii

DEDICATION.....iv

ACKNOWLEDGEMENTS.....v

ABSTRACT.....vi

LIST OF FIGURES.....xi

LIST OF APPENDICES.....xii

PROBLEM AND ITS SETTING.....1

1.0 INTRODUCTION.....1

1.1 BACKGROUND OF THE STUDY.....1

1.2 JUSTIFICATION OF THE STUDY.....4

1.3 STATEMENT OF THE PROBLEM.....4

1.4 RESEARCH OBJECTIVES.....5

1.5 RESEARCH HYPOTHESES.....6

1.6 SIGNIFICANCE OF THE STUDY.....6

1.7 ASSUMPTION OF THE STUDY.....7

1.8 DELIMITATIONS OF THE STUDY.....8

1.9 LIMITATION OF THE STUDY.....8

1.10 DEFINITIONS OF KEY TERMS.....9

1.11 ORGANISATION OF THE STUDY.....9

1.12 CHAPTER SUMMARY.....10

CHAPTER TWO.....11

LITERATURE REVIEW.....11

2.0 INTRODUCTION.....11

2.1 THEORATICAL FRAMEWORK 11
2.2 RESEARCH VARIABLES AND CONSTRUCTS OVERVIEW 16
2.3 EMPIRICAL EVIDENCE 23
2.4 RESEARCH GAP 24
2.5 CHAPTER SUMMARY 25
CHAPTER THREE 26
RESEARCH METHODOLOGY.....26
3.0 INTRODUCTION 26
3.1 RESEARCH PHILOSOPHY.....26
3.2 RESEARCH APPROACH.....26
3.3 RESEARCH METHOD 27
3.4 RESEARCH STRATEGY.....27
3.5 RESEARCH DESIGN 28
3.6 TARGET POPULATION AND SAMPLING.....28
3.7 DATA COLLECTION 30
3.8 VALIDITY AND RELIABILITY OF THE INSTRUMENT 31
3.9 DATA COLLECTION PROCEDURE.....32
3.10 DATA PRESENTATION AND ANALYSIS PROCEDURES 32
3.11 ETHICAL CONSIDERATIONS.....32
3.12 CHAPTER SUMMARY 33
CHAPTER FOUR 34
DATA PRESENTATION, ANALYSIS AND DISCUSSION.....34

4.0 INTRODUCTION 34
4.1 OVERALL RESPONSE RATE 34
4.2 DEMOGRAPHIC PROFILE OF RESPONDENTS 34
4.3 RELIABILITY TESTS OF THE DATA FROM QUESTIONNAIRES 36
4.4 PRODUCT QUALITY 37
4.5 CUSTOMER SATISFACTION 37
4.6 FEATURES AND CUSTOMER SATISFACTION 39
4.7 RELIABILITY AND CUSTOMER SATISFACTION 40
4.8 CONFORMANCE AND CUSTOMER SATISFACTION 41
4.9 DURABILITY AND CUSTOMER SATISFACTION 42
4.10 AESTHETICS AND CUSTOMER SATISFACTION 42
4.11 SERVICEABILITY AND CUSTOMER SATISFACTION 44
4.12 PERCEIVED QUALITY AND CUSTOMER SATISFACTION 45
4.13 REGRESSION ANALYSIS 46
4.14 SUMMARY OF INFERENTIAL ANALYSIS 51
4.15 CHAPTER SUMMARY 52
CHAPTER FIVE 53
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 53
5.0 INTRODUCTION 53
5.1 SUMMARY 53
5.2 CONCLUSIONS 54
5.3 RECOMMENDATIONS 56
5.4 RECOMMENDATIONS FOR FURTHER STUDY 58
REFERENCES 59
APPENDICES 65

LIST OF TABLES

Table 4.1: Gender of Respondents……..34

Table 4.2: Distribution of Respondents by age 34

Table 4.3: Academic qualifications 35

Table 4.4: Product quality 36

Table 4.5 Performance on customer satisfaction 37

Table 4.6: Features on customer satisfaction 38

Table 4.7: Reliability on customer satisfaction 39

Table 4.8: Perceived opinions of conformance on customer satisfaction 40

Table 4.9: Perceived opinions of durability on customer satisfaction 41

Table 4.10: Aesthetics on customer satisfaction 42

Table 4.11: Serviceability on customer satisfaction 43

Table 4.12: Perceived quality on customer satisfaction 44

Table 4.13: Association between performance and customer satisfaction 45

Table 4.14: Association between features and customer satisfaction..... 46

Table 4.15: Association between reliability and customer satisfaction..... 46

Table 4.16: Association between conformance and customer satisfaction..... 47

Table 4.17: Association between durability and customer satisfaction 48

Table 4.18: Association between aesthetics and customer satisfaction……48

Table 4.19: Association between serviceability and customer satisfaction……49

Table 4. 20: Association between perceived quality and customer satisfaction…50

Table 4. 21: Summary of confirmation of hypothesis……50

LIST OF FIGURES

Figure 2.1: Conceptual Framework..... 15

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LIST OF APPENDICES

APPENDIX 1: QUESTIONNAIRE 64

APPENDIX 2: TURNITIN REPORT 70

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CHAPTER ONE

PROBLEM AND ITS SETTING

1.0 INTRODUCTION

This chapter gives a general introduction to this study which aim to investigate the influence of product quality on customer satisfaction in the mobile smart phones industry thereby, setting a concrete foundation of this research. Major aspects discussed include; the background of the study, the justification of the study, statement of the problem, research objectives, research questions, research hypothesis, significance, assumptions, delimitations and limitations of the study. Definitions of key terms, as well as the organisation of the entire study are also discussed in this chapter.

1.1 BACKGROUND OF THE STUDY

Organisations today are operating in a complex dynamic environment where business is centered on taste and preferences of customers. This has caused customer satisfaction through product quality become a hinge of todays' business performance. The quality of a product should bring satisfaction to customers. Product quality is one of the critical aspects which holds a certain influence on consumers' purchase, hence several quality brands have been presented to assure the quality and the uniqueness of products. Moreover, customers can effortlessly distinguish high quality products and make enhanced decisions linked to their purchase (Košičiarová *et al*., 2016). This shows that the quality of a product highly influence customer satisfaction, thus the more competent the product, the greater the satisfaction. Poor product quality has been the biggest cause of customer dissatisfaction. Quality is taken as the most fundamental part of the business's competitive marketing strategy for its survival and success (Ishaq *et al*., 2014). Researchers ascertained that companies which do not focus on customer's needs and giving them value will yield customer dissatisfaction and loss of profits. Product quality according to Sitanggang (2019), "is an effort to meet or exceed customer satisfaction." Product quality determines the extent in which a product's ability can meet and satisfy customer's needs. Consumer's taste and preferences changes time to time so the quality of products also change in order to

satisfy customers. So continuous quality change and improvement of a product helps to keep the product with the set standards made to in order to meet customer's taste and preference (Sitanggang, 2019). Superior quality used to differentiate competitors but now it authenticates the value of a company to compete (Ling *et al*., 2018). This means that traditionally quality was used to differentiate companies and now it's used as a strategy to outwit competitors. Hakim (2021) posits that product quality has eight indicators or multi-dimensions which includes; performance, features, reliability, conformance, durability, serviceability, aesthetic and perceived quality. According to Ling *et al*. (2018), "Performance refers to product's primary operating characteristics, Features are additional characteristics that enhance the appeal of the product to the customer, Reliability is the likelihood that a product will not fail within a specific time period when put in use, Conformance is the precision with which the product or service meets the specified standards, Durability measures the length of a product's operating life. Serviceability is the speed, easy and costs with which the product can be put back into service when it breaks down, Aesthetics refers to how the product looks, feels, sounds etc. (depends on personal judgments and preferences) and Perceived quality is a quality attributed by the customer, noting that perception is not always reality". Quality is closely connected to customer value and satisfaction. Concentrated global competition has stressed the increasing significance of quality. Product quality is also a result of product design, adoption of appropriate principle management and process control (Sitanggang, 2019).

Customer satisfaction according to Sitanggang (2019), is the level of one's feeling after matching the performance perceived in the expectation. Shing (2012), said that satisfaction is when someone respond physiologically by feeling content or disappointed by the performance of a product after making a comparison of the results after and before tasting the product. Sari *et al*. (2020) said that if the point at which customer satisfaction upsurges performance rating, customer satisfaction is positive, and it is vital for the upsurge and, at last, enhance loyalty. Customer satisfaction is a driver for growth, survival and competitiveness in business. Customers today demand high quality products since their needs are continually changing. Most of devoted customers prefer high quality products (Albari, 2020). Although the needs of

customers are considered vital understanding has never been abundantly converted into action in a bid to assess essential information (Ling *et al*., 2018).

There are some factors that promote customer satisfaction and quality and these include social marketing. Social marketing promotes competition which will cause the organisation to improve the quality of its products according to customer's preferences hence promoting customer satisfaction (Simin, 2021). Khan and Ahmed (2012) refers product quality as a crucial element of customer satisfaction. Products with high quality get to be accepted by customers and it also holds a positive relationship with customer satisfaction. The price of a product depends on its quality which will also lead to customer satisfaction. Researchers asserted that the significance of the product depends on customer's perception which determines its price range and market demand. The rise in the price of a good promotes the quality of a product enabling the organisation to meet the consumer needs due to the motivation from the rise of the price of the good (Sokchan *et al*. 2018: 21-27). If the product fail to meet customer's needs the company can diversify in order to retain customer satisfaction (Zhao *et al*. 2019:111-121). Researchers agreed that customer satisfaction has become an influential tool to sustain competitive advantage for company success and an antecedent for customer loyalty. Cater and Cater (2010) also support that there is a positive relationship between customer perceived value and customer satisfaction.

It is recommended that companies must institute a collaborative measures that will make follow up on the extent of their product quality grounded on the customer opinion since product quality is one of the crucial determining factor of customer satisfaction, a rise or fall in product quality increases or decreases level of customer satisfaction (Sambo *et al*., 2022). Due to the impact of new entrance in business, globalization, new technology, increase in rivalry, lower purchase intentions, new products emerging and decline in market share which negatively affects sales volume, organisations have started concentrating on product quality and customer satisfaction so that they may remain competitive and survive in business. If customers' preference and expectations are not met they switch to other competitors. Repurchase intentions is determined by the quality of a product as well as satisfaction (Atiyahi, 2016).

1.2 JUSTIFICATION OF THE STUDY

The objectives of this research are to discuss the influence of product quality on customer satisfaction. This study seeks to evaluate the influence of product quality on customer satisfaction. Thus, the study will proffer recommendations which will be useful to firms to realize the need to institute a collaborative measures that will make follow up on the extent of their product quality grounded on the customer opinion since product quality is one of the main determining factor of customer satisfaction. This study was limited to mobile phone users in ward nineteen, Jerera where users of different brand of mobile phones are rampant. In this research the influence of product quality on customer satisfaction is seen and generally discussed to equip firms with knowledge on the significance of improving customer satisfaction through product quality. The research gap in existing literature is fastened by this study, thereby making this research crucial in the customer satisfaction literature. This research will provide intense knowledge and understanding on the importance of customer satisfaction to firms through product quality.

1.3 STATEMENT OF THE PROBLEM

One of the most vital issue that needs to be taken care of in today's business is customer satisfaction. Changes in customer's taste and preference from time to time has become a greatest challenge to companies especially in mobile smart phones industry. According to Cordella *et al*. (2021), recent trends shows that smartphones replacement cycle no longer exceeds an average of two years, they are now replaced prematurely due to technical and socio-economic reasons. Problems with software and other physical features like battery failure, back covers and displays are increasing. Early replacements occurrences can be reduced by refining reliability of smartphones, designing gadgets which are resilient to mechanical pressures, long-lasting batteries and offer satisfactory compliance to future circumstances of usage. The quality of a product encourages customers to repurchase the product as well as being loyal to that brand which would increase profitability and market share of the organisation. If a customer does not get what he or she expects, then there is little chance for a customer to return. It may lead to loss of customers' altogether. This could be disastrous for any business that depends on customer satisfaction for stability

in the market. Most of reliable customers prefers high quality products (Albari, 2020). Poor product quality has been the biggest cause of customer dissatisfaction. Quality is taken as the most fundamental part of the business's competitive marketing strategy for its survival and success (Ishaq *et al*., 2014). Therefore high quality of products leads to increased customer satisfaction. Thus, companies should produce or sell high quality products in order to ensure customer satisfaction. On a daily basis there are new entries in the market with attractive products and it is necessary for mobile smart phone vendors to identify the satisfaction level of their customers (Koshy, 2012). The statistics carried out by Statcounter GlobalStats on Mobile Vendor market share in Zimbabwe in 2022, Samsung had 33.83%, Huawei 20.49%, Apple 14.3%, Itel 11.9%, Tecno 5.7% and Unknown 3.77%. Following numerous complain by clients and many agencies in Zimbabwe concerning meagre products qualities which can drive to customer dissatisfaction hence disturbing repurchase intents together with customer loyalty to company's products qualifies this study to be conducted.

1.4 RESEARCH OBJECTIVES

1.4.1 Primary objective

The major objective of pursuing this study was to investigate the influence of product quality on customer satisfaction in the mobile smart phone industry

1.4.2 Secondary objectives

- To determine the influence of performance on customer satisfaction.
- To find out how features of a product influence customer satisfaction.
- To determine the influence of reliability on customer satisfaction.
- To determine the influence of conformance on customer satisfaction.
- To find out how durability influence customer satisfaction.
- To determine the influence of serviceability on customer satisfaction
- To determine the influence of aesthetics on customer satisfaction.
- To find out how perceived quality influence customer satisfaction.

1.5 RESEARCH HYPOTHESES

H_1: There is a statistically significant positive relationship between product performance and customer satisfaction

H_2: There is a statistically significant positive relationship between product features and customer satisfaction.

H_3: There is a statistically significant positive relationship between product reliability and customer satisfaction.

H_4: There is a statistically significant positive relationship between product conformance and customer satisfaction.

H_5: There is a statistically significant positive relationship between product durability and customer satisfaction.

H_6: There is a statistically significant positive relationship between product serviceability and customer satisfaction.

H_7: There is a statistically significant positive relationship between product aesthetics and customer satisfaction.

H_8: There is a statistically significant positive relationship between product perceived quality and customer satisfaction.

1.6 SIGNIFICANCE OF THE STUDY

This study will greatly profit the following disciplines as mentioned below:

1.6.1 To the researcher

The study is a requirement for the researcher to fulfill her requirements of her master's degree in Business Administration since this stands as a source of training in her academics and skills. This study helps the researcher to have enhanced understanding on the manner product quality influence customer satisfaction in mobile phones industry. The study also enhance the researcher's professional capacity in

research methods as well as equipping her with relevance in solving similar problems in life.

1.6.2 To Great Zimbabwe University

This study will be adopted and used by other researchers as a basis of arguments while providing the basis for further research thereby making a major contribution to the marketing body of knowledge. It will be also used as a base of information on service providers and their source of reference. The institution would be engaged and consulted by relevant industries for information concerning influence of product quality on customer satisfaction and there will be in a position to deliver.

1.6.3 To the Zimbabwean mobile smart phones industry

This study is also crucial to the Zimbabwean mobile smart phones industry. The research will benefit the industry players by providing information on how product quality influence customer satisfaction in order to succeed and survive in their businesses in this competitive world. Players in this industry will be afforded the opportunity to reflect on their product quality thereby addressing gaps that may obstruct the success of their businesses. It is due to such motive that led this study to be made with the aim to examine the influence of product quality on customer satisfaction in mobile phone industry.

1.7 ASSUMPTION OF THE STUDY

According to Nkwake *et al.* (2016), assumptions are the opinions a researcher place to monitor his or her study. The study is constructed on the subsequent assumptions:

- That participants would have adequate knowledge about product quality determinants of customer satisfaction
- That participants would be willing to provide truthful responses and also participate.
- That participants would respond whole heartedly and truthfully and would be willing to give full information.
- That high quality products contributed to customer satisfaction.

1.8 DELIMITATIONS OF THE STUDY

According to Leedy (1997), it is significant to delineate a study in relation to particularly the physical space in which the study is being conducted in terms of the research title and associated literature present. Below are the key delimitating variables of this study which includes geographic, conceptual and participant boundaries:

1.8.1 Geographical delimitation

The study was done in Zimbabwe and the units of analysis were all mobile phones users and mobile phones vendors in ward nineteen, Jerera. In a nutshell, the study was conducted in Zimbabwe.

1.8.2 Conceptual delimitation

This study focused on product quality and how it influence customer satisfaction in Mobile phones Industry in Zimbabwe. The study left out other areas that are linked to product quality in relation to customer satisfaction.

1.8.3 Participants delimitation

This study focused on participants drawn from the sample of all mobile phones users and mobile phones vendors in ward 19, Jerera.

1.9 LIMITATION OF THE STUDY

Limitations refers to challenges related to the study which the researcher cannot be able to avoid (Brutus et al., 2013). In carrying out this study the researcher faced the following constraints:

1.9.1 Financial constraints

The major limitation was financial constraints. In order to cut costs the researcher conducted interviews with the respondents based in Jerera.

1.9.2 Time constraints

The other constraint of this study was limited time since the researcher is a family person, full time employee of Judicial Service Commission and who was taking studies on part time basis and because of these reasons balancing all was constraining. To overcome this limitation the researcher maximised her lunch time breaks and Sundays to make sure that the research is completed in time.

1.9.3 Withholding of information

The research faced constraints of suppression of information, and to overcome the limitation the researcher depended on the information previously published which included newspapers, Journals and thesis.

1.10 DEFINITIONS OF KEY TERMS

1.10.1 Product quality – According to Sitanggang (2019), "is an effort to meet or exceed customer satisfaction." It can also be a frequently varying state as the customer's expectation or taste of a good or service is continuously changing.

1.10.2 Customer satisfaction – According to Kotler *et al*. (2011), is the condition of one's feeling after relating performance or supposed results as anticipated.

1.10.3 Loyalty – Is how customers react to products when they like or dislike it and the decision to either continuing to buy or not (Purwani *et al*., 2002).

1.11 ORGANISATION OF THE STUDY

This study is structured into five interrelated chapters has briefly discussed below:

1.11.1 Chapter one: Problem and its setting – The research topic was introduced in this chapter. This marks the foundation of this research. The chapter discussed the background of the research, research problem and the objectives that enlightens the research and the research questions, providing justifications, limitations and delimitations of the research.

1.11.2 Chapter two: Literature review – This chapter is designed at reviewing the existing literature concerning the assessment of product quality as a determinant of customer satisfaction. The theoretical framework would be provided in this chapter.

1.11.3 Chapter three: Research methodology – The methods and processes utilized for data collection, presentation, and analysis are covered in detail in this chapter, together with information on the study population, study sample, and the ethical considerations that guided this research.

1.11.4 Chapter four: Data presentation, analysis and discussion – This chapter presents, analyses and discusses the findings of this study. Data gathered from research instruments employed by this study were presented using different charts and diagrams. Results are analysed using different statistical tools. Discussions are made by relating current results to other related studies grouped and analysed.

1.11.5 Chapter five: Summary, conclusions and recommendations – The study closes with a summary of the whole study and then concludes on the fundamental results of the research and finally suggests recommendations.

1.12 CHAPTER SUMMARY

This chapter set a foundation to this study. Key aspects discussed in this chapter includes; the background of the study, the justification of the study, statement of the problem, research objectives, research problems, limitations and delimitations of the study as well as research hypothesis and definition of key terms. The review of related literature was discusses in the following chapter.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews existing literature on the analysis of the influence of product quality on customer satisfaction in the mobile smartphones industry. According to Boote and Beile (2005), literature review can be defined as "a synthesis of the available literature on a certain topic including empirical research studies, theoretical and methodological contributions and conceptual reviews." The literature reviewed in this section is built balanced on the different themes constructed from the objectives of the research. The chapter also covers the theoretical framework and conceptual framework. The chapter closes by stressing the chapter summary briefing all the themes and concepts enclosed in the chapter.

2.1 THEORATICAL FRAMEWORK

According to Freeman (2018), the theoretical framework is a structure that identifies and explains the key factors, components or constructs that govern how research is organized. Theoretical frameworks are important in research because they are in charge of comprehending, speculating about or interpreting the variables interactions that predict, impact or affect the evens or outcomes. The ideas that support the research variables are thus presented in the theoretical framework. According to Miffin (2000), a theory is a series of hypothesis or guiding principles that are intended to explain a set of phenomenon or facts, have undergone extensive testing and facts that have been thoroughly examined and are generally recognized as true and which can be used or adopted to form a predictions about a natural occurrence or environment. As a result, it may also be described to as a belief or principle that serves to direct behaviour or to aid in making decisions or understanding concepts. The theoretical literature in this study focuses more on theories than on real-world applications. This research study therefore, employ two theories, and these are, the "Expectancy-Disconfirmation Theory" and "Kano Model".

2.1.1 Expectancy-disconfirmation theory

Expectancy-disconfirmation theory was propounded by Oliver (1980). Oliver developed the theory to clarify how consumers assess the quality of products and services and pass judgment on their level on satisfaction based on their expectations and views of how well products or services performed. According to expectancy-disconfirmation theory (EDT), the discrepancy between a customer's expectations and how well a product or service performs in their eyes determines how satisfied they are with it. This notion states that a purchaser is content if the goods or service meets or surpasses their expectations. The consumer is unhappy, though, if the good or service doesn't leave up to their expectations. By looking at how customer expectations and perceptions of performance are influenced by product quality, this theory can be applied to the mobile smartphones sector. Kim and Lee (2011) looked at how usability and dependability affect consumer satisfaction in the smartphone market. The study discovered that reliability significantly influenced customer satisfaction because customers had high standards for reliability. Due of the high expectations that customers had for usability, the study also discovered that usability had a considerable impact on customer satisfaction. Yang and Liu (2004) studied on the connection between mobile phone industry product attributes and consumer satisfaction. Survey revealed that product attributes including screen size, camera quality and battery life influenced customer satisfaction. The survey also discovered that customers had high expectations for these characteristics and that how well they performed in actual use affected their happiness. This approach is adopted for this research because high product quality meets or surpass the expectations of customers which leads to their satisfaction.

2.1.2 Kano model

Kano (1980) developed this model to clarify on how product features influence customer satisfaction and how organisations can make use of the information to improve their products and remain competitive. Chen and Chuang (2008) affirm that the Kano model is used to address trade-offs problems in numerous criteria optimization by ascertaining the essential criterion in customer satisfaction and to enhance understanding the connection between performance measures and

customer satisfaction. A survey by Chen and Chuang (2008) found out that the best-possible mobile smartphone design may successfully improve both customer satisfaction and overall aesthetics performance. The model assists mobile smartphone firms to understand customer needs and preferences for product features. Similarly, Huang and Ku (2013) suggest that smartphone must-have attributes like battery life and network quality that are essential for ensuring customer satisfaction. Likewise, Chen and Huang (2013) opine that screen size and camera quality were significant performance aspects that influenced customer satisfaction in the mobile smartphone sector. Lee and Tsai (2010) claim design elements including color and shape have a major impact on customer satisfaction in the smartphone sector. Both must have features and delighters have a favourable effect on customer satisfaction (Lee & Tsai, 2010). In a research by Strategic Analytics, with customer satisfaction scores of 826 and 824 out of 1000, respectively, Samsung and Apple were deemed to be the top two smartphones providers in 2021.

2.1.3 Product quality

Products are anything that can be provided by manufacturers for the market to take not of, ask for, seek out, purchase use or consume in order to satisfy their requirements or desires. There are physical goods like televisions, books and cars and services like travel, restaurant and hotels (Mahsyar & Surapati, 2020). According to Kotler and Armstrong (2004), product quality "*is the ability of a product to perform its functions."* It encompasses the product's general accuracy, dependability, simplicity of use and maintenance, as well as other highly regarded qualities. Product quality have eight dimensions that is, performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality (Mahsyar & Surapati, 2020). African market has a wider range of smartphone brands but Europe have quality smartphones than Africa (Zuyderhoudt, 2018). Oyaro, (2020) propounded that in Kenya, product quality (smartphones) have positive significant impact on user satisfaction, especially its performance and reliability. The results of the comparative study between Samsung and Tecno shows that Samsung had higher quality scores than Tecno especially on camera quality, display quality and user satisfaction (Eze, 2021). This shows the impact of product quality on customer satisfaction. With more

individuals owning smartphones, Zimbabwe's mobile smartphone sector has grown significantly in modern years, but there have been question raised concerning the quality of smartphones sold in Zimbabwe especially the imported ones. Numerous imported smartphones were sold in Zimbabwe that did not adhere to the regulations and standards, according to a 2018 study conducted by the Zimbabwe Information and Communication Technologies (ZICT). This was linked to both producer's and merchant's absence of quality control procedures. Numerous smartphones sold in Zimbabwe according to the 2019 study by Zimbabwe National Standard Association (ZNSA) were found to not fulfill the standards for battery life, electromagnetic compatibility, and other crucial aspects. The study by Walewangko *et al*. (2021) on the effects of product quality of JB Vape store on customer satisfaction resulted that product quality of JB Vape store partially effects the customer satisfaction which was also supported by Sitanggang *et al*. (2019). A company's success can be determined by how consistently high-quality products or services meet the needs of customers, employees and shareholders. When quality of the goods and services increase customer satisfaction also increases. Higher levels of customer satisfaction might leads in revenue for the business (Sitanggang *et al*., 2019). Literature shows connection between product quality and customer satisfaction.

2.1.4 Customer satisfaction

After purchasing a good or service, buyers will assess whether it meets their expectations or not. In the event that goods or services meet expectations, then the customer will be happy. On the other hand, if customers are not satisfied with goods or services provided they feel dissatisfied. It has been shown that customer's satisfaction is greatly correlated with the outcomes of the evaluation ensuing acquisition (Mahsyar & Surapati, 2020). Consumers track the performance of a product and compare it with their expectations so they can conclude on their satisfaction. When customer's needs and fulfilment are met they become satisfied. According to Kotler and Keller (2009), customer satisfaction is the, *"level of feeling someone that arise after comparing the performance of the products are received with expectations"*. If the performance surpass expectations customers feel satisfied. Expectations are created based on what competitors offer, experiences of friends and

family as well as experience of purchase and the market. Customer satisfaction or discontent is a customer's reaction to the difference experienced between earlier perception and the apparent performance of the customer (Tjiptono & Fandy, 2008). Customer satisfaction can be measured by customer loss rate, periodic surveys, suggestions and recommendations as well as mystery shoppers (Kotler & Keller, 2012). Moradi (2019) said that product quality had a significant positive influence on customer satisfaction especially as far as durability and reliability is concerned. For the last two decades, quality have been regarded to be the most critical factor of any competitive promotional strategy for the existence and accomplishment of businesses (Ishaq *et al*., 2014). Researchers have suggested that companies that fails to priotize giving value to customers and fails to deliver, make huge losses and also lose customers. So organisations put more effort to understand their customer's demands and constantly provide for them so they may satisfy them. Researchers have also established that the perceived value of a customer is a key factor of their satisfaction (Ishaq *et al*., 2014). A customer who is satisfied typically gets the products they anticipate, which provide value and give them a positive experience. The success of a business typically depends on its delighted consumers, who act as brand ambassadors and indirectly market its goods and services on social media and through word of mouth (Abdullah *et al.*, 2022). Thilagavathi and Kanchana (2020) found that Samsung smartphone was the most preferred by Respondents. Product recommendations from devoted customers are necessary for businesses to succeed. Product quality, quality of service, emotion, price and promotion are five indicators of customer satisfaction (Hakim, 2021). There are three indicators of customer satisfaction which includes, fulfilment of desires, fulfilment of needs and fulfilment of expectations (Lina, 2022). As from the above explanation, it can be concluded that firms must priotize product quality as its top priority before evaluating the degree to which consumers are pleased by the current quality level and conducting an evaluation that resulting in suggestions for enhancement in the form of creativity (differentiation or modification) and innovation. It is envisaged that these initiatives preserve and enhance market segmentation and enable us to defeat the opposition.

2.2 RESEARCH VARIABLES AND CONSTRUCTS OVERVIEW

2.2.1 Conceptual Framework

Dyer *et al*. (2020) defines conceptual framework as synthesis of literature on how to study a phenomenon results. Its function is to outline the steps that must be taken during the research. The conceptual framework connects the observations of the understudied subjects with the knowledge that already exist about the other researcher's perspective (Sterling, 2018). Conceptual framework can also be referred to as the researcher's guide to understanding how the variables in the research study are connected. In the research under consideration, it is therefore necessary to determine the dependent and independent variables. The conceptual framework should save as a guide for the researcher as they do their research. In the following diagram customer satisfaction is the dependent variable whilst performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality are independent variables.

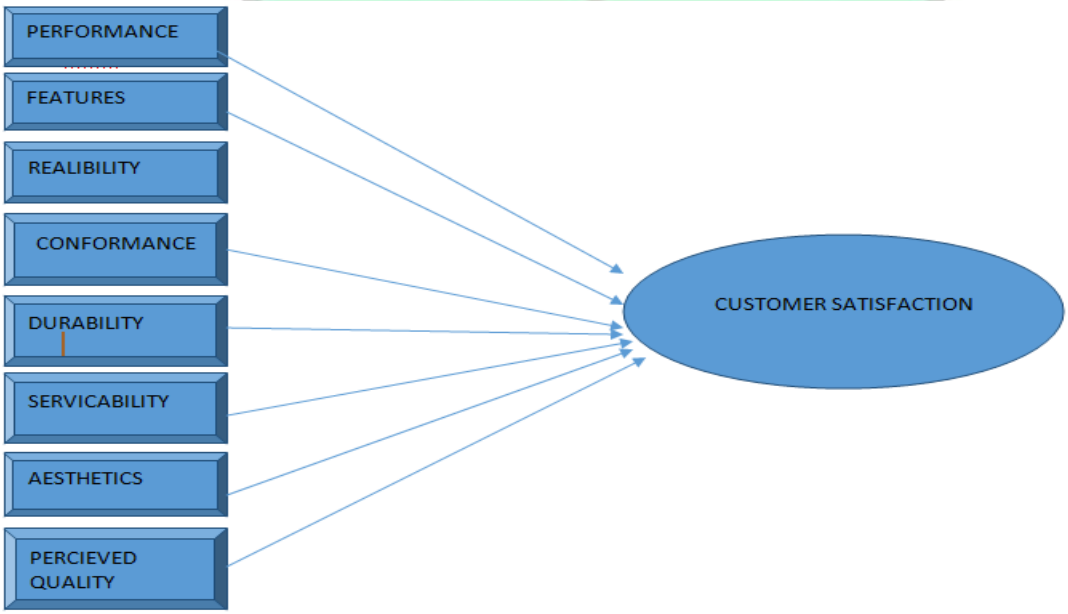

Figure 2.1 Conceptual framework

Source: Researcher (2023)

The figure 2.1 above indicates that, customer satisfaction is the dependent variable whilst performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality are independent variables.

2.2.2 Performance and Customer satisfaction

Ling *et al*. (2018) say, "Performance refers to product's primary operating characteristics." Oyaro (2020) propounded that in Kenya, product quality (smartphones) have positive significant impact on user satisfaction, especially its performance and reliability. According to Saxena (2017), satisfaction combines level of perceived performance and expectations. Satisfaction depends on the real performance of a product in relation to the customer's expectations. Customer satisfaction according to Sitanggang (2019), is the degree to which one's feeling after associating the performance perceived in the expectation. Equally, Shing (2012) posits that satisfaction is when someone responds physiologically by feeling content or disappointed by the performance of a product after making a comparison of the results after and before tasting the product. Sari *et al*. (2020) claimed that if customer satisfaction boosts performance rating to such extent it becomes positive, it is essential for the rise and, ultimately, results in loyalty. Oliver in his expectancy disconfirmation theory suggested that the inconsistency between expected and real performance is what defines satisfaction level. So satisfaction is achieved when a product exceeds expectations. Dissatisfaction (negative disconfirmation) also is a performance that fails to meet expectations. As per studies, consumer satisfaction may have a direct or indirect effect on financial performance. Kim and Lee (2011) looked at how usability and dependability affect consumer satisfaction in the smartphone market. The study discovered that reliability significantly influenced customer satisfaction because customers had high standards for reliability. Due of the high expectations that customers had for usability, the study also discovered that usability had a considerable impact on customer satisfaction. Lee (2021) studied the connection between product quality and client pleasure in the smartphone market, concentrating on Apple and Samsung. According to the survey, dependability and performance are the main elements influencing consumer satisfaction for both Apple and Samsung, and they have a considerable impact on it. Yusof (2020), examined the

influence of product performance on customer satisfaction in mobile telecommunications industry. The study discovered that product performance has a significant positive influence on customer satisfaction as far as internet speed, call quality and network quality were concerned. This shows that there is a significant relationship between performance of smartphones and customer satisfaction.

2.2.3 Features and consumer satisfaction

Product features are instruments used by competitors to set their products apart from those of their rivals' (Ginting, 2012:97). Features serve as a competitive tool to set a company's products apart from those of competitors (Kotler & Armstrong, 2008:273). Companies must also consider packaging for collections or features (Kotler & Keller, 2009: 8). According to these experts' definitions, a product feature is an element like a product's qualities like color, packaging, merchant prestige, and factory service that guarantees the product can satisfy customers' requirements and wishes. Kotler and Keller (2012) state that there are four indications that can be used to gauge a product's feature variables: feature diversity, feature quality, feature importance, and feature completeness. Products and services' "bells and whistles" are the features that improve their core capabilities. The distinction between primary and secondary factors in performance might be difficult to make. The fact that features entail quantifiable, objective properties is significant once more; particular preferences do not affect in what manner these traits manifest as quality variations (Garvin, 1987). Ling *et al*. (2018) claim that features are supplementary characteristics that heighten how the product looks like to customer. The results of the comparative study between Samsung and Tecno shows that Samsung had higher quality scores than Tecno especially on camera quality, display quality and user satisfaction (Eze, 2021). Cordella *et al*. (2021) pronounced that recent trends shows that smartphones replacement cycle no longer exceeds an average of 2 years, they are now replaced prematurely due to technical and socio-economic reasons. Problems with software and other physical features like battery failure, back covers and displays are increasing. Early replacements occurrences can be reduced by refining the reliability of smartphones, crafting products which are resistant to mechanical challenges, long-lasting batteries and being able to be used in the future. Imtiaz and Islam (2020)

examined how product features affect customer satisfaction in the smart phone market. Their findings revealed that customer satisfaction significantly influenced by product features notably those related to battery life, camera quality and screen size. One scholar who studied on 5G smartphones, the connection between product characteristics and consumer satisfaction in the mobile telecommunications sector, discovered that product attributes, particularly those relating to network speed, processing speed, and camera quality, have a considerable beneficial impact on consumer happiness.

2.2.4 Reliability and customer satisfaction

Ling *et al*. (2018) affirm that reliability is when a product is expected to function for a long time before it fails. This dimension shows that at one point there will be chances in the future where a product will fail. The mean time to first failure, the mean time between failures, and the failure rate per unit time are some of the most popular reliability metrics (Garvin, 1987). Since they require a product to be utilized for a specific period of time, these measurements apply more to durable goods than to goods and services that are used right away. Customers often give reliability more weight when downtime and maintenance expenses increase. The most efficient brand among top six mobile phone manufacturers in Turkey is Nokia, LG and Sonny Ericsson respectively as far as customer satisfaction and loyalty efficiency is concerned. Panasonic, Motorola and Samsung are the least efficient manufacturers (Bayraktar *et al*., 2012). Reliability is the most important component that affects customer satisfaction than other dimensions since it is a critical driver of customer satisfaction (Abdullah *et al*., 2022). Sirgy *et al*. (2013) propounded that when customers perceive a product as reliable, they are more likely to be satisfied with their purchase and make repeat purchases. Authors assert that there is significant effect of product reliability on customer satisfaction. If smartphones reliability is improved the occurrence of early replacements will be reduced (Cordella *et al*., 2021). There are stress factors that affects the reliability of smartphones and these includes material used, operating conditions (vibration, electrical stresses, ingress of dust, water and mechanical shocks), environmental (humidity and ambient temperature) and the component's shape and size. Such challenges can be reduced by making provisions on how to

maintain and utilize the gadget properly; the design of strong devices through by using high quality parts as well as making use of protective accessories (for instance, external cases and screen protectors) and gadgets with future proof with enough memory capability and performance (SoC, RAM) together with the security updates from time to time and the availability of firmware or software (Cordella *et al*., 2021).

2.2.5 Conformance and customer satisfaction.

Ling *et al*. (2018) define conformance as “the precision with which the product or service meets the specified standards”. Garvin (1987) also defines conformance as the degree to which a product's design and functional elements adhere to accepted standards. All products and services contain specifications in some form. When fresh designs are generated, purity standards for materials and part sizes are defined. Traditional form of these requirements is as a target, deviating from the center is permitted in a certain range. Due to the fact that this method of compliance connects working within an acceptable range with providing satisfactory quality, there is no worry about whether requirements have been accurately satisfied Garvin, (1987). Better quality variations and perfections are targeted to sustain the product’s creation to the established standard in order to prevent consumers from losing faith in the product in question (Sitanggang *et al*., 2019). Riccio and Oliveira (2010) examined the association between conformance and customer satisfaction. The authors found that there is a connection between conformance and customer satisfaction since customers are more likely to be pleased with their purchases and have a favourable opinion of the brand when goods and services meet predetermined standards. Consumer need to feel compatible with a product’s quality for marketing to be effective, and they tend to buy products that meet their needs or wants. Conformance can be realized over effective process control, employee training and quality management systems. There are factors that influence conformance and customer satisfaction such as software performance, product design, after-sales service, manufacturing processes (Mohiuddin *et al.*, 2020). Customers feel satisfied if they feel products they use are of high quality.

2.2.6 Durability and customer satisfaction.

"Durability measures the length of a product's operating life" (Ling *et al*., 2018). Garvin (1987) also defined durability as a measure of product lifespan and have two scopes such as economic and technical. Technically durability is the extent of use one gets before the product depreciates. Economically the consumer compares the price and personal inconveniences of the product as well as the timeframe needed to replace. A fascinating approach to lessen the effects of the smartphones on the environment is to make them more durable. Technical factors (such as distance, time and cycles) can restrict a product's durability. This limitation is dependent on the product's reliability, which is its resistance to lots of and poor mechanisms, and its ability to be repaired once it reaches a limiting condition (Cordellah *et al*., 2021). A product is in a usable state until a limiting event prevents it from performing the necessary functions. If corrective measures are taken, it return to a functioning state. When maintenance and repair factors (including software faults) are taken into account, a product's durability has an impact on both its functional and technical lifespan (Cordellah *et al*., 2021). In the mobile smartphone industry, durability is a crucial component of customer satisfaction. Customer anticipates that their smartphones will last and survive normal use. Customers are more likely to be satisfied with their purchases and have a favourable opinion of the firm when smartphones are long lasting and dependable. Effective product design, production processes and quality control leads to durability (Alam *et al*., 2021). The researchers also noted a number of issues with preserving durability in the smartphone industry. The use of delicate material, the requirement for constant process development, and effect of consumer behaviour on product durability are some of these difficulties. In order to maintain ongoing durability and customer satisfaction, businesses should concentrate on these issues and continuously review and enhance their product designs, production processes and quality control. So this indicates a significant association between durability and customer satisfaction.

2.2.7 Serviceability and customer satisfaction

Ling *et al*. (2018), defined serviceability as how quickly, cheaply and easily the product may be repaired when broken. Serviceability, also known as speed, politeness, and

capability and easy of repair, became the sixth element of quality. Customers worry not about a product's failures but also about duration of serviceability, how appointments are handled, in what way they engage with service workers and how often service calls or fixes fail to resolve persistent concerns. When problems are not resolved promptly and grievances are filed, a business's procedures for managing grievances are likely to have an impact on how customers eventually evaluate the quality of its products and services (Garvin, 1987). Even after the repairs are finished, customers can still not be happy. The way these complainants are addressed has an impact on a business's standing for quality and customer service. Profitability will probably eventually be impacted as well. According to a 1976 consumer study, more than 40% of households that complained to fix issues were dissatisfied with the outcomes. It seems sense that consumer willingness to repurchase the offending brands was closely connected with how satisfied they were with how their complaints were resolved (Garvin, 1987). Cordellah *et al*. (2021) state that repairs and maintenance should be economically viable and quick in case of failures. The product should have instructions on use, maintenance and repair. So this shows a positive significant relationship between serviceability and customer satisfaction.

2.2.8 Aesthetic and customer satisfaction.

Garvin (1987) says that, "Aesthetics refers to how the product looks, feels, sounds etc. (depends on personal judgments and preferences)." With this dimension it is difficult to please every customer since it is subjective (Garvin, 1987). A product's shape color and texture are all considered to be aesthetic in terms of their visual design and look. Customers are drawn to smartphones with aesthetically pleasing designs, and if the smartphone satisfies aesthetic preference, they are more likely to be happy with their purchase (Ganguly *et al*., 2021). Effective product design, color selection and material selection can all contribute to aesthetic. In order to achieve effective aesthetic, the impact of culture and regional variances on aesthetic preferences, trade-offs between aesthetic and functional design, distinction on product design and continual innovation are all necessary. As far as smartphones are concerned, material competence is crucial since materials, parts (mainly electronics and displays), and

production of the device greatly influence the product's life cycle impacts (Cordellah *et al*., 2021).

2.2.9 Perceived quality and customer satisfaction

Perceived quality is how customers accredit the quality of a product and it does not mean what customers perceive is the truth or same Ling *et al*. (2018). Garvin (1987) asserts that if customers does not always possess a thorough understanding of the attributes of a product or service, they may rely entirely on unintended dimensions as their only basis for product assessment. For instance, a product's durability must often be inferred from a range of physical and intangible features. In these circumstances, it may be more important to consider images, marketing, and brand name suggestions about quality than the reality itself. According to Islam *et al*., (2021), perceived quality describes how a customer feels about a product's general quality. If customers believe their smartphones to be of excellent quality, they are more likely to be happy with their purchase. A number of factors such as manufacturing techniques, product design and after-sale support affects perceived quality. In order to maintain perceived quality there is need for impact of user behaviour, differentiation in product design, tradeoffs between perceived quality and pricing and continuous innovation. It is recommended that companies should concentrate on continuous monitoring and improving their product designs, after-sales services, manufacturing processes and customer satisfaction (Islam *et al*. 2021). Customers do not perceive quality as something technical but how they feel towards a product or service when using it. By constantly and profitably satisfying the client's wants and preferences for quality, this generates customer satisfaction and value and influences the customer's purchasing decision (Ha *et al*., 2010).

2.3 EMPIRICAL EVIDENCE

Empirical evidence indicate that improving mobile smartphone features leads to positive impact on customer satisfaction. For instance, in China usage of mobile instant message has the biggest percent of mobile phone users at 72% which has provided remarkable revenue (Deng *et al*., 2010). Chumpitaz and Paparoidamis (2004) claim that great product quality always result in customer satisfaction, which

further foster loyalty. In the case of Canada, perceived value and perceived service quality became key constructs affecting customer satisfaction in mobile services (Turel & Serenko, 2006). Cordella *et al*. (2021) assert that recent trends shows that smartphones replacement cycle no longer exceeds an average of two years, they are now replaced prematurely due to technical and socio-economic reasons. Problems with software and other physical features like battery failure, back covers and displays are increasing. Empirically, Samsung smartphones is still extremely high given the quality of the products provided, including the troublesome battery and the limited internal memory space that quickly fills up due to Samsung's default programs which led to decrease in the sales over the years (Kurniawan, 2022). However, the results of the comparative study between Samsung and Tecno shows that Samsung had higher quality scores than Tecno especially on camera quality, display quality and user satisfaction (Eze, 2021).

So it is evident that product quality influence customer satisfaction. According to Zuyderhoudt (2018), African market has a wider range of smartphone brands but Europe have quality smartphones than Africa. Nevertheless, Oyaro, (2020), propounded that in Kenya, product quality (smartphones) have positive significant impact on user satisfaction, especially its performance and reliability. Empirical evidence has it that, if smartphones reliability is improved the occurrence of early replacements will be reduced (Cordella *et al*., 2021). In a view of this, this study aims to examine the influence of product quality on customer satisfaction, by making use of a controllable sample size. Unlike previous studies that concentrated on the effects of product quality on loyalty, this research focuses on relationship between product quality and customer satisfaction in the mobile smartphone industry.

2.4 RESEARCH GAP

While several studies has investigated the relationship between product quality and customer satisfaction, there may be a drawback of empirical research that has identified the specific dimensions of product quality that are most important to customers in the mobile smartphone industry. Therefore a potential research gap could be to conduct a study that aims to ascertain the critical aspects of product quality that influence customer satisfaction in the mobile smartphone industry. This could

involve analyzing customer feedback, review and rating of smartphone brands and models to determine which features and characteristics of a phone are most valued by customers and have significant impact on their overall satisfaction. Moreover, this study could also investigate how customers perceive and evaluate the quality of different smartphone brands and models, and whether their perceptions of quality align with their actual experiences and usage of the products. This could provide insights into how smartphone manufacturers could improve their product quality to fulfil customer anticipations and enhance customer satisfaction. This research will initially provide outline of product quality as determinant of customer satisfaction in the mobile smartphone industry. Finally this research will evaluate scholarly works that have previously explored how product quality relates to customer satisfaction in the mobile smartphone industry.

2.5 CHAPTER SUMMARY

Based on the topic above, the chapter analyzes related and existing literature on the influence of product quality on customer satisfaction in the mobile smartphone industry using Ward nineteen, Jerera, Zimbabwe as a case study. Marshal (2006) defined a literature review as a careful and perceptive discussion focusing on the body of prior literature that establishes a logical framework for the investigations and situates it with the tradition of inquiry and the context of comparable studies. The various themes developed from the study objectives formed the basis of the material reviewed in this chapter. The theoretical framework and conceptual framework were also presented in the chapter. The research approach used to conduct this study is covered in detail in the following chapter

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

The research methodology that underlies this study is covered in this chapter. Beullens and Loosveldt (2014) define research methodology as a system of problem-solving when conducting research by identifying the best techniques, tools, and procedures. This chapter will focus on the research philosophy, research approach and research design that will be used to conduct this study.

3.1 RESEARCH PHILOSOPHY

Research philosophy, as defined by Galliers (2011), is a viewpoint on how phenomenon data should be obtained, analysed and used. Positivism philosophy and interpretivist philosophy are the two subcategories of research philosophy. The emphasis on data and statistics (quantitative research) in this study leads it to adopt the positivism research philosophy. According to Bradburn (2016), positivism relies on structured or closed questions. Positivism philosophy make sure that the researcher in separate from the study and that no consideration is given to human interests. According to the positivism ideology, the researcher's focus should be on facts (Crowther & Lancaster, 2018). By definition, positivism is factual. Therefore, this fits well with the study being examined as the investigations is centered on facts concerning the influence of product quality on customer satisfaction in the mobile smartphone industry in Ward nineteen, Jerera, Zimbabwe.

3.2 RESEARCH APPROACH

The deductive research methodology was chosen for this study. Deductive approach is a method of research that people most frequently identify with scientific investigation (Sheppard, 2021). Deductive research methods evaluate a well-known theory or phenomenon and use hypothesis testing to determine whether the theory is true in a particular situation. It starts with finding a social theory that motivates the study and then testing its implications using data. This enables a transition from ordinary to

specific level. Thus, the testing of the hypothesis is possible using a deductive research approach.

3.3 RESEARCH METHOD

Research methods are particular techniques used in data collection and analysis. Research methods are categorized in three main approaches that is quantitative approach, qualitative and mixed methodology. The quantitative research was chosen for this study. Given that there will be a significant number of respondents, the study will employ a quantitative research design method. The study is expected to produce a range of responses from the sample by employing a quantitative method of research. The sample's replies will range, and some will be clustered together to produce percentages and other descriptive data. The purpose of quantitative research is to either refute, change or reinforce an existing theory through the use of deductive techniques and through statistical testing of the hypothesis. Rovai (2014) believes that quantitative research is a research method known for deductive towards research. Quantitative research design is used when a researcher has to collect and analyse the data set given in numerical format (Creswell, 2014). Also Williams (2007) opined that research selection depends on whether the statistics to be collected is word-based, arithmetical or mixed in order to determine the research design. Quantitative researchers perceive the world as independent (Rovai, 2014). According to the relationships between variables in these more specific subgroups, observations are made and hypothesis are evaluated and replicated in quantitative research (Creswell, 2018). The information gathering and analysis for this study are done using mathematically based methodologies in order to identify the influence of product quality on customer satisfaction in the mobile smartphone industry in Ward nineteen.

3.4 RESEARCH STRATEGY

The survey approach was used in this investigation. Survey strategy is able to attain information from large population samples. Groves et al., (2009) defines a survey as a research method in which a group of individuals is selected from a larger population and asked a set of standardized questions in order to collect data on their behaviours, attitudes and beliefs or other characteristics. It refers to information collecting about

opinions, traits or behaviours of large group of people (Dangal, 2021). They can be conducted using various modes of data collection for instance, face to face survey online surveys and telephone interviews. Face to face hand delivery and online questionnaire through whatsapp platform was used in this study. The large group in this context refers to mobile smartphone users and vendors in Ward nineteen.

3.5 RESEARCH DESIGN

Bhattacherjee (2012) defines research design as full strategy of collecting data in research project pursuing to respond to established research questions or to test hypothesis. According to Bradburn, (2016), each research problem is unique, hence great care must be taken to develop a research design that suits the issue to be researched and the goals to be achieved. There are three categories of business research designs that is, descriptive, exploratory and casual (Bhattacherjee, 2012). The descriptive case study research design was employed in this investigation. Saunders et al., (2016) defines descriptive research design as a design that is applied while collecting data through questionnaires, interviews or observation. This design will be employed because it can address the how, who and what aspects of the subject under study. This design was selected since it will provide measurable results on product quality and customer satisfaction. This design will make it possible to gather information from a big sample, which will make it easier to generalize from the results. The case study component of the research design ensures an extensive empirical investigation of the chosen group, thing, person and environment, and in this study is contextualized to customer satisfaction in mobile smartphone industry in Ward nineteen.

3.6 TARGET POPULATION AND SAMPLING

Blumberg *et al*. (2017), defines population as the entire group of components from which the researcher hopes to draw certain conclusions. However, Bhattacherjee (2012) sees the sampling frame as a segment of the target population that is reachable and from which a sample can be taken. All of Ward nineteen's mobile smartphone users and vendors make up a study population. The researcher examined a sample before extrapolating its results to the intended audience (Cooper & Schindler, 2017).

According to Sekaran and Bougie (2019) target population referred to as the complete group of individuals, interesting objects or occasions that the researcher wishes to study. In this study the researcher will focus on mobile smartphone users and vendors in ward nineteen.

3.6.1 Sampling method

Neuman (2019) defines sampling as a process of choosing samples from the aimed population while safeguarding that they are representative of the overall population. The researcher utilized stratified random sampling, a probabilistic sampling technic, since quantitative was the study's methodology. When working with population that is heterogeneous, stratified sampling is typically used (Bryman & Bell, 2015). Thus, it was necessary for the researcher to combine similar elements. In order to identify groups of people that share similar characteristics, the researcher separated the population into two sectors (Copper & Schindler, 2019). Then, the random was taken among two sectors (Saunders *et al*., 2019). This was to make sure equal opportunity of participants to be nominated is achieved. The final sample from this was therefore representative of the total population.

3.6.2 Sample size

Copper and Schindler (2017) assert that a sample is made up of a small number of the population's constituent parts that represents the population as a whole. This implies that in order to have statistical analysis there is need for a sizeable sample and, consequently, the overview of research results to the population (Saunders *et al*., 2019). Since the population is unknown, in order to find the sample size, the researcher employed the following formula, $n = (Z_{\alpha/2})^2/4e^2$

Where:

n = sample size

$Z_{\alpha/2}$ = ±1.96 desired confidence level of 95%

e = margin of error of 5%.

Therefore, the sample size was 384.

3.7 DATA COLLECTION

3.7.1 Sources of data

According to Bell *et al.* (2018), secondary data includes a systematic analysis of related literature from reliable journal articles, the internet, books and other related sources. Primary data is the data collected and recorded for the first time by the researcher to be used at present or in the future for different reasons (Saunders, 2016). Secondary data was helpful since it enabled the researcher to investigate how customer satisfaction levels in the mobile smartphone industry are influence by product quality. In order to get insight into the problem's existing solutions, previous empirical research on the influence of product quality on customer satisfaction in mobile smartphone industry were reviewed. As a result sources were assessed thoroughly in order to ascertain trends by the researcher amid previous scholars.

3.7.2 Research instruments

3.7.2.1 Questionnaires

A questionnaire is a statement with a list of queries that will be made of respondents and is used by organizations to learn more about the circumstances and procedures in use as well as to solicit feedback. (Milne, 2008). Questionnaires typically include a number of closed-ended questions (Marshal *et al*., 2006). It is easy to get information which is short and to the point using questionnaire. It assist to get information which is uniform unlike other data collection methods and they are quick. They allow the researcher to reach many respondents given limited time Questionnaires allowed confidentiality and eliminated bias and influence of the researcher since respondents filled the questionnaires without researcher's involvement (Leedy & Ormrod, 2012). Some respondents did not return questionnaires, some did not want to share the knowledge believed that by responding they would not gain anything or could even suffer if they expressed their true view (Leedy & Ormrod, 2012). It was simple to collect information from a sizable population (Saunders *et al*., 2019). The researcher managed to gather data, and presented it in an understandable simple manner.

The questionnaire had 2 sections. Section A: Demographic profiles like sex, age and educational levels. Section B: Relationships of variables. The questionnaire used the five point Likert scale to direct respondents to choose their answers. According to Willson (2011), responses from the five point Likert scale are easy to compare as well as coding and analysing straight from the questionnaire. The Likert scale reads 1= strongly disagree to 5= strongly agree to show the respondent's level of agreement of the product quality constructs.

3.8 VALIDITY AND RELIABILITY OF THE INSTRUMENT

3.8.1 Validity

According to Creswell (2017), validity is the extent to which data gathering instrument exactly and correctly measures what it was intended to assess. Cooper and Schindler (2017) say that content validity is a systematic and independent assessment of how well a measure's content accurately reflects what it is expected to measure. By ensuring that the product quality scale contained each and every component of the construct being tested, the current study ensured content validity. Lastly, the researcher selected a set of measuring items that have been linked to customer satisfaction in earlier study to ensure construct validity. As a result the study adopted the research's instrument.

3.8.2 Reliability

In order to determine whether we are measuring what is intended to be assessed and the effectiveness of the measurement, the research objectives and problem statement were compared to the study's findings. The degree to which the study results may be replicated is the subject of reliability (Bell *et al*., 2018). The questionnaire's reliability was assessed using Cronbach's Alpha test. According to Saunders et al (2019) the most common reliability index is Cronbach's Alpha. Cooper and Schindler (2017) asserts that Alpha values of 0.75 to 1 imply reliability that is acceptable. 0.8 reliability is said to be very good, range of 0.7 is the acceptable one and range of 0.6 is regarded as poor reliability (Sekeran & Bougie, 2019). Questionnaire's items were taken from earlier used scale to this study in order to increase dependability.

3.9 DATA COLLECTION PROCEDURE

The researcher went out to the field to gather data in the course of data collection period and send some through whatsapp platform. Participants in this study received questionnaires to complete on their convenience. The researcher reminded participants using phone calls to complete questionnaires (Saunders *et al*., 2019). Data was gathered in between August 2023 to September 2023.

3.10 DATA PRESENTATION AND ANALYSIS PROCEDURES

To analyse the research data, the researcher used statistical package for the social sciences (SPSS) version 20 and Microsoft Excel. To achieve the research aim, the study used both descriptive and inferential statistics. In order to ascertain links between constructs and their influence on customer satisfaction, the researcher examined the hypothesis (Bell *et al*., 2019). Multiple Regression Analysis (MRA) was used to confirm or deny the research's hypotheses.

3.11 ETHICAL CONSIDERATIONS

Saunders *et al*. (2019) define ethics as norms or standards of behaviour that make a distinction between right and wrong. The ethical guidelines as outlined by Bell *et al*. (2018) are explained below. The guidelines were strictly followed throughout the course of this research.

3.11.1 Informed consent

All interested research participants were fully informed beforehand that the study will not likely cause any damage. Research participants was nonetheless awarded complete flexibility to divulge or not to divulge their personal tales in any manner they chose.

3.11.2 Anonymity

Saunders *et al*., (2019) claims anonymity of participants as common ethical act in research, hence no individual's identification information was collected in this study and the researcher assured participants that they will not find what they provided in

the final report. The researcher numbered questionnaires for example, Q1 to indicate that was the first distributed questionnaire.

3.11.3 Confidentiality

According to Sekeran and Bougie (2019), informants provide information of the study knowing that their information will be treated as private and confidential. As a result there was any agreement between researcher and participants not to disclose information. All surveys, the researchers guarantee participants that the forms will be preserved inside a lockable safe.

3.12 CHAPTER SUMMARY

The study approach that directed data gathering and analysis was covered in chapter three. In this study, the research philosophy, methodology, technics, design and survey strategy were discussed along with their reasons. Structured questionnaire was used to gather data. The chapter also deliberated the stages utilised to secure data quality. The researcher used quantitative approaches to data analysis because this investigation was quantitative. The ethical concerns and actions taken to improve the observance of moral requirements served as the chapter's conclusion. The presentation, analysis and discussion of the findings are covered in the next chapter.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 INTRODUCTION

The former chapter concentrated on the research methodology related to the research study. This chapter deals with data presentation, analysis and discussion of findings. Tables were used to illustrate the findings. Data is presented, analysed and interpreted in line with sub questions upon which study is grounded.

4.1 OVERALL RESPONSE RATE

Questionnaires were opted since they would reach many people in a limited amount of time and also that participants' confidentiality and uniformity was easy to achieve. Total of 384 questionnaires were distributed to 384 smartphone users and vendors in Jerera ward nineteen and only 231 with percentage of 60.2% response rate. However 39.8% of the Respondents failed to return the research instruments. Since some of the questionnaires were send through Whatsapp some had no data bundles to download the questionnaire, and some had no document reader applications in their smartphones. To those who received hard copies might have been too busy with their work and fail to complete the questionnaires.

4.2 DEMOGRAPHIC PROFILE OF RESPONDENTS

The demographic profile of respondents was also studied in order to have an overview of their backgrounds. Asking for demographic profile is an initial stage of interaction with the respondents and their backgrounds builds up to their level of appreciating the study. In this study respondents were asked their gender, age group and level of education and below there is a summary of the data on the gender of participants (Table 4.1).

4.2.1 Gender distribution of respondents

Table 4.1 below gives a summary of the representation of participants by gender.

Table 4.1 Gender of respondents

Gender	Frequency	Percentage %
Male	107	46.3
Female	124	53.7
Total	**231**	**100**

Source: Fieldwork (2023)

From the data presented above, the majority contributors to the study were females who were 124 (53.7%) and males were 107 (46.3%). It is evident from these findings that more females are smartphone users. It is felt that this response rate was good enough to allow the researcher to attain valid and reliable findings. This agrees with Fincham (2008) who suggested that the response rate approximating 60% for most research should be the goal of researchers. Baruch (1999) perceives a response rate of 57.6% as fairly acceptable in academic research such as the one in hand.

4.2.2 Ages of respondents

Respondents were asked to provide their age groups and below is the summary of their age groups presented in Table 4.2.

Table 4.2 Distribution of respondents by age

Age	Frequency	Percentage %
18-23 years	41	17.7
24-29 years	54	23.4
30-36 years	56	24.2
37-42 years	44	19.0
43 years and above	36	15.6
Total	**231**	**100**

Source: Fieldwork (2023)

Table 4.2 shows that 24.2% of the Respondents were between 30-36 years of age and most of the smartphone users are within this age group. This shows that most of the people responded to this study were mature enough to respond to the problem under investigation and also that they are able to use and understand the functionalities of their smartphones.

4.2.3 Academic qualifications

Respondents were also asked about their academic qualifications in order to see if respondents involved have the capacity to fully understand the problem under review. Table 4.3 below shows the summary of respondents' academic qualifications.

Table 4.3 Academic qualifications

Academic qualifications	Frequency	Percentage %
Ordinary level	45	19.5
Advanced level	26	11.3
Undergraduate	80	34.6
Post graduate	27	11.7
Others	53	22.9
	231	100

Fieldwork (2023)

Table 4.3 above shows that highest number of Respondents were undergraduates with 34.6% followed by Respondents with other qualifications which includes certificates and diplomas with 22.9%. Educational qualifications helps to show that Respondents involved fully understands the matter under research. Validity and reliability of responses can partially be determined by the educational level of Respondents.

4.3 RELIABILITY TESTS OF THE DATA FROM QUESTIONNAIRES

SPSS software for Cronbach's Alpha was used to measure the reliability of the data. The findings shows a Cronbach's Alpha of 0.941 which is considered a very good value for reliability since it exceeds 0.7. The results shows that 41 out of 45 items scales had Cronbach's Alpha that exceeds 0.7. However, in order to improve the reliability of the other 2 constructs the researcher decided to remove 4 items which were causing 2 of the constructs to have Cronbach's Alpha values below 0.7. Before the deletion of 4 items the Cronbach's Alpha value was 0.937 which is very good. This confirms the high degree of consistency and stability of the measures. There should be high level of consistency in the study so that it contribute valid and effective knowledge in the body of knowledge thus why reliability test was conducted in the study. Cronbach's Alpha measure acceptable for the constructs should be 0.7 (Copper

& Schindler, 2003). As per the results from SPSS on the entire measure scale the Cronbach's Alpha value exceeded 0.7 which shows that constructs were reliable for the study.

4.4 PRODUCT QUALITY

Table 4.4 below shows a summary of the results of the reliability test conducted on SPSS which shows the reliability of each product quality construct.

Table 4:4 Product quality

Product quality attributes	Alpha	Number of items
Performance	.795	5
Features	.819	3
Reliability	.742	5
Conformance	.832	5
Durability	.754	3
Aesthetics	.707	5
Serviceability	.807	5
Perceived quality	.846	5

Fieldwork (2023)

These findings suggests that smartphone customers and vendors highly supports the idea that product quality have influence on customer satisfaction. Customers are highly satisfied when the quality of a product meets their expectations.

4.5 CUSTOMER SATISFACTION

The outcomes of the study reveals the opinions of participants concerning product quality and customer satisfaction. The opinions were established on a Likert scale type which stretched data from 1 = Strongly Disagree, 2= Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree and were coded as numerical when inputted into SPSS to find mean and standard deviation statistics. Table 4.5 below shows the summary of responses regarding respondents' opinions on the extent they agreed or disagreed with the statements concerning influence of product performance on customer satisfaction.

Table 4.5 Performance on customer satisfaction

Performance	**N**	**Mean**	**Std. Deviation**
Current Smartphone performance is important to me	231	4.35	.815
Current smartphone performance always meet my requirements	231	3.93	.818
Current Supplier's smartphone performance meet requirements better than other options in the market.	231	3.85	.817
Current smartphones have update support and information on control of updates.	231	4.32	.710
Current smartphone have the capacity to allow installation of future functionalities.	231	4.25	.815
Valid N (listwise)	**231**		

Fieldwork (2023)

Table4. 5 above shows the descriptive statistics (mean and standard deviation) of the variable (performance). The results above (mean values above 3) shows that participants agreed and strongly agreed that performance have significant relationship with customer satisfaction. The standard deviations .815, .818, .817, .710 and .815 shows moderate variability in the data. This shows that there is moderate variation of the answers away from the mean which implies that respondents have almost similar perception on the relationship between performance and customer satisfaction. The respondents agreed that smartphone performance is important to them since they have update support and information on control of updates and the capacity to allow installation of future functionalities. Respondents also indicated that if their smartphones meet their requirements than other options in the market they feel satisfied which supports the relationship between performance and customer satisfaction. Shing (2012) posits that satisfaction is when someone responds physiologically by feeling content or disappointed by the performance of a product after making a comparison of the results after and before tasting the product. This shows that smartphones manufacturers should focus on improving their product's performance since it have effects on customer satisfaction.

4.6 FEATURES AND CUSTOMER SATISFACTION

Respondents were asked to give their opinions regarding the extent to which they agreed or disagreed with the statements regarding the influence of product features on customer satisfaction and their responses are summarised in Table 4.6 below.

Table 4.6 Features on customer satisfaction

Features	**N**	**Mean**	**Std. Deviation**
Current smartphone features is what I want for my smartphone.	231	4.05	.832
Current smartphone features are desirable and useful.	231	4.03	.745
Current supplier's smartphone features are desirable and useful than other competitors.	231	3.78	.935
Valid N (listwise)	**231**		

Source: SPSS 20

The findings shown above, a mean score of 4.05 indicated that customers generally view today's smartphone features to be in line with their tastes and aspirations. Customer's choice for smartphone features are moderately variable, as indicated by the standard deviation of 0.832. This demonstrates that while the general consensus is very stable, individual tastes vary somewhat. The mean score of 4.03 shows that customers find the features of current smartphones to be appealing and useful. The standard deviation of 0.745 indicates a mediocre amount of variation in customer's assessments of the usefulness and the desirability of existing smartphone features. Some customers may have strong opinions compared to others. The mean score of 3.78 indicates that customers believe the smartphone features provided by the current suppliers are marginally less appealing and useful than those provided by rival suppliers. The standard deviation of 0.935 shows somewhat a significant degree of variability in customer's opinions of the smartphones features offered by the current supplier when compared to rivals. This shows that customer's perspective on this topic vary widely. Thus it is notable that product features contributes to the satisfaction of customers.

4.7 RELIABILITY AND CUSTOMER SATISFACTION

Respondents were also asked to give their views regarding the extent they agreed or disagreed with the statements concerning influence of product reliability on customer satisfaction. Table 4.7 below shows a summary of their response.

Table 4.7 Reliability on customer satisfaction

Reliability	**N**	**Mean**	**Std. Deviation**
Current supplier's smartphone reliability can meet my needs.	231	3.84	.871
Current supplier's smartphone is always reliable.	231	3.70	.857
Current supplier's smartphone is reliable than other competitors.	231	3.74	.874
My smartphone is resistance to water and dust.	231	2.67	1.094
Screen protectors and protective cases are available in the market.	231	3.87	1.072
Valid N (listwise)	**231**		

Fieldwork (2023)

From the findings above customers generally believe the smartphone from the current supplier to be reliable most of the time as per mean score 3.70. The standard deviation of 0.857 shows moderate level of variability in customer's perceptions of the reliability of the current supplier's smart phones. The mean score 3.74 indicates that consumers generally believe the smartphone provided by the current supplier to be more dependable than other options. Standard deviation of 0.874 shows moderate variability in customer's opinion regarding relative reliability of the current smartphone compared to other competitors. The average score of 2.67 shows that customers believe their smartphones are resistance to water and dust. Standard deviation of 1.094 shows high level of variability in customer's opinions of their smartphones' resistance to water and dust. The mean score of 3.87 indicates that customers believe that screen protectors and protective cases are readily available in the market. The findings also shows standard deviation of 1.072 which shows moderate variability on customers' opinion on the availability of screen protectors and protective cases are available in the market. Reliability is the most important component that affects

customer satisfaction than other dimensions since it is a critical driver of customer satisfaction (Abdullah *et al*., 2022). It is evident from the findings that reliability have influence on customer satisfaction.

4.8 CONFORMANCE AND CUSTOMER SATISFACTION

Table 4.8 below shows a summary of respondents' opinions on the extent to which they agreed and disagreed with the statements on influence of product conformance on customer satisfaction.

Table 4.8 Perceived opinions of conformance on customer satisfaction

Conformance	**N**	**Mean**	**Std. Deviation**
Current smartphone's conformance can meet my needs	231	3.74	.894
Current supplier's smartphone always conforms to my requirements.	231	3.61	.825
Current supplier's conformant is more than other competitors.	231	3.58	.759
Data transfer and deletion functions are available.	231	4.41	.734
Password reset and restoration of factory tools are available.	231	4.41	.716
Valid N (listwise)	**231**		

Fieldwork (2023)

From the findings shown above, mean scores of 3.74, 3.61 and 3.58 on average customer believes that current smartphone's conformances can meet their needs, conforms to their requirements and also consider the current suppliers smartphone to have higher conformance compared to competitors respectively. The findings also reveals that customer opinions consider the availability of data transfer and deletion functions high as well as password reset and restoration of factory tools with the mean scores of 4.41. The standard deviations for all conformance items show moderate variability in customer opinions that is .894, .825, .759, .734 and .716 respectively. This shows that conformance have influence on customer satisfaction. This was

supported by Riccio and Oliveira (2010) who examined the relationship between conformance and customer satisfaction. The authors found that there is a relationship between conformance and customer satisfaction since customers were more likely to be pleased with their purchases and have a favourable opinion of the brand when goods and services meet predetermined standards.

4.9 DURABILITY AND CUSTOMER SATISFACTION

Regarding influence of product durability on customer satisfaction, respondents were asked to give their opinions on the extent they agreed or disagreed with the statements and their responses were summarised on Table 4.9 below.

Table 4.9 Perceived opinions of durability on customer satisfaction

Durability	**N**	**Mean**	**Std. Deviation**
Smartphone's durability is important to me.	231	4.45	7.78
Current supplier's smartphone is always durable.	231	3.61	8.62
Current supplier's smartphone is more durable than other competitors.	231	3.63	8.29
Valid N (listwise)	**231**		

Fieldwork (2023)

The findings of the study show the perceived opinions of durability on customer satisfaction. The mean scores of 4.45, 3.61 and 3.63 respectively shows on average customer's perceptions on how durability is important to them, the extent of durability of their smartphones and that their current smartphones' durability are more durable in comparison to other competitors. The findings shows standard deviation of 7.78, 8.62 and 8.29 on all three items which indicates moderate variability of customer's opinions. This also proves that product durability have positive influence on customer satisfaction.

4.10 AESTHETICS AND CUSTOMER SATISFACTION

Respondents were also asked their opinions concerning the extent they agreed or disagreed with the statements concerning influence of product aesthetics on customer satisfaction and their response were summarised in Table 4.10 below.

Table 4.10 Aesthetics on customer satisfaction

Aesthetics	N	Mean	Std. Deviation
Smartphone's appearance is important to me.	231	3.82	1.075
Current supplier's smartphone have a good appearance.	231	4.10	.687
Current supplier's product have a better appearance than other competitors.	231	3.92	.744
Current supplier's smartphone's interface design is satisfactory to me.	231	4.00	.852
Smartphone's appearance and quality of spare parts available are essential to me.	231	3.76	.929
Valid N (listwise)	**231**		

Fieldwork (2023)

The findings above shows customer's opinions on aesthetics and customer satisfaction. The mean scores of 3.82, 4.10, 3.92, 4.00 and 3.96 indicates that on average smartphone's appearance is important to customers, the Current supplier's smartphone have a good appearance, current supplier's product have a better appearance than other competitors, current supplier's smartphone's interface design was satisfactory to them and that smartphone's appearance and quality of spare parts available were essential to them respectively. The standard deviation of 1.075 shows high level of variability in customer's opinions regarding the importance of smartphone's appearance. The standard deviation of 0.687 also shows low level of variability in customer's opinions since many of them strongly agree that their smartphones had good appearance. Also standard deviation of 0.744, 0.852 and 0.929 shows moderate level of variability on customer's opinions. This shows that product aesthetics plays a significant role in enhancing customer satisfaction. Customers are drawn to smartphones with aesthetically pleasing designs, and if the smartphone satisfies aesthetic preference, they are more likely to be happy with their purchase (Ganguly *et al*., 2021).

4.11 SERVICEABILITY AND CUSTOMER SATISFACTION

Respondents were asked to give their views concerning the extent they agreed or disagreed with the statements concerning the influence of product serviceability on customer satisfaction and their responses are summarised below on Table 4.11.

Table 4.11 Serviceability on customer satisfaction

Serviceability	**N**	**Mean**	**Std. Deviation**
Smartphone's serviceability is important to me.	231	4.16	.877
Current supplier's smartphones has high level of serviceability.	231	3.45	.907
Current supplier's smartphones are more serviceable than other competitors.	231	3.41	.874
My smartphone can be disassembled for repair.	231	2.86	1.495
My smartphone has provision of maintenance and repair information to final users and professional repairer.	231	3.19	1.214
Valid N (listwise)	**231**		

Fieldwork (2023)

Table 4.11 above presents customer's perception on serviceability and customer satisfaction. The above results shows mean scores of 4.16, 3.45, 3.41, 2.86 and 3.19 which suggests that on average smartphone's serviceability was important to them, current supplier's smartphones had high level of serviceability, current supplier's smartphones were more serviceable than other competitors, their smartphones can be disassembled for repair and that their smartphones had provision of maintenance and repair information to final users and professional repairer respectively. Participants agreed that serviceability was important to them, their smartphones had high level of serviceability and also that their current supplier's smartphones had better serviceability compared to other competitors and this was represented by the following standard deviation = 0.877, 0.907 and 0. 874.

The standard deviation 1.495 shows that there was high level of variability from the mean on customer's opinions. Maybe this was because some of current smartphones have built in batteries and they cannot be disassembled for repair. Cordellah *et al*.

(2021) state that repairs and maintenance should be economically viable and quick in case of failures. The product should have instructions on use, maintenance and repair. So this shows a positive significant relationship between serviceability and customer satisfaction.

4.12 PERCEIVED QUALITY AND CUSTOMER SATISFACTION

Table 4.12 below shows a summary of response from respondents'' opinions regarding the extent to which they agreed or disagreed with the statements concerning influence of product perceived quality on customer satisfaction.

Table 4.12 Perceived quality on customer satisfaction

Perceived quality	N	Mean	Std. Deviation
Current supplier's smartphone's quality can meet my standards.	231	3.91	.749
Current supplier's smartphone has high quality.	231	3.72	.836
Current supplier product is of better quality than other suppliers.	231	3.75	.838
Current supplier's product is resistant to accidental drops.	231	3.04	1.122
Current supplier's product do not scratch easily.	231	3.12	1.115
Valid N (listwise)	**231**		

Fieldwork (2023)

Table 4.12 above shows perceived opinions on perceived quality and customer satisfaction. From the presented results it is noted that the participants agreed that their current supplier's smartphones quality meets their standards, had high quality and they had better quality than other suppliers (mean = 3.91, 3.72 and 3.75 respectively). The standard deviation 0.749, 0.836 and 0.838 shows moderate variability from the mean of customer's opinions. Participants had neutral view (mean= 3.04 and 3.12) on current supplier's product resistant to accidental drops and scratching. Standard deviation 1.122 and 1.115 shows high level of variability on participant's opinion on resistance to accidental drops and scratching. This shows that some with higher quality smartphones resist accidental drops and scratching more

than those with lower quality smartphones. This also shows that perceived quality have a significant role on customer satisfaction. According to Islam *et al*., (2021), perceived quality describes how a customer feels about a product's general quality. If customers believe their smartphones to be of excellent quality, they are more likely to be happy with their purchase.

4.13 REGRESSION ANALYSIS

In order to confirm or reject the proposed hypotheses in the first chapter, the regression analyses were done for each of the dimensions of product quality as reflected in the ensuing tables below:

H_1: There is a statistically significant positive relationship between product performance and customer satisfaction

Table 4.13 below confirms the association between product performance and customer satisfaction.

Table 4.13 Association between performance and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.539	.271		5.681	.000
	Performance	.571	.069	.481	8.295	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

Findings on performance and customer satisfaction show a significant positive association that is shown by a p-value of 0.000. This illustrates that on this regression analysis accepted H_1 while rejecting the Null hypothesis. According to Saxena (2017), satisfaction combines level of perceived performance and expectations. Satisfaction depends on the real performance of a product in relation to the customer's expectations.

H_2: There is a statistically significant positive relationship between product features and customer satisfaction

Table 4.14 also confirms the association between product features and customer satisfaction.

Table 4.14 Association between product features and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.154	.314		6.854	.000
	Features	.399	.077	.325	5.203	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

Findings on feature and customer satisfaction show a significant positive relationship that is illustrated by a p-value of 0.000. This indicates that on this regression analysis the study accepted H_2 while rejecting the Null hypothesis. This also means that features positively affect customer satisfaction. Ling *et al*. (2018) claim that features are added characteristics that boost the looks of the merchandise to the customer.

H_3: There is a statistically significant positive relationship between reliability and customer satisfaction

Table 4.15 confirms the association between product reliability and customer satisfaction

Table 4.15 Association between reliability and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.540	.260		9.756	.000
	Reliability	.318	.066	.303	4.811	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

Basing on the results on the coefficient shown above from regression model it can be noted that there is a positive β coefficient and also significant ($p < 0.05$). This means that H_3 is accepted and rejecting null hypothesis. This propose that there is a positive connection between reliability and customer satisfaction. Reliability is the most important component that affects customer satisfaction than other dimensions since it is a critical driver of customer satisfaction (Abdullah *et al*., 2022). Sirgy *et al*. (2013) propounded that when customers perceive a product as reliable, they are more likely to be satisfied with their purchase and make repeat purchases.

H_4: There is a statistically significant positive relationship between product conformance and customer satisfaction

Table 4.16 below confirms association between product conformance and customer satisfaction.

Table 4.16 Association between conformance and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.719	.256		6.716	.000
	Conformance	.571	.070	.475	8.161	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

Findings on conformance and customer satisfaction show a significant positive relationship that is shown by a p-value of 0.000. This shows that on this regression analysis the study accepted H_4 while rejecting the Null hypothesis. This also means that features positively affect customer satisfaction. Better quality variations and enhancements are anticipated to sustain the product's creation to the established standard in order to prevent consumers from losing faith in the product in question (Sitanggang *et al*., 2019).

H_5: There is a statistically significant positive relationship between product durability and customer satisfaction

The association between product durability and customer satisfaction was confirmed on Table 4.17 below.

Table 4.17 Association between durability and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.081	.233		8.915	.000
	Durability	.466	.063	.439	7.401	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

The above findings on durability and customer satisfaction show a significant positive relationship that is indicated by a p-value of 0.000. This means that the study accepted H_5 and reject null hypothesis. This evident that durability have influence on customer satisfaction. Garvin (1987) asserted that economically the consumer compares the price and personal inconveniences of the product as well as the timeframe needed to replace.

H_6: There is a statistically significant positive relationship between aesthetics and customer satisfaction

Table 4.18 below confirms the association between product aesthetic and customer satisfaction.

Table 4.18 Association between aesthetics and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.688	.292		5.785	.000
	Aesthetics	.529	.073	.431	7.238	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

The findings above indicates a positive β of 0.529 and a positive significant p-value of 0.000. This proves a positive relationship between aesthetic and customer

satisfaction. So the study accepts H_6 and reject null hypothesis. This was supported by Ganguly *et al*. (2021) who postulated that customers are drawn to smartphones with aesthetically pleasing designs, and if the smartphone satisfies aesthetic preference, they are more likely to be happy with their purchase.

H_7: There is a statistically significant positive relationship between serviceability and customer satisfaction

The association between product serviceability and customer satisfaction is confirmed on Table 4.19 below.

Table 4.19 Association between serviceability and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.378	.224		10.629	.000
	Serviceability	.406	.064	.389	6.384	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

Findings on serviceability and customer satisfaction show a significant positive relationship that is shown by a p-value of 0.000. This shows that on this regression analysis the study accepted H_7 while rejecting the Null hypothesis. This means that there is a significant relationship between serviceability and customer satisfaction. This was believed by Cordella *et al*. (2021) who stated that repairs and maintenance should be economically viable and quick in case of failures. The product should have instructions on use, maintenance and repair.

H_8: There is a statistically significant positive relationship between perceived quality and customer satisfaction

Table 4.20 confirm the association between product perceived quality and customer satisfaction.

Table 4.20 Association between perceived quality and customer satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.672	.288		5.803	.000
	Perceived Quality	.535	.072	.438	7.381	.000

a. Dependent Variable: Customer Satisfaction

Source: Researcher (2023)

The findings above show a positive significant ($p < 0.05$) relationship between perceived quality and customer satisfaction. H_8 was accepted and null hypothesis rejected. According to Islam *et al*., (2021), perceived quality describes how a customer feels about a product's general quality. If customers believe their smartphones to be of excellent quality, they are more likely to be happy with their purchase.

4.14 SUMMARY OF INFERENTIAL ANALYSIS

Regression analysis to whether confirm or reject the hypotheses above were summarised in Table 4.21 below.

Table 4.21 Summary of confirmation of hypotheses

	Research Hypothesis	Result
H_1	There is a significant relationship between performance and customer satisfaction.	Confirmed
H_2	There is a significant relationship between features and customer satisfaction.	Confirmed
H_3	There is a significant relationship between reliability and customer satisfaction.	Confirmed
H_4	There is a significant relationship between conformance and customer satisfaction.	Confirmed
H_5	There is a significant relationship between durability and customer satisfaction.	Confirmed
H_6	There is a significant relationship between aesthetics and customer satisfaction.	Confirmed
H_7	There is a significant relationship between serviceability and customer satisfaction.	Confirmed

H_8	There is a significant relationship between perceived quality and customer satisfaction.	Confirmed

Source: Researcher (2023)

The findings of the study indicates that there is a significant relationship between product quality and customer satisfaction. Sitanggang *et al*. (2019) said that a company's success can be determined by how consistently high-quality products or services meet the needs of customers, employees and shareholders. So it is essential for companies to continue improving their product's quality so that they manage to satisfy customers.

4.15 CHAPTER SUMMARY

In this chapter findings of the study were presented, analysed and interpreted. Data was collected through questionnaires and analysed through SPSS software. The data was also presented in tables for clear interpretation and understanding of the results. The next and last chapter summarises the study, gives conclusions on the key results of the study and making recommendations thereof.

COURAGE WISDOM SUCCESS

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 INTRODUCTION

This was the last section of the study on the Influence of product quality on customer satisfaction in the mobile smartphone industry case of ward nineteen, Jerera. The chapter focuses on the summary, conclusions and recommendations to the study.

5.1 SUMMARY

In the chapter one of the study the researcher looked on the background of the study, the justification of the study, statement of the problem, research objectives, research questions, research hypothesis, significance, assumptions, delimitations and limitations of the study. Definitions of key terms, along with the organisation of the entire study were also discussed. Furthermore in chapter two the research analyzed related and existing literature on the influence of product quality on customer satisfaction in the mobile smartphone industry using Ward nineteen of Jerera in Masvingo, Zimbabwe as a case study. Marshal (2006) defined a literature review as a careful and perceptive discussion focusing on the body of prior literature that establishes a logical framework for the investigations and situates it with the tradition of inquiry and the context of comparable studies. The various themes developed from the study objectives formed the basis of the material reviewed in this chapter. The theoretical framework and conceptual framework were also presented in the chapter. More so, in chapter three directed data gathering and analysis was covered. In this study, the research philosophy, methodology, technics, design and survey strategy were discussed along with their reasons. Structured questionnaire was used to collect data. The study employed a five point Likert scale from strongly disagree to strongly agree. 384 questionnaires were distributed and send through whatsapp plat and only 231 were returned. The chapter also deliberated the stages used to secure data quality. The researcher used quantitative approaches to data analysis because this investigation was quantitative. The ethical concerns and actions taken to improve the

observance of moral requirements served as the chapter's conclusion. The results of the study were presented, analysed and interpreted in chapter four. Primary data was collected through questionnaires and analysed by SPSS software through regression analysis. The data was also presented in tables for clear interpretation and understanding of the results. The findings of the study revealed and confirmed that product quality had influence on customer satisfaction. The findings of the study showed that performance, features, reliability, conformance, durability, aesthetics, serviceability and perceived quality have positive significant relationship with customer satisfaction which was all illustrated by p-value of 0.000 that is significant at 5% confident level. The regression analysis accepted H_1 to H_8 and rejected null hypothesis. Finally chapter five summarized, made conclusion and recommendations of the whole study

5.2 CONCLUSIONS

In light of the summarised findings above, the following key conclusions can be drawn from the current study.

5.2.1 Performance and customer satisfaction

Basing on the findings, the study concluded that there is positive relationship between product quality and customer satisfaction. Participants indicated that smartphone performance was important to them so there is need for manufacturers to improve performance of their products in order to meet their expectations. Saxena (2017) posts that satisfaction combines level of perceived performance and expectations. Satisfaction depends on the real performance of a product in relation to the customer's expectations. The coefficient on performance showed a positive value of 0.571 with significant p-value of 0.000 at 5% confident level. The study accepted H_1 and rejected null hypothesis. The findings revealed that performance is the strongest aspect of product quality that influence customer satisfaction the most, therefore manufacturers need to focus on the performance of their products.

5.2.2 Features and customer satisfaction

From the findings, it can be also concluded that smartphone features influence customer satisfaction positively. This was also illustrated with a positive coefficient value of 0.399 with significant p-value of 0.000 at 5% confident level and the study

accepted H_2 and rejected null hypothesis. From the findings features are the second least aspect of product quality that influence customer satisfaction. Ling *et al*. (2018) claim that features are added characteristics that boost the look of the merchandise to the customer. Cordella *et al*. (2021) pronounced that recent trends shows that smartphones replacement cycle no longer exceeds an average of 2 years, they are now replaced prematurely due to technical and socio-economic reasons. Problems with software and other physical features like battery failure, back covers and displays are increasing. Early replacements occurrences can be reduced by improving the reliability of smartphones, designing devices which are resistant to mechanical stresses, durable batteries and offer sufficient adaptability to future conditions of use.

5.2.3 Reliability and customer satisfaction

Participants also indicated that reliability had positive influence on customer satisfaction with positive coefficient value of 0.318 and p-value of 0.000 at 5% confident level. The study accepted H_3 and reject null hypothesis. Findings have shown that reliability was the least of all aspects, maybe because this dimension indicates that the product would be likely to fail in future. Reliability can be measured by the mean time to first failure, the mean time between failures, and the failure rate per unit time (Garvin, 1987). However, if smartphones reliability is improved the occurrence of early replacements will be reduced (Cordella *et al*., 2021).

5.2.4 Conformance and customer satisfaction

Basing on the findings above, conformance had positive influence on customer satisfaction since it had a positive coefficient value of 0.571 and p-value of 0.000 at 5% confident level. H_4 was accepted and null hypothesis rejected. Findings shows that conformance is the second strongest aspect of product quality. This was seconded by Sitanggang *et al*. (2019) who claimed that better quality variations and enhancements are meant to sustain the product's creation to the established standard in order to prevent consumers from losing faith in the product in question.

5.2.5 Durability and customer satisfaction

The findings also confirmed with a positive coefficient value of 0.466 and p-value of 0.000 at 5% confident level that durability have positive influence on customer satisfaction. The study accepted H_5 and rejected null hypothesis. In support of this, Cordellah *et al*. (2021) also said that when maintenance and repair factors (including

software faults) are taken into account, a product's durability has an impact on both its functional and technical lifespan.

5.2.6 Aesthetics and customer satisfaction

From the findings, it can also be concluded that aesthetics have positive impact on customer satisfaction following a positive coefficient of 0.529 and p-value of 0.000 at 5% confident level. The study also accepted H_6 and reject null hypothesis. Ganguly *et al*. (2021) claimed that customers are drawn to smartphones with aesthetically pleasing designs, and if the smartphone satisfies aesthetic preference, they are more likely to be happy with their purchase.

5.2.7 Serviceability and customer satisfaction

Basing on the findings it can also be concluded that serviceability have positive influence on customer satisfaction as supported by the positive coefficient of 0.406 and p-value of 0.000 at 5% confident interval. H_7 was accepted and rejected null hypothesis. Customers worry not about a product's failures but also about duration of serviceability, how appointments are handled, in what way they engage with service workers and how often service calls or fixes fail to resolve persistent concerns (Garvin, 1987).

5.2.8 Perceived quality on customer satisfaction

From the findings above, it can be also concluded that perceived quality have positive influence on customer satisfaction as indicated with a positive coefficient of 0.535 and p-value of 0.000. The study accepted H_8 and rejected null hypothesis. By constantly and profitably satisfying the client's wants and preferences for quality, this generates customer satisfaction and value and influences the customer's purchasing decision (Ha *et al*., 2010).

5.3 RECOMMENDATIONS

Drawing from the conclusion above, the following recommendations are made;

5.3.1 Performance on customer satisfaction

Manufacturers of smartphones are recommended to improve performance of their products through updating update control information and increasing the capacity to allow installation of new applications which leads to customer satisfaction.

5.3.2 Features on customer satisfaction

It is recommended that companies in smartphone industry implement collaborative metrics with customers such as having constant surveys in order to get information from customers on what they want rather than designing what the company want.

5.3.3 Reliability on customer satisfaction

Manufacturers of smartphones are recommended to improving the reliability of smartphones, designing gadgets which have long lasting batteries, which can also adapt to future use and also which cannot be affected mechanically.

5.3.4 Conformance on customer satisfaction

Improving conformance through effective process control, employee training and quality management systems. Companies are recommended to hire innovative personnel who can come up with new ideas in order to improve processes.

5.3.5 Durability on customer satisfaction

Companies are recommended to make use of quality material in assembling their products and constantly develop their processes.

5.3.6. Aesthetics on customer satisfaction

Manufacturers are recommended to consider cultural and regional variances, continual innovation and also material quality since product aesthetics attracts customers the most.

5.3.7 Serviceability on customer satisfaction

Companies are recommended to produce more and quality spare parts and also make service or maintenance information readily available so that customer can repair their smartphones if they are malfunctioning.

5.3.8 Perceived quality on customer satisfaction

Companies are recommended to concentrate on continuous monitoring and improving their product designs, after-sales services, manufacturing processes and customer satisfaction.

5.4 RECOMMENDATIONS FOR FURTHER STUDY

Future studies can be conducted in order to address the limitation of this study, further research can be conducted using different customers to improve the reliability of its results.

Great Zimbabwe University
COURAGE WISDOM SUCCESS

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APPENDICES

DEAR PARTICIPANT

My name is Mildret Chudu. I am pursuing MBA at Great Zimbabwe University. I am kindly appealing to you to attempt all the questions by ticking in a box that corresponds with your level of agreement for each statement. Your participation in this research is highly valued. This questionnaire is designed to obtain feedback from you on your level of satisfaction towards product quality in mobile smartphone industry in Zimbabwe. The results from this survey will be used to determine the level of satisfaction from the influence of product quality in mobile smartphone industry in ward 19 towards this topic. Taking part in this survey is completely voluntary and anonymous. The questionnaire consists of two sections. The questionnaire should take no more than 15 minutes of your time. Your co-operation is appreciated.

When evaluating a question, please answer the question from your own perspective.

Thank you for taking the time to complete this survey.

Should you have any questions, please feel free to contact: Mildret Chudu: mildretchudu@gmail.com or 0783168587/0772910236.

SCREENING QUESTIONS

Do you currently use a mobile smartphone?

No	
Yes	

Do you frequently use your mobile smartphone for several activities such as communication, browsing the internet and entertainment?

No	
Yes	

If your answer is yes to both questions above, then please complete the rest of the questionnaire.

SECTION A: DEMOGRAPHICAL DETAILS

1. What is your gender?

Male	1
Female	2

2. What is your age group?

18-23 years	1
24-29 years	2
30-36 years	3
37-42 years	4
43 years and above	5

3. What is your educational level?

Ordinary level	1
Advanced level	2
Undergraduate	3
Post graduate	4
Others	5

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SECTION B:

On a scale of 1 to 5 where 1 = Strongly Disagree, 2= Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly Agree,

Tick where appropriate to indicate the extent to which you agree or disagree with each of the following statements.

Performance		1	2	3	4	5
P1	Current Smartphone performance is important to me					
P2	Current smartphone performance always meet my requirements					
P3	Current Supplier's smartphone performance meet requirements better than other options in the market.					
P4	Current smartphones have update support and information on control of updates.					
P5	Current smartphone have the capacity to allow installation of future functionalities.					
Features						
F1	Current smartphone features is what I want for my smartphone.					
F2	Current smartphone features are desirable and useful.					
F3	Current supplier's smartphone features are desirable and useful than other competitors					
F4	Batteries, display and back covers are removable in less than a defined number of steps/minutes.					
F5	I can recommend current supplier's smartphone to others due to its features.					
Reliability						
R1	Current supplier's smartphone reliability can meet my needs.					
R2	Current supplier's smartphone is always reliable.					
R3	Current supplier's smartphone is reliable than other competitors.					
R4	My smartphone is resistance to water and dust					

R5	Screen protectors and protective cases are available in the market.					
Conformance						
C1	Current smartphone's conformance can meet my needs					
C2	Current supplier's smartphone always conforms to my requirements.					
C3	Current supplier's conformant is more than other competitors.					
C4	Data transfer and deletion functions are available.					
C5	Password reset and restoration of factory tools are available.					
Durability						
D1	Smartphone's durability is important to me.					
D2	Current supplier's smartphone is always durable.					
D3	Current supplier's smartphone is more durable than other competitors.					
D4	I have changed my battery once in two years.					
D5	I frequently change my phone in two years					
Aesthetics						
A1	Smartphone's appearance is important to me.					
A2	Current supplier's smartphone have a good appearance.					
A3	Current supplier's product have a better appearance than other competitors.					
A4	Current supplier's smartphone's interface design is satisfactory to me.					
A5	Smartphone's appearance and quality of spare parts available are essential to me.					
Serviceability						
S1	Smartphone's serviceability is important to me.					
S2	Current supplier's smartphones has high level of serviceability.					

S3	Current supplier's smartphones are more serviceable than other competitors.					
S4	My smartphone can be disassembled for repair.					
S5	My smartphone has provision of maintenance and repair information to final users and professional repairer.					
Perceived quality						
PQ1	Current supplier's smartphone's quality can meet my standards.					
PQ2	Current supplier's smartphone has high quality.					
PQ3	Current supplier product is of better quality than other suppliers.					
PQ4	Current supplier's product is resistant to accidental drops.					
PQ5	Current supplier's product do not scratch easily.					
Customer satisfaction						
CS1	Current supplier has a strong focus on its customers.					
CS2	Current supplier's product design differentiates it from that of others.					
CS3	Current supplier's top management are committed to customer satisfaction.					
CS4	Current supplier engages in continual monitoring of its customer satisfaction activities.					
CS5	Current supplier engages in activities to add value to its customers.					

Thank you for taking the time to complete this survey!!!

Appendix 2 turn it report

Dissertation

ORIGINALITY REPORT

18%	13%	8%	11%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Midlands State University Student Paper	3%
2	etd.aau.edu.et Internet Source	1%
3	Submitted to Myanmar Imperial College Student Paper	1%
4	Mauro Cordella, Felice Alfieri, Christian Clemm, Anton Berwald. "Durability of smartphones: A technical analysis of reliability and repairability aspects", Journal of Cleaner Production, 2021 Publication	1%
5	Submitted to Open University of Mauritius Student Paper	<1%
6	Submitted to Multimedia University Student Paper	<1%
7	Submitted to University of Northampton Student Paper	<1%
8	www.researchgate.net Internet Source	