

**INFLUENCE OF INNOVATION ON CUSTOMER SATISFACTION: A CASE OF
CUSTOMERS OF SAFARICOM PLC**

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FULFILLMENT OF THE DEGREE OF MASTER OF COMMERCE AT
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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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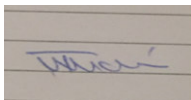
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DEDICATION

This thesis is dedicated to my dear parents, Christopher Ogogo and Elizabeth Ogogo for the constant progress checks, encouragement, and prayers. I also dedicate it to my siblings, Nivian, Eddah, Juliet and Hazel for their love and encouragement.

ABSTRACT

Businesses today operate in a competitive environment and therefore they need to ensure they keep their customers satisfied. The competition is not just local but global, making organizations rethink about strategies for customer satisfaction. One such strategy is innovative strategies. The telecommunication industry in Kenya has become competitive and firms in this sector have been forced to come up with new and improved ideas to better their services and products so as to deliver customer satisfaction. Previous studies have presented conceptual, contextual, and methodological gaps which this study sought to address by determining the influence of innovation on customer satisfaction for customers of Safaricom Plc. The specific objectives of the study were to establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc, to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc and to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. This study was informed by two theories namely: Diffusion of Innovation Theory and Expectancy disconfirmation Theory. The study employed descriptive cross-sectional research design and made use of Krejcie and Morgan table and 5% level of precision or margin of error to arrive at a sample size of 385 respondents to whom structured questionnaire was administered. The data collected was purely quantitative, thus SPSS aided the analysis. The analysis involved the use of descriptive and inferential statistics. The results were displayed using tables, charts, and bars. The findings revealed that the variance in the dependent variable was explained by the model. The coefficient of determination indicated that the independent variables used in this study of product innovation, process innovation and marketing innovation were jointly responsible for variation in customer satisfaction for customers of Safaricom Plc. The remaining percentage of the expected variation in customer satisfaction for customers of Safaricom Plc. was accounted for by other factors which were not part of the current model. The study found that the model adopted in this study was statistically significant in explaining the influence of innovation (product innovation, process innovation, and marketing innovation) on customer satisfaction for customers of Safaricom Plc. In terms of the influence of each innovation, the study established a positive and significant relationship between product innovation and customer satisfaction, a positive and significant relationship between process innovation and customer satisfaction, and a positive and significant relationship between marketing innovation and customer satisfaction. The findings led to the conclusion that various forms of innovations used in this study - product, process, and marketing innovation each have a significant and positive influence on customer satisfaction for customers of Safaricom Plc. The study thus recommends that the management of Safaricom Plc should continue to prioritize and invest in innovation as a central component of its business strategy. The management should also dedicate resources to research and development, fostering a culture of innovation within the organization, and regularly seeking feedback from customers to understand their needs and preferences. The study was limited by use of a small sample size of customers within Nairobi County, and relied solely on self-reported measures, presenting a risk of response bias or social desirability bias. Only three innovation types were used in the study. Future studies could address these limitations.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
DEDICATION.....	iv
ABSTRACT.....	v
LIST OF TABLES.....	x
LIST OF FIGURES.....	xii
LIST OF ABBREVIATIONS AND ACRONYMS.....	xiii
OPERATIONAL DEFINITION OF KEY TERMS.....	xiv
CHAPTER ONE.....	1
INTRODUCTION.....	1
1.1 Background to the Study.....	1
1.1.1 Innovation.....	3
1.1.2 Customer Satisfaction.....	4
1.1.3 Safaricom Kenya Limited.....	6
1.2 Statement of the Problem.....	7
1.3 Research Objectives.....	9
1.3.1 General Objective.....	9
1.3.2 Specific Objectives.....	9
1.3.3 Research Questions.....	9
1.4 Scope of the study.....	10
1.5 Significance of the study.....	10
1.5.1 Significance to Policy Makers.....	10
1.5.2 Significance to Practice.....	10

1.5.3 Significance to Theory.....	10
1.6 Chapter Summary.....	11
CHAPTER TWO	12
LITERATURE REVIEW	12
2.1 Introduction.....	12
2.2 Theoretical Review	12
2.2.1 Diffusion of Innovation Theory.....	12
2.2.2 Expectancy Disconfirmation Theory.....	14
2.3 Empirical Review	16
2.3.1 Product Innovation and Customer Satisfaction	16
2.3.2 Process Innovation and Customer Satisfaction	18
2.3.3 Marketing Innovation and Customer Satisfaction	20
2.4 Research Gaps.....	22
2.5 Conceptual Framework.....	24
2.6 Operationalization of variables	25
2.7 Chapter Summary.....	26
CHAPTER THREE	27
RESEARCH METHODOLOGY	27
3.1 Introduction.....	27
3.2 Research Philosophy	27
3.3 Research Design.....	28
3.4 Population.....	28
3.5 Sampling Design.....	28
3.6 Data Collection Methods.....	29

3.7 Research Quality	29
3.7.1 Reliability Test	30
3.7.2 Validity Test	31
3.8 Data Analysis and Presentation.....	32
3.9 Ethical Consideration	33
3.10 Chapter Summary.....	34
CHAPTER FOUR.....	35
RESULTS AND DISCUSSIONS.....	35
4.0 Introduction	35
4.1 Response Rate	35
4.2 Demographic Information.....	36
4.2.1 Gender of Respondent	37
4.2.2 Age Distribution	38
4.2.3 Level of Education.....	39
4.2.4 Duration of being Customer	40
4.4 Descriptive Analysis	41
4.4.1 Descriptive Statistics on Product Innovation.....	42
4.4.2 Descriptive Statistics on Process Innovation.....	43
4.4.3 Descriptive Statistics on Marketing Innovation	45
4.4.4 Descriptive Statistics on Customer Satisfaction.....	47
4.5 Inferential Analysis	48
4.5.1 Correlation Analysis Results	49
4.5.2 Regression between Product Innovation and Customer Satisfaction	51
4.5.3 Regression between Process Innovation and Customer Satisfaction	52

4.5.4 Regression between Marketing Innovation and Customer Satisfaction.....	53
4.5.5 Multiple Linear Regression Analysis Results	55
CHAPTER FIVE	59
DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS	59
5.1 Introduction.....	59
5.2 Discussion of Findings	59
5.2.1 Product Innovation and Customer Satisfaction	59
5.2.2 Process Innovation and Customer Satisfaction	60
5.2.3 Marketing Innovation and Customer Satisfaction	62
5.3 Conclusions	63
5.4 Recommendations	65
5.4.1 Policy Recommendations	65
5.4.2 Managerial Recommendation.....	66
5.5 Theoretical Contribution	67
5.6 Limitations	67
5.7 Suggestions for Further Research	68
REFERENCES.....	69
APPENDICES	80
Appendix I: Letter of Introduction	80
Appendix II: Questionnaire for the Customers	81
Appendix III: Authorization Letter	86
Appendix IV: NACOSTI LICENCE.....	87

LIST OF TABLES

Table 2.1: Summary of research gaps.....	22
Table 2.2: Operationalization of Study Variables.....	25
Table 3.1: Reliability Test Results.....	31
Table 3.2: Validity Test using KMO and Bartlett's Test	32
Table 4.1: Response Rate.....	36
Table 4.2: Gender of Respondent	37
Table 4.3: Age.....	38
Table 4.4: Highest Level of Education	39
Table 4.5: Duration	40
Table 4.6: Descriptive Analysis on Product Innovation	42
Table 4.7: Descriptive Analysis on Process Innovation	44
Table 4.8: Descriptive Analysis on Marketing Innovation.....	45
Table 4.9: Correlation Matrix	49
Table 4.10 Model Summary for Product Innovation and Customer Satisfaction.....	51
Table 4.12 ANOVA for Product Innovation and Customer Satisfaction	51
Table 4.13: Regression Coefficient for Product Innovation and Customer Satisfaction.....	52
Table 4.14 Model Summary for Process Innovation and Customer Satisfaction.....	52
Table 4.15 ANOVA for Process Innovation and Customer Satisfaction.....	53

Table 4.16: Regression Coefficient for Process Innovation and Customer Satisfaction	53
Table 4.17 Model Summary for Marketing Innovation and Customer Satisfaction.....	54
Table 4.18 ANOVA for Marketing Innovation and Customer Satisfaction	54
Table 4.19: Regression Coefficient for Marketing Innovation and Customer Satisfaction.....	54
Table 4.20: Model Summary	55
Table 4.21: ANOVA.....	56
Table 4.22: Multiple Regression of Coefficients.....	56

LIST OF FIGURES

Figure 2.1: Conceptual Framework	25
Figure 4.1: Gender of Respondent	37
Figure 4.2: Age Distribution	38
Figure 4.3: Duration of being Customer	41

LIST OF ABBREVIATIONS AND ACRONYMS

NACOSTI	National Commission of Science Technology and Innovation
NSE	Nairobi Securities Exchange
OECD	Organization for Economic Co-operation and Development
SPSS	Statistical Package for the Social Sciences

OPERATIONAL DEFINITION OF KEY TERMS

- Product Innovation:** Refers to the development and implementation of new or significantly improved goods or services that are unique to the telecommunications industry. This can range from entirely new technology to improvements on existing telecommunications devices, systems, or services.
- Process Innovation:** This refers to the implementation of new or significantly improved production or delivery methods. Process innovation is all about improving efficiency, reducing costs, improving the quality of service, and can also lead to the creation of new and improved products or services.
- Marketing Innovation:** Refers to the implementation of new marketing methods involving significant changes in product design or packaging, product placement, product promotion or pricing. It involves the development and application of unique, novel or improved marketing strategies intended to better meet customer needs, open up new markets, or newly position a company's product in the consumer's mind to gain a competitive edge.
- Customer Satisfaction:** Refers to the degree to which a company's products or services meet or exceed customer expectations. In the case of Safaricom PLC, a leading telecommunications company in Kenya, this would pertain to how well the company's services and customer service align with what their customers expect and desire.
- Innovation:** Used to refer to the introduction of new ideas, devices, methods, or the application of better solutions that meet new requirements, existing market needs, or solve previously unaddressed problems. This concept is related to, but not

synonymous with, invention, as innovations can also occur from applying existing ideas or products in a new way.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Forward-looking companies are turning to customer service and customer satisfaction to gain a competitive advantage and generate revenue (Kiarie, 2019). Over the years, companies have been increasingly focused on customer satisfaction and launching new initiatives to meet consumer needs. According to a 2019 study by Deloitte, businesses are increasingly prioritizing customer-centric approaches in their strategies, underpinned by the understanding that improved customer satisfaction leads to higher customer loyalty and better business outcomes (Deloitte, 2019). Companies are actively leveraging advancements in technology to gain insights into customer needs, preferences, and behaviors.

In doing so, they are able to tailor their products and services to provide a more personalized and satisfying customer experience. In terms of driving innovation, there has been a shift from merely focusing on product innovation towards broader process and business model innovations (Accenture, 2020). This is fueled by digital transformation trends, with companies increasingly adopting technologies like AI, big data, and IoT to innovate their processes and business models. Such innovations often aimed at improving customer experience and satisfaction, by delivering more value, convenience, and personalized offerings to customers.

In this competitive market, customers have many feasible options to select among the telecommunication companies; therefore, telecommunication companies should focus on which factors are to be added to attract their customers (Nwachukwu & Vu, 2022). Nowadays, telecommunication companies cannot rely on price alone to attract and retain customers; they must ensure that customers are satisfied and have a great experience. Na, Kang and Jeong (2019) suggests that from a customer's initiative up to after-sales services, every company should strive to give customers a seamless and unforgettable experience. When customers are not satisfied with the service you offer them, they can take their business to competitors and spread the word about the poor service your company offers (Kiarie, 2019).

Customer satisfaction is a critical determinant of the business success of telecom companies like Safaricom PLC, being influenced by numerous factors, one of which is the innovation aspect

(Khan & Khan, 2019). Innovation, in this context, encompasses new products, services, or improvements in service delivery that meet or exceed customer expectations, thereby leading to increased satisfaction (Li & Ma, 2020). Safaricom PLC, a leading telecom in Kenya, has invested significantly in innovation to improve customer experience, thus studying its influence provides a comprehensive understanding of how innovation impacts customer satisfaction. Past research suggests that innovation positively impacts customer satisfaction by creating value and meeting the ever-evolving needs of customers (Iqbal, 2019).

According to Abdullah, Prabhu and Othman (2022), satisfaction is the feeling of a person from comparing the performance of products in the result of his /her expectation. Moreover, Goyal and Kar (2020) consider customer satisfaction a customer post-purchase interpretation and their perception of the overall products or their service experience. Telecommunication companies have resorted to embracing strategies that enhance satisfaction for their customers. One such strategy is innovation strategies.

In 2018 T-Mobile's Team of Experts initiative was launched in the United States, which aimed to revolutionize customer service by eliminating frustrating automated systems and connecting customers directly with a dedicated team of specialists (T-Mobile, 2018). In 2019, several major providers, including AT&T, Verizon, and Vodafone, embraced eSIM technology to offer customers greater flexibility and convenience (Perez, 2019). eSIM technology allows users to switch between mobile carriers without having to physically change their SIM cards, making it easier for customers to choose the services that best meet their needs (Perez, 2019). This trend highlights the industry's shift towards a customer-centric approach, focusing on providing solutions that cater to their subscribers' ever-evolving demands.

Moreover, the rise of 5G technology between 2018 and 2020 demonstrates companies' commitment to customer satisfaction. Companies like Verizon, AT&T, and China Mobile have invested heavily in 5G infrastructure, aiming to deliver faster speeds, lower latency, and enhanced connectivity to their subscribers (Mlot, 2020). By prioritizing the development and deployment of 5G networks, these companies are working to satisfy customer demands for improved connectivity and seamless experiences in an increasingly digital world (Mlot, 2020).

Companies are today focusing more on leveraging technology and data analytics to personalize products and services to better meet customer needs (Rust, Lemon & Zeithaml, 2020). There is

also an increasing trend in research to understand the role of digital innovation in creating customer value and satisfaction (Kumar & Reinartz, 2019). Yet, gaps exist in understanding how different forms of innovation differently affect customer satisfaction, and how context-specific factors come to play, which necessitated the current study.

1.1.1 Innovation

Innovation refers to a continuous process of discovery, learning and application of new technologies and techniques from many sources (Suchek, Fernandes, Kraus, Filser & Sjögrén, 2021). Christa and Kristinae (2021) consider innovation as the introduction of new product or service in the market and converting new knowledge in new products and services in order to satisfy existing customers and to attract new customers. According to Schumpeter (2016) innovation is combining new product, new process, opening of new market, new way of organizing the business, and new sources of supply. Some companies can also go for innovation because the customer wants some changes according to their ease so these new changes can also be the result of customer demands.

Innovation has been described and operationalized differently by various authors based on the focus of their research. Schumpeter, a pioneering theorist in innovation studies, defined it as the introduction of new goods, new methods of production, new markets, new sources of supply, and new organizational forms (Schumpeter, 1934). According to Rogers (2003), innovation is an idea, practice, or project perceived as new by an individual or unit of adoption. Oslo Manual from OECD (2018) describes innovation as the implementation of a new or significantly improved product (good or service), a new marketing method, or a new organizational method in business practices, workplace organization, or external relations. In terms of operationalization, studies often classify innovation into categories like product, process, marketing, and organizational innovation, and measure it through indicators like the number of patent applications, R&D spending, or self-reported measures of novel changes implemented (OECD, 2018; Zhang & Fu, 2022).

There are different types of innovations that have been adopted by different organizations with the objective of enhancing efficiency and improving customer satisfaction. These innovation types include but not limited to financial innovation, product innovation, process innovation, organizational innovation and market innovation (Zhang & Fu, 2022). For the purpose of the current study, product, process and market innovations were adopted. A product innovation is the

bringing in of a fresh or considerably upgraded product in relation to its features or proposed usage (Sinaga, Lumban Gaol & Ichsan, 2021). Product innovation includes significant improvements in technical specifications, components and materials, incorporated software, user friendliness or other functional characteristics. A process innovation on the other hand is a tool to improve organizational efficiency (De Giovanni, & Cariola, 2021). Oslo Manual (OECD, 2019) defines a process innovation as the implementation of a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment and/or software. Oslo Manual (OECD, 2019) defines a marketing innovation as “the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing.” Oslo Manual (OECD, 2019) highlights that a marketing innovation may open new markets, address customer needs, reposition products in the market to increase sales. A marketing innovation consists of new sales and marketing techniques.

Innovation is a crucial driver of economic growth and organizational success. Over time, numerous theories have been developed to explain and guide innovation processes. Innovation was informed by the Diffusion of Innovation theory as developed by Rogers (1962). The theory explains the user adoption of new technologies and how, why, and at what rate new ideas and technology spread. Diffusion of innovation theory is one of the oldest social science theories (Rogers, 1995). While the telecommunication sector has done a lot in terms of innovation, it is not clear how innovation influences the customer satisfaction of customers of Safaricom Plc. Therefore, there was need for this study to be carried out to determine the influence of innovation on customer satisfaction for customers of Safaricom Plc.

1.1.2 Customer Satisfaction

Customer satisfaction involves ensuring the emotional and functional satisfaction of customers (Almuqren, Qasem & Cristea, 2019). While emotional satisfaction is based on the experience of a service, functional satisfaction deals with the performance of a service. Rind, Shaikh, Kumar, Solangi and Chhajro (2018) assert that one prominent way of increasing customer satisfaction is spotting problems before customers complain about them. A higher level of satisfaction of customers has a positive impact on a degradation of the benefits of alternatives suppliers and hence increase repurchase intentions. Dissatisfied customers are more interested to find alternatives for

information and more likely to suggest competitors' proposals than satisfied customers (Rind *et al.*, 2018).

According to Parasuraman (2022), customer satisfaction basically identifies the gap between customer perception and their prior expectation. Customer satisfaction is an important factor because it has a direct relation with the organization's profitability. If the customer feels satisfaction from the brands of any organization, he or she purchases from that organization and ultimately that organization makes profits (Singh, 2016). Customer satisfaction has numerous benefits to a company and some of the benefits include increased customer loyalty because when customers are satisfied, they are likely to stay with a business for long, which boost sales and profitability (Bhattacharya, Morgan & Rego, 2021).

Customer satisfaction is a metric that measures how happy customers are with a business's products, services, and capabilities (Wulandari, 2022). It's a reflection of how a customer feels when interacting with a brand: poor customer satisfaction leads to negative reviews, while satisfied customers helps you build a brand. Customer satisfaction consists of numerous factors that are important to stay on top and customer satisfaction is important because it determines many factors that impact business (Kim & Kim, 2022). The first impact is whether someone can be a repeat customer. In addition, customer satisfaction has increased importance in the digital age with concern to what customers post online. Another factor, that is commonly overlooked, is how much they may spend with a business in the future; the first step in improving your customer satisfaction is by understanding the factors that impact it, which is followed by learning how to act on those factors (Yang, Cao, Wang & Lu, 2022). This study measured customer satisfaction using loyalty, repeat purchase, likelihood of referral and positive comments.

Loyalty is a good measure of customer loyalty in the telecommunication sector because it reflects the long-term commitment and preference customers have for a particular service provider (Agha, Rashid, Rasheed, Khan & Khan, 2021). This loyalty often results from consistent positive experiences, high-quality services, and competitive pricing that meet or exceed customer expectations (Agha *et al.*, 2021). Additionally, repeat purchases are a valuable measure of customer satisfaction in the telecommunication sector because they indicate customer loyalty, trust, and reliability, which are essential for the long-term success of a company. Repeat purchases are a strong indicator of customer loyalty, as customers who are satisfied with a company's

products or services are more likely to continue using them in the future (Lubis, Dalimunthe, Absah & Fawzee, 2020). In the telecommunication sector, where customers have many options, a high rate of repeat purchases suggests that a company is successfully retaining its customers by meeting their needs and expectations. It has also been demonstrated in literature that likelihood of referral is a valuable measure of customer satisfaction as it indicates the extent to which satisfied customers are willing to recommend a company's products or services to their friends and family (Reichheld, 2003).

Customer satisfaction in the telecommunication industry can be conceptualized as the degree to which customers perceive that their expectations and needs are being met by the products, services, and overall experience provided by their chosen telecommunications provider (Chatterjee & Kar, 2019). This encompasses various aspects such as network coverage and reliability, call and data quality, customer service responsiveness, pricing, and the availability of innovative services and features (Ogunsiji & Mora, 2019). Telecommunication companies that successfully address these factors and adapt to the evolving preferences and demands of their customers are more likely to achieve higher levels of customer satisfaction, leading to increased customer retention, loyalty, and ultimately, market success (Al-Debei & Akroush, 2018).

1.1.3 Safaricom Kenya Limited

Safaricom Plc is a telecommunications company headquartered in Nairobi, Kenya. It was founded in 1997 as a subsidiary of Telkom Kenya and was later acquired by Vodafone Group in 2000. Today, Safaricom is a publicly traded company listed on the Nairobi Securities Exchange and is majority-owned by Vodafone Group. Safaricom provides a wide range of telecommunications services, including voice, data, and mobile money services. Its flagship product is M-Pesa, a mobile money transfer service that allows users to deposit, withdraw, and transfer money using their mobile phones. M-Pesa has become a popular payment solution in Kenya and is also used in other countries in Africa.

In addition to its telecommunications services, Safaricom also offers a variety of other products and services, including cloud services, digital content, and IoT solutions. It has been recognized as one of the most innovative companies in Africa and has received numerous awards for its products and services. The company is also committed to social responsibility and has

implemented a number of initiatives to promote education, health, and environmental sustainability in the communities where it operates.

According to the latest available data released by the Communication Authority of Kenya (2022), Safaricom had a market share of 64.2% in the mobile telecommunications sector in Kenya. This means that Safaricom is the dominant player in the market, with a significant lead over its competitors. The other major players in the Kenyan mobile telecommunications market are Airtel and Telkom Kenya, which according to the same report had market shares of 25.3% and 9.9% respectively. It's worth noting that these market share figures can fluctuate over time based on various factors, such as changes in pricing, network quality, and consumer preferences.

The company has been performing well in the Kenyan market over the years and recently posted a profit of Ksh. 31.87 billion. The company prides itself as a pioneer in the mobile money transfer through its M-pesa product which has performed quite well. The company recently launched its fifth generation (5G) network in Nairobi and Mombasa.

Safaricom PLC, a leading telecommunications provider in Kenya, has demonstrated its commitment to various forms of innovation, including product, process, market, and technology innovation. Product innovation is evident in the introduction and expansion of its widely popular mobile money service, M-Pesa, which has revolutionized financial transactions and fostered financial inclusion in the country. Process innovation can be seen in the company's continuous efforts to improve its network infrastructure, ensuring better coverage, connectivity, and quality of services for its subscribers. Market innovation is showcased through initiatives like the "No Expiry Data" campaign, addressing customers' concerns and differentiating Safaricom from its competitors. Finally, technology innovation is exemplified by Safaricom's investment in cutting-edge technologies such as 5G, which promises to deliver faster speeds and enhanced connectivity for users, further solidifying the company's position as a forward-thinking telecommunications provider. Despite the adoption of all these innovations, it is unclear how they have impacted customer satisfaction. There is therefore a need to carry out a study on the influence of innovation on customer satisfaction for customers of Safaricom Plc.

1.2 Statement of the Problem

Despite Safaricom Plc's dominance in the Kenyan telecommunications market and its various innovative offerings such as M-Pesa, there have been customer satisfaction issues. Studies indicate

that while Safaricom scores high on network coverage and internet speed, it faces challenges in areas like pricing, customer service, and billing transparency (Njoroge & Gathenya, 2020; Fardowsa, 2022). This has resulted in a significant number of customer complaints, which could negatively impact the company's customer retention and market share.

Several studies have been conducted linking innovation and organizational performance (Škerlavaj, Černe, Dysvik, & Carlsen, 2019; Ismail, Rose, Uli, & Abdullah, 2019; Gebauer, Saul, Haldimann & Gustafsson, 2020; Bican & Brem, 2020). However, there are limited studies on innovation and customer satisfaction, and in the context of the telecommunication sector in Kenya. The fact that the telecommunication industry in Kenya has been largely affected by the changing operating environment characterized with competition calls for adoption of innovation strategies so as to enhance a competitive edge in the markets. Karanja (2019) carried out a study on innovation strategies adopted by insurance companies in Kenya. His study concluded that companies with strong technology-enabled innovation strategies are more likely to secure competitive advantage and create superior shareholder value. Since the study focused on banking sector and not telecommunication presents a contextual gap.

Another scholar, Kemoli (2020) carried out a study on strategic innovations and performance of commercial banks listed in the Nairobi Stock Exchange (NSE). His study concluded that listed commercial banks had deviated from the existing industry rules and engaged in creation of new and significant customer value and that strategic innovation was embedded in their corporate strategy. Since the study focused on innovation strategies and in the banking sector, both conceptual and contextual gaps are evident.

Moreover, Dachyar (2018) study on the Role of Innovation Management Model to Improve Service Quality concluded that companies have to make new strategy for innovation for better quality services in order to maintain number of customers. The study indicated that the good innovations can continuously generate better service and product quality. M'mata and Weda (2022) did a study on the effects of technological innovations on the financial performance of the commercial banks in Kenya and concluded that the banks had employed various technological innovations i.e., ATM services, mobile phone transactions and internet-based banking services. The studies by Škerlavaj et al., (2019); Ismail et al. (2019); Gebauer et al. (2020); Bican and Brem,

(2020); Karanja (2019); Dachyar (2018); M'mata and Weda (2022) were conducted in varied contexts hence contextual gap since their finding may not apply to Safaricom Plc. Additionally, these studies used different variables and adopted different methodologies, hence both conceptual and methodological gaps are evident. It is in light of the highlighted contextual, conceptual and methodological gaps that the current study sought to determine the influence of innovation on customer satisfaction: A case of customers of Safaricom Plc.

1.3 Research Objectives

1.3.1 General Objective

To determine the influence of innovation on customer satisfaction: A case of customers of Safaricom Plc.

1.3.2 Specific Objectives

The following were the specific objectives that guided the study:

- i. To establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc.
- ii. To establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc.
- iii. To establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc.

1.3.3 Research Questions

The following were the research questions for the study:

- i. What is the influence of product innovation on customer satisfaction for customers of Safaricom Plc?
- ii. What is the influence of process innovation on customer satisfaction for customers of Safaricom Plc?
- iii. What is the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc?

1.4 Scope of the study

The study was conducted in Nairobi County. The study focused on customers of Safaricom Plc. because it is the market leader. The study embraced innovation types such as product, process and marketing innovations as independent variables and customer satisfaction as the dependent variable. The study employed descriptive cross-sectional research design and targeted the customers of Safaricom Plc across the county. The study was carried out in two to three weeks.

1.5 Significance of the study

1.5.1 Significance to Policy Makers

The policy makers may find the results of this study very invaluable, as it may be able to show the significance of adoption of innovation to achieve returns and improve on customer satisfaction in the telecommunications firms in Kenya. The Communications Authority of Kenya may also find the results of this study very invaluable, as it may be able to ascertain the extent of the competition in the industry and the innovation that may mitigate the effects of such competition and influence achievement of improved customer satisfaction.

1.5.2 Significance to Practice

This study may be important to the management of Safaricom Plc. as they can be able to know what value innovation plays in the sector. It may assist them to identify, analyze and adopt innovations that can ensure they achieve customer satisfaction. This study may also be very useful in helping managers of Safaricom Plc to improve their innovative capabilities and activities as well as embrace programs that encourage innovation in their companies.

1.5.3 Significance to Theory

This study holds significant relevance to the theory of innovation by providing valuable insights into the practical application and impact of innovation within a real-world business context. By examining how Safaricom's innovative products, services, and strategies contribute to customer satisfaction, the study may help refine and expand existing theories of innovation by offering empirical evidence on the relationship between innovation and customer satisfaction. Furthermore, the case study reveals best practices and lessons learned from Safaricom's experiences, ultimately contributing to a deeper understanding of how companies can harness the power of innovation to drive customer satisfaction and foster long-term business success. The findings of this study may

also help future scholars and researchers as it may add to the existing body of knowledge as well as encourage further research in this area. The students and academicians may be able to use this study as a basis for further discussions. This study may also help scholars as an important reference material from which future studies in innovation and customer satisfaction can be done. It may also act as a source of knowledge.

1.6 Chapter Summary

The chapter has presented the background to the study in which the study variables have been conceptualized. The section has also described the statement of the problem which informs the need for the study, followed by research objectives, both general and specific objectives. The chapter has also covered the scope of the study, significance and finally chapter summary.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review of the study, the summary of research gaps and the conceptual framework of the study.

2.2 Theoretical Review

Theoretical framework introduces and describes the theory which explains why the research problem under study exists. This study was informed by two theories namely, Diffusion of Innovation Theory and Expectancy disconfirmation Theory.

2.2.1 Diffusion of Innovation Theory

The Diffusion of Innovation theory was developed by Rogers (1962). It explains the user adoption of new technologies and how, why, and at what rate new ideas and technology spread. Diffusion of innovation theory is one of the oldest social science theories (Rogers, 1995). It originated in communication to explain how, overtime, an idea or product gains momentum and diffuses or spreads through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. Adoption means that a person does something differently from what one had previously done (i.e., purchase or use a new product, acquire or perform a new behaviour, etc). The key to adoption is that the person must perceive the idea, behaviour or product as new or innovative; it is through this that diffusion is possible. Diffusion of innovation theory attempts to explain and describe the mechanisms of how new inventions are adopted and become successful (Clark, 2012).

Mannan and Haleem (2017) states that not all innovations are adopted even if they are good; it may take a long time for an innovation to be adopted. He further states that resistance to change may be a hindrance to diffusion of innovation, and that although it might not stop the innovation, it may slow it down. Rogers (1995) identifies five critical attributes that greatly influence the rate of adoption. These include relative advantage, compatibility, triability and observability. According to Rogers, the rate of adoption of new innovations depends on how the organization perceives its relative advantage, compatibility, triability, observability and complexity.

Thus, an individual's attitude determines his/her intention which further shapes the actual behaviour (Fathema, Shannon & Ross, 2015). The way in which faculty members perceive themselves to have control over the technology types, such as the forms of LMSs, matters. The perceptions they have concerning behaviour in terms of whether it is difficult to perform such behaviour and also if there are/are not any challenges to overcome are influenced by their attitude.

Different innovations tend to spread and get adopted at different rates, basing on these five characteristics: relative advantage, which is the extent to which the innovation is viewed to be superior to its predecessor by the potential adopter; compatibility, which is the level to which it is perceived to be consistent with existing belief values; its complexity which is the degree to which it is sighted to be burdensome to understand; trial ability, which describes how easily potential adopters can explore the innovation; and observability, which is the extent to which the benefit of using the innovation is visible to potential adopters, (Rogers,2003). This theory was considered relevant to the study since it identifies key factors influencing the adoption of an innovation, including its relative advantage, compatibility, complexity, trialability, and observability.

This theory informs all the independent variables of product, process and marketing innovations and it helped the researcher to understand how the company's innovative products and services are adopted and spread among its customer bases. By analyzing factors such as relative advantage, compatibility, complexity, trialability, and observability of Safaricom's innovations, the researchers was able to gain insights into the reasons behind the success of Safaricom Plc. in satisfying customers. The researcher gained insights of how easy or difficult it was for the customers to embrace the innovations (complexity), how these innovations were relevant to their existing beliefs and values (compatibility) and the potential benefits of these innovations as they use their subscriptions (observability). Additionally, examining the different adopter categories (innovators, early adopters, early majority, late majority, and laggards) provides valuable information on how different segments of Safaricom's customers respond to and adopt innovations. This understanding can help Safaricom tailor its innovation strategies to better meet the needs and preferences of its users, ultimately leading to increased customer satisfaction.

Criticism of Diffusion of Innovation Theory

The Diffusion of Innovation Theory, proposed by E.M. Rogers in 1962, has been widely adopted in various disciplines but also met with its share of criticism. One of the most significant criticisms

is the theory's pro-innovation bias, where it is generally assumed that the adoption of an innovation is beneficial, and rejection is detrimental (Wejnert, 2002). Critics argue that this inherent bias negates the consideration of situations where an innovation may be inappropriate or harmful to a society or a segment thereof (Sahin, 2006). The theory also fails to take into account that adopters can reject an innovation after initially adopting it, as it primarily focuses on the initial adoption (Greenhalgh et al., 2004).

Another key criticism is the theory's individualistic focus, which assumes that the decision to adopt an innovation is a purely rational process and does not adequately consider social and cultural contexts (Williams & Edge, 1996). Critics have argued that the process of adoption is complex and influenced by social systems, not just individual decisions (Straub, 2009). Moreover, the theory is primarily descriptive, explaining how innovations are adopted but not providing much insight into why specific innovations are adopted over others. It does not provide clear criteria for what constitutes an innovation and also lacks precise predictors of an innovation's diffusion rate (Greenhalgh et al., 2004). Despite the critiques, this theory was still found to be suitable for this study.

2.2.2 Expectancy Disconfirmation Theory

Expectancy disconfirmation theory was conceptualized by Oliver (1980, 1997). This theory draws on the cognitive dissonance theory, which was developed by Leon Festinger in 1957, to understand how dissonance between a person's cognition and reality affects his/her subsequent cognition and/or behavior (Yüksel & Yüksel, 2001). Expectancy disconfirmation amongst other theories has been used to explain how customers form satisfaction judgments (Van Ryzin, 2013). The basic assumption of the EDT model is that customers form expectation before buying or using the product or service. These expectations are used as a standard in the evaluation/judgment of the actual performance perception. The theory came from a subject of study for antecedents of satisfaction (Anderson & Sullivan, 1993). The standard approach to study the satisfaction involves comparison of prior expectations with observed performance. The expectancy disconfirmation theory posits that disconfirmation which is the difference between expectations and perceived performance affects customer satisfaction.

Customer satisfaction develops after comparing perceived performance and expectations before buying or using the product or service. The difference between expectations and perceived

performance is known as disconfirmation of expectation or desire (Poister & Thomas, 2011; Johnson, Nader & Fornell, 1996). If customers like the quality of a product or service after using it, positive disconfirmation occurs. Similarly, if customers perceive that the performance of the product is below their expectation about the quality of a product or service, negative disconfirmation occurs. Therefore, it simply implies that positive disconfirmation leads to customer satisfaction and negative disconfirmation means that customers are not satisfied with the offering (Montfort, Masurel & Rijn, 2000).

This theory has been used by a number of researchers in the past as a mirror to explore customer satisfaction in various field of study, for instance psychology (Gotlieb, Grewal & Brown, 1994), marketing (Oliver, 1980; Santos & Boote, 2003; Diehl & Poynor, 2010), tourism (Fallon & Schofield, 2003), information technology (Khalifa & Liu, 2002), repurchase behavior and retention (e.g. Hsu et al., 2006), and the airline industry (Chen, 2008). The initial expectation of such customers consists of feedback from customers about their expectations. This is vital to enhance service, process, and marketing innovations and to meet customers' requirements. Additionally, adopting an innovative approach to service, process and marketing can improve customer's experience after using products or services. The researcher therefore considered this theory relevant to the study since it informs the dependent variable of customer satisfaction, and it gives a better understanding of how customers become satisfied with an introduction of a new product or service into the market and thus informs the variable on product innovation.

Criticism of Expectancy Disconfirmation Theory

The Expectancy Disconfirmation Theory (EDT), a widely accepted framework in the consumer behavior field, also has been subject to criticism. One of the key criticisms is its assumption that consumers have well-defined pre-purchase expectations (Oliver, 1980). Critics argue that this isn't always the case, especially in situations where consumers are unfamiliar with the product or service, or in services where outcomes are uncertain and may vary across different uses (Spreng, MacKenzie, & Olshavsky, 1996). Further, EDT assumes that consumers make rational decisions and follow a logical evaluation process, which may not always be accurate given the influence of emotions and impulse behavior in consumer decisions (Westbrook & Oliver, 1991).

Another significant criticism is that the theory largely ignores the context or situation in which the consumption occurs. It overlooks the influence of factors such as social environment, cultural

differences, and situational variables that can impact the consumer's expectations and their evaluation of the perceived performance (Kanning & Bergmann, 2009). Moreover, EDT focuses on individual transactions, without considering the overall relationship between a company and its customers. Critics argue that focusing solely on transaction-specific satisfaction may ignore the broader context of relationship satisfaction, which often plays a crucial role in determining customer loyalty and repeated patronage (Johnson, Anderson & Fornell, 1995).

2.3 Empirical Review

This section covers existing literature on innovation strategies and its different types and their relation to customer satisfaction.

2.3.1 Product Innovation and Customer Satisfaction

Empirical studies have provided valuable insights into the relationship between product innovation and customer satisfaction. A study by Rahman et al. (2019) in Bangladesh examined the impact of product innovation on customer satisfaction in the banking sector, focusing on new financial products and services. The study was done with a primary focus on the introduction of novel financial products and services. The variables used in this study were product innovation, as the independent variable, and customer satisfaction, as the dependent variable. The research utilized a quantitative methodology, employing statistical analysis techniques to analyze data collected through surveys or questionnaires. The results revealed a statistically significant positive relationship between product innovation and customer satisfaction, thereby underscoring the value of incorporating innovative products to cater to the dynamic needs and preferences of customers within a highly competitive market.

In another study by Lopes and Rodrigues (2019), the researchers investigated the influence of product innovation on customer satisfaction in the Portuguese telecommunications industry. The study aimed to understand the impact of product innovation on customer satisfaction in the context of the Portuguese telecommunications industry. The study's specific objectives were to identify and analyze the extent to which product innovations in telecom services influence customer satisfaction and to determine how these innovative services could be better tailored to meet customer needs and preferences. To meet these objectives, the researchers used a mixed-methods approach. They collected quantitative data through customer surveys on various aspects of product innovation and its impact on customer satisfaction. In addition, they conducted qualitative

interviews or focus groups with a subset of customers to gain deeper insights into their experiences and perceptions. They found that product innovation, characterized by the introduction of new and improved products and services, played a crucial role in driving customer satisfaction, particularly in terms of addressing customer pain points and fulfilling their expectations (Lopes & Rodrigues, 2019). The study also suggested that companies that consistently invest in product innovation are more likely to achieve higher levels of customer satisfaction and loyalty, resulting in a competitive edge.

Furthermore, a study by Lebdaoui and Robaina (2020) explored the relationship between product innovation and customer satisfaction in the context of the Moroccan automotive industry. The study treated product innovation as the independent variable, encompassing elements like technological advancements in automobiles, design improvements, and novel features or services. The dependent variable was customer satisfaction, gauged by customer ratings, repeat purchases, and brand loyalty. The methodology employed in this study was quantitative in nature, given the variables and the context. Survey questionnaires were used to collect data from customers, focusing on their perceptions of the innovativeness of the automotive products and their satisfaction levels. Their research findings confirmed a positive link between product innovation and customer satisfaction, highlighting the significance of innovation in attracting and retaining customers in a highly competitive market (Lebdaoui & Robaina, 2020). These empirical studies collectively emphasize the importance of product innovation in driving customer satisfaction across various industries, underscoring its vital role in business success and competitiveness.

Mwarenge and Kinyua (2022) evaluated product innovation as a predictor of organizational performance among micro finance banks in Mombasa County, Kenya. The purpose of the study was to determine how product innovation influences microfinance bank performance in Mombasa County, Kenya. The study adopted a descriptive research design and used product innovation as the only independent variable. Findings revealed that product innovation had a positive and significant influence on microfinance bank performance. The study concluded that product innovation significantly contributes towards the performance of microfinance banks. The recommendations were that microfinance banks' management should review policies relating to product innovation. In particular, the following aspects of product innovation should be strengthened: diversification, quality improvement and technical specification.

Daragahi (2017) examined the relationship between innovation and customer satisfaction in health products manufacturing companies in Tehran Province in Iran. The study was conducted to investigate the effect of innovation in product presentation on customer satisfaction. The study observed that innovation (open or closed) has a positive effect on customer satisfaction (the quality of a product, satisfaction with sales, satisfaction with after-sales services, and the brand of product). The study concluded that as the companies adopt more innovations, the level of customer satisfaction is enhanced. Moreover, the study concluded that innovation in product presentation had a positive effect on the satisfaction of customers consuming cosmetics.

In Nakuru, Kenya, Chemitei and Mukatia (2019) investigated the impact of product innovation on the viability of microfinance organizations. Product innovation had a substantial direct impact on the viability of the firms, according to the report. Individual managers of specific microfinance companies should use ingenuity and innovation to develop unique practices to ensure they are still one step ahead of the pack, resulting in increased profitability, according to this report. Ncurai, Oloko and Rambo (2022) evaluated the effect of product innovation factors on SACCO deposit financial results. As predictors of product developments, this study looks at the store network, product selection, product position, and product prices. The study found that store chains, product reach, product position, and product prices had a strong direct relationship with the financial results of these deposits.

2.3.2 Process Innovation and Customer Satisfaction

In a study by Tavakoli et al. (2019), the authors investigated the impact of process innovation on customer satisfaction in the Iranian banking sector. The primary objective of this research was to explore whether and how improvements in banking processes, such as streamlining operations, adopting digital technologies, and enhancing service delivery methods, contribute to increased customer satisfaction. Regarding the methodology, the researchers adopted a quantitative approach. The study found that process innovations, such as the implementation of new technologies, streamlining operations, and enhancing service delivery, positively influenced customer satisfaction by improving service quality, reducing waiting times, and increasing overall convenience for customers (Tavakoli, Farsani, & Khoshkhooyan, 2019).

Another study by Hassan et al. (2019) examined the relationship between process innovation and customer satisfaction in the context of Malaysian manufacturing companies. The research revealed

that process innovation, including the adoption of new production techniques and the improvement of existing processes, played a vital role in enhancing customer satisfaction by ensuring product quality, reducing delivery times, and providing better customer support (Hassan, Mokhtar, Abdull Manaf, & Baharun, 2019). The study also underscored the importance of continuous process improvement for organizations aiming to maintain a competitive edge and increase customer satisfaction.

Additionally, a study by Agbor and Osibanjo (2020) focused on the impact of process innovation on customer satisfaction in the Nigerian telecommunications industry. The authors found that process innovations, such as the introduction of new billing systems, enhanced network management, and improved customer service processes, significantly influenced customer satisfaction by providing a more seamless and satisfying experience for subscribers (Agbor & Osibanjo, 2020). Collectively, these empirical studies highlight the crucial role of process innovation in driving customer satisfaction across various industries, emphasizing its importance in achieving business success and competitiveness. A process innovation is the implementation of a new or significantly improved production or delivery method, including significant changes in techniques, equipment and/or software OECD (Oslo Manual, 2005). Process innovation is intended to decrease unit costs of production, to increase quality and to improve delivery of products and services (Oke et al., 2007).

In Pakistan, Naveed, Akhtar, Cheema (2012) sought to investigate the benefits (customer satisfaction and loyalty) and cost (customer dissatisfaction) associated with innovation. The results described the significant relationship of innovation with customer satisfaction and brand loyalty. The study found a strong significant association between innovation, customer satisfaction and brand loyalty. A study by O'Sullivan and Dooley (2018) indicated that a process involves linking a set of activities designed to change input into output which is offered to the consumer. Bergfors and Larsson (2019) also noted that process innovation is driven by a firm's internal production objectives. Arguably, process innovation tends to enhance the operational effectiveness and efficiency of a firm. Omachonu and Einspruch, (2020) argue that process innovation involves implementing improved production or a new delivery method using new equipment, techniques and software. They contend that process innovation aims to improve supporting activities such as computing, accounting, purchasing and maintenance. Arguably, process innovation involves several aspects of a business day to day functions such as human

resource, manufacturing, commercial activities and management, technical design and commercial activities.

Omesa (2015) examined the effect of process innovation on financial performance in utility companies in Kenya: a case study of the Kenya power and lighting company. A case study was done on Kenya Power and Lighting Company on their prepaid service process innovation. The findings showed a positive statistically significant relationship between sale of electricity, a measure of the prepaid process innovation and financial performance indicator of return on assets. Since the study focused on KPLC and used process innovation as the main independent variable, both contextual and conceptual gaps are evident.

2.3.3 Marketing Innovation and Customer Satisfaction

In a study by Liu et al. (2019), the authors investigated the impact of marketing innovation on customer satisfaction and loyalty in the context of the Chinese hotel industry. The research found that marketing innovations, such as unique promotional strategies, personalized services, and innovative customer engagement tactics, positively influenced customer satisfaction by creating memorable experiences and fostering emotional connections between customers and the hotel brand (Liu, Liu, & Wang, 2019).

In another study conducted by Kaur and Sharma (2019), the researchers examined the relationship between marketing innovation and customer satisfaction in the Indian retail industry. The study revealed that marketing innovation, including creative advertising campaigns, innovative loyalty programs, and customer-centric marketing strategies, played a crucial role in enhancing customer satisfaction by addressing their needs, preferences, and expectations more effectively (Kaur & Sharma, 2019). The authors emphasized the importance of marketing innovation in attracting and retaining customers in an increasingly competitive market.

Lastly, a study by Akroush et al. (2020) explored the effects of marketing innovation on customer satisfaction in the context of the Jordanian pharmaceutical industry. The research found that marketing innovations, such as the adoption of new product positioning strategies, creative packaging designs, and innovative distribution channels, positively influenced customer satisfaction by offering unique value propositions and meeting the evolving demands of customers (Akroush, Al-Debei, & Al-Abdallah, 2020). These empirical studies collectively highlight the

critical role of marketing innovation in driving customer satisfaction across different industries, underlining its significance in achieving business success and maintaining a competitive edge.

Market innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing OECD (Oslo Manual, 2005). Market innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing firm's sales (Gunday et al., 2011). Market innovations are strongly related to pricing strategies, product package design properties, product placement and promotion activities along the lines of four Ps of marketing (Kotler, 1991).

Nawafleh and Al-Khattab (2019) examined the Impact of Marketing Innovation on Customer Satisfaction in Aqaba Special Economic Zone Authority. The aim of the study was to explore the effect of marketing innovation on customer satisfaction in Aqaba Special Economic Zone Authority. Also, the study involved the effect of each one of the elements of marketing innovation (innovation in marketing, innovation in performance, innovation in culture and innovation in product) on the customer satisfaction level. The result of analysis of the data indicated that there was a statistically significant strong positive relationship between customer satisfaction and marketing innovation. A study by Liu (2019) investigated the relationship between customer satisfaction and firms' innovation efforts in marketing: taking shipping logistics companies as an example. The study indicated that how to make customers arrive at the maximum satisfaction is an important issue in marketing.

Adamu, Hussin and Ismail (2020) sought to find out the effect of marketing innovation on performance of small and medium enterprises in Nigeria. Specifically, the study investigated the relationship between innovative products, pricing, and promotion and distribution strategies with efficiency of small businesses. Outcomes indicated that marketing innovation strategies positively impacted efficiency. The study concluded that based on the positive effect of marketing innovation on many firms, firms should strive toward adopting it in their lines of business operations.

In the same light, Ndesaulwa and Kikula (2016) determine the link between innovative marketing strategies and business efficiency, observed indication from the metal sector in Turkey. Outcomes indicated that innovation (such as product and process innovation) improve their efficiency. This implies the technological improvement impact on the efficiency of Turkish automotive supplier

industry. Likewise, Karabulut, (2015) determine the linkage between innovation and small business efficiency in Malaysia. Results demonstrated the creativity of the brand substantially influences company performance.

2.4 Research Gaps

A number of studies have been carried out to assess the relationship between innovation and customer satisfaction; however, these studies have presented inconclusive findings as some have found positive relationship, whereas others have presented negative relationship. For instance, Thai, Turkina and Simba (2022); Mwarenge and Kinyua (2022); Daragahi (2017); Naveed, Akhtar, Cheema (2012); Omesa (2015); Adamu, Hussin and Ismail (2020) found that there is a positive relationship between innovation and customer satisfaction. Other studies Berggren and Montfort, Masurel and Rijn (2000); Vermeulen, De Jong and Oshaughnessy (2005) found a negative relationship.

A number of studies have been reviewed from different contexts, having used different variables and diverse methodologies. However, there is need to investigate the specific effect of innovation types such as the ones discussed in this study on the customer satisfaction in the telecommunication sector in Kenya. This is because most previous empirical studies as above examples were done in the banking sector hence presenting contextual gap that this study seeks to address. All these contexts face different factors and deal with different innovation services therefore it's true to state that a study on the influence of innovation on customer satisfaction in the context of a Kenyan telecommunication firm has not been done. Hence there is a contextual gap identified. This study filled these identified research gaps by identifying the influence of innovation on customer satisfaction among customers of Safaricom Plc.

Table 2.1: Summary of research gaps

Study	Focus of Study	Findings	Research Gap	Focus of current study
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Mwarenge and Kinyua (2022)	Product innovation as a predictor of organizational performance among micro finance banks in Mombasa County, Kenya.	Product innovation had a positive and significant influence on microfinance bank performance.	Context of study was microfinance banks, and the concept was on the relationship between product innovation and performance.	The context was a telecommunication firm in Kenya and the three types of innovation was used as independent variables.
Daragahi (2017)	The relationship between innovation and customer satisfaction in health products manufacturing companies in Tehran Province	Innovation (open or closed) found to have a positive effect on customer satisfaction (the quality of a product, satisfaction with sales, satisfaction with after-sales services, and the brand of product).	Study focused on health products manufacturing companies in Tehran Province, hence contextual gap.	This research focused on a telecommunication firm in Kenya
Naveed, Akhtar, Cheema (2012).	Investigate the benefits (customer satisfaction and loyalty) and cost (customer dissatisfaction) associated with innovation.	The study found a strong significant association between innovation, customer satisfaction and brand loyalty.	The study used secondary data, hence methodological gap.	The current study used primary data which was quantitative in nature.
Omesa (2015)	Effect of process innovation on financial performance in utility companies in Kenya: a case study of the Kenya power and lighting company	A positive statistically significant relationship between sale of electricity, a measure of the prepaid process innovation and financial performance indicator of return on assets	The study was conducted in the utility sector specifically KPLC and used process innovation as the only study variable.	The current study focused on a telecommunication firm in Kenya and used three types of innovations as variables.

Nawafleh and Al-Khattab (2019)	Impact of Marketing Innovation on Customer Satisfaction in Aqaba Special Economic Zone Authority.	There was a statistically significant strong positive relationship between customer satisfaction and marketing innovation.	Context of study was in economic zone authority	Study focused on the telecommunication sector in Kenya
Ndesaulwa and Kikula (2016)	Determine the link between innovative marketing strategies and business efficiency, observed indication from the metal sector in Turkey	Innovation (such as product and process innovation) improve their efficiency.	Study conducted in the Turkey context and used marketing innovation as the only type of innovation	Study focused three innovations and was conducted in the Kenyan context

Source: Researcher (2023)

2.5 Conceptual Framework

Figure 2.1 shows relationship of study variables, innovation, and customer satisfaction.

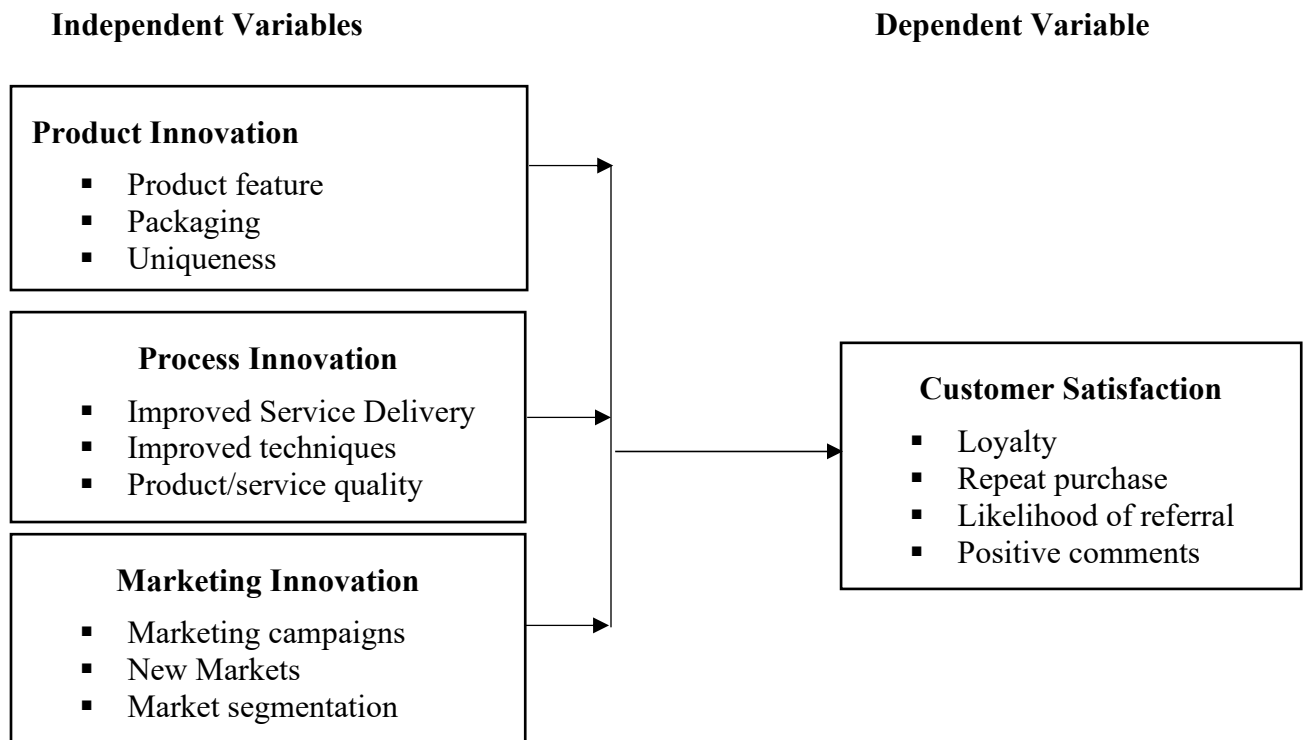


Figure 2.1: Conceptual Framework

Source: Researcher (2023)

In this study, innovation was assessed by examining the three types of innovation, product process and marketing innovations whereas customer satisfaction was measured in terms of loyalty, repeat purchase, and likelihood of referral and positive comments.

2.6 Operationalization of variables

Table 2.2 shows the operationalization of the independent and dependent variables.

Table 2.2: Operationalization of Study Variables

Variable	Indicators	Rating Measures	Supporting Literature	Questionnaire Items
Product Innovation	Product feature	Five Point Scale -Strongly Disagree	Thai, Turkina and Simba (2022);	Section B, Item 1
	Packaging	-Disagree	Mwarenge and Kinyua (2022);	
	Uniqueness	-Neutral -Agree -Strongly Agree	Chemitei and Mukatia (2019).	
	Improved Service Delivery	Five Point Scale -Strongly Disagree	Naveed, Akhtar, Cheema (2012); O’Sullivan and Dooley (2018);	Section B, Item 2
Improved techniques	-Disagree -Neutral -Agree -Strongly Agree	Omesa (2015)		
Process Innovation	Product/service quality	-Agree -Strongly Agree	Nawafleh and Al-Khattab (2019); Liu (2019); Adamu, Hussin and Ismail (2020); Ndesaulwa and Kikula (2016).	Section B, Item 3
	Marketing campaigns	Five Point Scale -Strongly Disagree		
Marketing Innovation	New Markets	-Disagree -Neutral -Agree -Strongly Agree	Jamal and Nasser (2020); Budur and Poturak, (2021); Hajar <i>et al.</i> (2022).	Section B, Item 4
	Market segmentation	-Agree -Strongly Agree		
Customer Satisfaction	Repeat purchase	Five Point Scale -Strongly Disagree	Jamal and Nasser (2020); Budur and Poturak, (2021); Hajar <i>et al.</i> (2022).	Section B, Item 4
	Likelihood of referral	-Disagree -Neutral -Agree -Strongly Agree		
	Positive comments	-Agree -Strongly Agree		

Source: Researcher (2023)

2.7 Chapter Summary

This chapter presents a comprehensive review of relevant literature, discussing the key theories, empirical findings, research gaps, and the conceptual framework underpinning the proposed study. The theoretical review section outlines the key theories relevant to the research topic, providing a brief description of each and explaining how they are applicable to the study. This section also discusses their strengths and weaknesses, as well as any controversies or debates surrounding them. The empirical review section synthesizes the empirical studies conducted in the area of interest. This section also identifies gaps in the existing literature and justifies the need for further research in the area. It discusses the limitations of previous studies, inconsistencies in the findings, and any areas that have been overlooked or insufficiently explored. Finally, the conceptual framework section presents a visual or graphical representation of the key concepts and relationships to be investigated in the study. It illustrates how the theoretical and empirical literature informs the research questions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design that was adopted by the researcher. The chapter highlights the research design and research methodology used to test the variables in accordance with the model and variables presented in the second chapter of the thesis. Specifically, the chapter discusses issues that appertains to research design, population, data collection method, reliability, validity, data analysis and presentation and ethical considerations.

3.2 Research Philosophy

Research philosophy is an important part of research methodology (May & Williams, 2002). Research philosophy is classified as ontology, epistemology, and axiology. These philosophical approaches enable to decide which approach should be adopted by the researcher and why, which is derived from research questions (Saunders, Lewis & Thornhill, 2009). The important assumptions are present in research philosophy which explains about the researcher's' view regarding the world. According to Saunders (2012) research philosophy is an approach of evaluating social phenomena and trying to explain the understandings realized.

There are different types of research philosophies including Positivism philosophy, Realism philosophy and Interpretivist philosophy. According to Positivism philosophy, research strategy is approached on the basis of data collection and hypothesis development (Von, Bernstein & Newton, 1951). Realism is a philosophical approach that posits the existence of an objective reality independent of our perceptions, thoughts, and beliefs. The central tenet of realism is that things exist in the world independently of our knowledge or understanding of them (Audi, 2019). Realists argue against idealistic views which suggest that reality is constructed by our perceptions. In the domain of science, scientific realism holds that the entities and structures posited by scientific theories, including unobservable ones, are real and exist regardless of whether they are observable (Psillos, 2020). Moreover, the interpretation and application of realism can differ across various disciplines, making it a complex and multifaceted philosophy (Devitt, 2020).

Interpretivist philosophy, a qualitative research approach, argues that reality is socially constructed and that the researcher and the subject co-create understanding. Contrary to positivist perspectives

that view reality as objective and independent, interpretivism asserts that knowledge and meaning are subjective and emerge from the interactions between individuals and their environment (Schwandt, 2000). This philosophy advocates for a deep understanding of the social world by interpreting the experiences and social contexts of individuals (Crotty, 1998). Interpretivists emphasize that human behavior is significantly influenced by the cultural, social, and historical contexts within which people live and act (Lincoln & Guba, 2000). Critics, however, argue that the interpretivist approach can lack generalizability due to its focus on specific contexts and individuals (Bryman, 2016). They also challenge its subjectivity, questioning the validity and reliability of the findings (Hammersley, 2013).

This study adopted the positivistic philosophy. Positivism will be critical in this study because it limits the role of the researcher to data collection and interpretation through an objective approach, and the research findings are usually observable and quantifiable.

3.3 Research Design

A research design is the plan that a researcher chooses in order to answer questions in a valid, objective, and accurate manner (Thorpe *et al.*, 2006). This study employed descriptive cross-sectional research design. Descriptive cross-sectional research design was selected because it enables for collection of data in order to answer questions concerning the current status of the subjects in the study. Additionally, in descriptive research, the researcher attempts to establish what influences variables to behave the way they behave though he is not in a position to control what happens to the variables.

3.4 Population

Study population can be considered to be an aggregation of objects or items from which the researcher seeks to obtain a sample (Rubin & Babbie, 2016). This study targeted all the consumer customers of Safaricom Plc (Safaricom subscribers), totaling to 38.4 million as of January 2023 (Safaricom Website, 2023). The customers were selected randomly.

3.5 Sampling Design

As indicated by Orodho (2009), sampling is the process of selecting units/items from accessible population to fairly generalize results to the target population. A subset of a population is called sample (Kothari, 2004). According to Orodho (2003) sampling is a procedure of selecting a

representative of a population on which research can be conducted and inferential conclusion from the study can be applied in general terms to the entire population. This study adopted purposive sampling technique. Purposive sampling, also known as judgmental, selective, or subjective sampling, is a type of non-probability sampling technique in which the researcher relies on their own judgment when choosing members of the population to participate in the study. The primary goal is to focus on particular characteristics of a population that are of interest, which best enables the researcher to answer their research questions. This sampling technique is often used when the population is not well-defined, or when it is difficult to establish a clear sampling frame just like the case of the current study. This justifies why the study adopted purposive sampling method.

This study used of Krejcie and Morgan table to determine the sample size. Krejcie and Morgan (1970) provide a widely used table for determining the sample size needed for a given population size and desired level of precision in a survey or study. To use the table, the desired level of precision or margin of error for the study must be known. This study used 5% level of precision or margin of error. For a population of 38.4 million and a desired level of precision of 5%, the Krejcie and Morgan (1970) table recommends a sample size of 385. Therefore, the study used a sample of 385 customers within Nairobi County.

3.6 Data Collection Methods

The study collected primary data using structured questionnaires. Kothari & Gaurav (2014) posits that questionnaire as data collection tool is suitable tools for social science research as they gather data which is privy observable and they seek details pertaining individual feelings, accomplishments, motivations, attitudes, as well as experience. The questionnaires as data collection tool were availed to the sampled respondents for self-administering via a google link to Safaricom subscribers. Questionnaire was utilized on the grounds that it enables the respondents to give their reactions in a convenient manner. The questionnaire was self-administered to all the customers. The questionnaire contained closed ended questions to guide the respondents' answers within the choices given. The feedback was then downloaded and analyzed.

3.7 Research Quality

Quality research most commonly refers to the scientific process encompassing all aspects of study design; in particular, it pertains to the judgment regarding the match between the methods and questions, selection of subjects, measurement of outcomes, and protection against systematic bias,

nonsystematic bias, and inferential error (Boaz & Ashby, 2003). Four criteria are widely used to appraise the trustworthiness of a research tool: reliability, validity, confirmability, and transferability. The purpose of establishing reliability and validity in research is essentially to ensure that data are sound and replicable, and the results are accurate. The evidence of validity and reliability are prerequisites to assure the integrity and quality of a measurement instrument (Kimberlin & Winterstein, 2008). This study assessed the quality of the study in terms of reliability testing and validity testing.

Pilot test for the questionnaire was carried out in order to validate the research instruments and to identify the major problems that would be encountered during the actual research study. In this study a total of thirty-nine (39) participants that constituted 10% of the sample size (385) were selected for piloting and did not form part of the final analysis units so as to obtain reliable feedback to improve the questionnaire. This was done in conformity with Kothari and Garg (2004) who indicated that pilot sample should constitute at least 10% of the study sample. These results were used to check whether the questions were well understood by the respondents and whether there could be ambiguous ones and to establish validity and reliability of the instruments.

3.7.2 Reliability Test

Reliability refers to the coherence of the measurements achieved; how consistent they are from one instrument administration to another (Taber, 2013). Reliable findings were consistently achieved when information was collected with more than one trial of samples from the same population. Following the pilot study, the Social Sciences Statistics Package (SPSS) was utilized to develop a reliability coefficient for the questionnaire. The internal consistency of the study instrument was evaluated using Cronbach's Alpha. This study used Cronbach's alpha as a reliability testing tool to test the reliability of the questionnaire items.

According to Creswell and Creswell (2017), reliability is defined as scenario where when a person administers a questionnaire as data collection instrument to a respondent twice obtained similar results on the second interview similar to the first outcome. For this to be realized from the test data, this study considered Cronbach alpha coefficient of 0.7 or above. Reliability level of 0.70 is authorized to be adequate for prediction tests or assumption of construct measurements (Shemwell, Chase, & Schwartz, 2015). Consequently, the research values of 0.7 as an acceptable criterion. In other words, numbers over 0.7 shows dependability while values below showed that the research

tool is not reliable. The reliability was determined using the alpha formula of Cronbach by use of SPSS. The results of reliability test are presented in Table 4.3.

Table 3.1: Reliability Test Results

Variable	Number of Items	$\alpha > 0.7$	Comments
Product Innovation	8	0.770	Reliable
Process Innovation	8	0.811	Reliable
Marketing Innovation	8	0.921	Reliable
Customer Satisfaction	9	0.719	Reliable

Source: Survey Data, 2023

Findings in Table 3.1 depicts that the Cronbach’s alpha for all the study variables were greater than the minimum acceptable value of 0.70. Based on findings, all the study variables exhibited strong levels of internal consistency and thus were considered reliable and suitable for data collection.

3.7.2 Validity Test

Validity is a measure that determines how well an instrument accomplishes its goal. According to Creswell (2009); Mohajan (2017) a valid study is one in which the findings can be generalized to subjects and situations other than the specific ones which have been studied. This is ascertained through scrutiny and careful designing of items of the tools with focus on research objectives (Creswell, 2009). The validity of the tools was thus determined by submitting the questionnaires to a contingent of experts who examined the instruments' questions and statements that determined their relation to the study goals in each sub-section. Both content and construct validity were used in this study.

Content validity was tested by submitting the questionnaires to experts and supervisors, in which the questionnaire was subjected to a rigorous scrutiny by supervisors and reviewers in charge of thesis development to ensure content validity. On the other hand, construct validity was tested using KMO. The validity of the responses was tested statistically using Kaiser-Meyer-Olkin (KMO), which was used to establish whether the responses were valid based on their values. The value of KMO should be greater than 0.5 for a data set to be regarded as valid and suitable for statistical analysis (Field, 2013). For questionnaire, the findings of the KMO and Bartlett's Test of Sphericity (significance) was computed and presented as in Table 3.2.

Table 3.2: Validity Test using KMO and Bartlett's Test

Variable	KMO	Significance
Product Innovation	.583	.041
Process Innovation	.533	.046
Marketing Innovation	.612	.002
Customer Satisfaction	.798	.000

Source: Survey Data, 2023

Validity test results in Table 3.2 indicates that the KMO statistic for all the four variables were above 0.5 with critical level of significance, which was set at 0.5 (Field, 2013). Besides the KMO test, the Sphericity test of Bartlett was significant ($p < .05$) for all the variables of the study. These results provided an excellent confirmation of the study variables for further statistical analysis.

3.8 Data Analysis and Presentation

After data had been collected through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keying into statistical package for social sciences (SPSS) computer software for analysis. SPSS was used to analyse the quantitative data collected using the questionnaires. The quantitative data was analysed using descriptive and inferential statistics. The analysis was used to derive conclusions and generalizations regarding the population.

The analysis of variance (ANOVA) was used to check the overall model significance. In particular, the calculated f statistic was compared with the tabulated f statistic. A critical p value of 0.05 was also used to determine whether the overall model is significant or not. A critical p value of 0.05 was used to determine whether the individual variables were significant or not. The relationship between the dependent variable and the independent variables was tested using multiple regression of the model.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where;

Y =Customer Satisfaction

X₁ = Product Innovation

X₂ = Process Innovation

X_3 = Marketing Innovation

In the model, β_0 = the constant term while the coefficient $\beta_i = 1 \dots 3$ were used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables X_1 , X_2 and X_3 . The error (ϵ) term captures the unexplained variations in the model. The results were presented on tables, charts and bars.

3.9 Ethical Consideration

In this study, the researcher upheld the ethical requirements of research. The researcher started by seeking approval from the Strathmore University ethical committee (SU-IERC) to conduct the study; permission was then sought from the National Commission of Science Technology and Innovation (NACOSTI). She introduced herself to the participants and clarified the academic purpose of the study as well as what the research entailed. During the study, three principles of ethics were observed namely beneficence, respect for human dignity as well as justice (Harriss & Atkinson, 2015). The researcher ensured both respect and honesty toward the rights of individuals and without causing any harm to the respondents was priority with utmost confidentiality and privacy assurance. The participants were allowed to freely choose to take part in the study or not. Furthermore, it was of utmost importance that the study's intentions were thoroughly explained to all participants prior to their involvement, as suggested by Babbie (2010). The researcher prioritized maintaining participant confidentiality and anonymity, asking them not to include their names on the questionnaires. Participants were granted full autonomy to decide whether to respond to any questions or not. They were also given the option to discontinue participation at any time due to personal reasons. All such considerations were clearly communicated prior to administering the research instruments.

The researcher took great care to avoid any language or actions that could potentially cause physical or psychological discomfort to participants. During data analysis and reporting stages, the researcher upheld the commitment to truth, reporting the findings as they were, in alignment with the guidelines suggested by Creswell (2014). The researcher acknowledged all utilized information sources within the research report, following Mugenda (2011)'s advice.

3.10 Chapter Summary

This chapter has presented research design that was adopted by the researcher. The chapter highlights the research design and research methodology to be used to test the variables in accordance with the model and variables presented in the second chapter of the thesis. Specifically, the chapter discusses issues that appertains to research design, population, data collection method, reliability, validity, data analysis and presentation and ethical considerations.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter delves into the analysis, presentation of findings, interpretation and discussion of findings per study variables. This chapter serves as a crucial component of this research study, as it allows to present and analyze the data collected in order to draw meaningful conclusions and insights related to the research objectives. This study sought to determine the influence of innovation on customer satisfaction: A case of customers of Safaricom Plc. Specifically, the study sought to; establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc, to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc and to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. In quantitative analysis, both descriptive and inferential statistics were applied. For purposes of descriptive analysis, the results from the field were organized in frequency distribution tables, percentages, means and standard deviations. The summary of the study findings was presented in tables, charts, graphs and in textual forms in order to bring out a more logical and meaningful picture of the data gathered by the researcher.

4.1 Response Rate

The researcher sought to establish the response rate for the questionnaire from the respondents. The response rate is a critical measure of the effectiveness and validity of the research since high response rates indicates a less biased sample, as more responses mean a greater likelihood that the sample accurately reflects the larger population (Babbie, 2010). Conversely, low response rates increase the risk of nonresponse bias, where the views or characteristics of non-respondents differ systematically from those of respondents, potentially skewing the results (Groves, 2006). Therefore, this study determined the response rates to ensure the representativeness of the sample and the robustness of the findings (Baruch & Holtom, 2008).

This study targeted all the consumer customers of Safaricom Plc (Safaricom subscribers), totaling to 38.4 million as of January 2023. This study made use of Krejcie and Morgan table to determine the sample size. This study used 5% level of precision or margin of error. For a population of 38.4 million and a desired level of precision of 5%, the Krejcie and Morgan (1970) table recommends

a sample size of 385. Therefore, the study sample size comprised 385 customers within Nairobi County. Structured questionnaires were administered to the sampled respondents and the response rate was as shown in Table 4.1

Table 4.1: Response Rate

Response	Frequency	Percentage
Returned	336	87.3
Unreturned	49	12.7
Total Administered	385	100

Source: Survey Data, 2023

The results in Table 4.1 depicts that out of the 385 questionnaires administered, 336 were dully filled and returned translating into a response rate of 87.3 percent which was considered excellent for this research. This response rate was found to be in agreement with the assertions by Bailey, Singarayer and Rhodes (2000) that, a response rate of 50% and above is adequate for analysis, while if a response rate is more than 70% is considered excellent for descriptive and inferential analysis.

4.2 Demographic Information

This section presents information on respondents' demographic profiles. The demographic information of the customers of Safaricom Plc. was considered necessary in this study because understanding the demographic characteristics of these customers helps the researcher identify specific market segments and describe their marketing efforts of the company accordingly. Different demographic groups may have distinct preferences, needs, and expectations when it comes to telecommunications services, thus by segmenting the customer base based on demographics, Safaricom can design and deliver innovative solutions that cater to the unique requirements of each group, thereby increasing customer satisfaction. According to Murphy, et al. (2019), although demographic variables cannot be manipulated, researchers can explain relationships between them and the variables of the study. Demographic characteristics of the respondents are discussed below.

4.2.1 Gender of Respondent

The respondents were asked to indicate their genders. This was necessary because it was to help the researcher understand if men and women use Safaricom's services differently, and if their satisfaction levels correspondingly vary with innovations. Customer satisfaction can be influenced by a wide range of factors, and gender is just one aspect to consider. It's also important to ensure that services and innovations are inclusive and accessible to all customers, regardless of their gender. Responses on gender of respondent are presented in Table 4.2 and Figure 4.1.

Table 4.2: Gender of Respondent

Gender	Frequency	Percentage
Male	180	53.6
Female	156	46.4
Total	336	100

Source: Survey Data, 2023

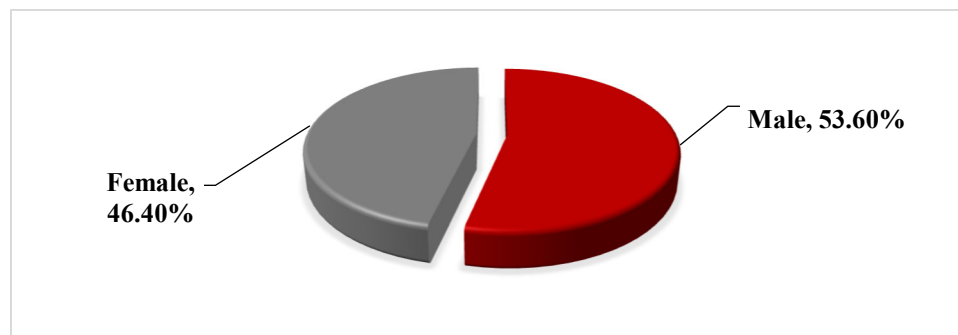


Figure 4.1: Gender of Respondent

Source: Survey Data, 2023

The results in Table 4.2 and Figure 4.1 depicts that most (53.6%) of the respondents were male, and 46.4% were female. These findings provide a basis for understanding the influence of innovation on customer satisfaction while taking gender differences into account. This implies that there is relatively balanced distribution of male and female customers among Safaricom subscribers and that the study captured insights from both genders. This balance is important to

ensure the findings are representative and can be used to identify any significant differences in satisfaction levels between male and female customers in response to innovations.

4.2.2 Age Distribution

The respondents were asked to indicate the age brackets within which they fall. This was necessary in helping the researcher understand the distribution in terms of ages among Safaricom customers, since it is believed that different age groups tend to have varying needs and preferences when it comes to the use of telecom services. For instance, younger customers might be more interested in data packages for internet access, while older customers might prioritize voice call quality and reliability. Responses on age of respondent are presented in Table 4.3 and Figure 4.2.

Table 4.3: Age

	Frequency	Percent
18-35 years	195	58
36-45 years	76	22.6
46-55 years	46	13.7
56 Years and above	19	5.7
Total	336	100

Source: Survey Data, 2023

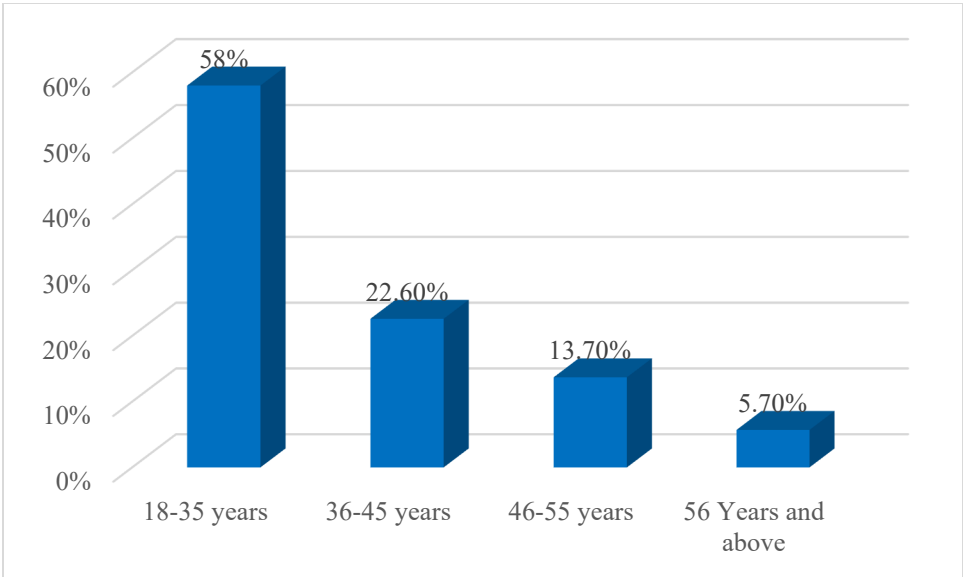


Figure 4.2: Age Distribution

Source: Survey Data, 2023

The findings show that most of the respondents (58%) were aged between 18-35 years. This implies that the largest proportion of Safaricom customers primarily consists of younger customers, typically characterized as digital natives who are comfortable using new technologies. They might be more inclined to use data-intensive services such as streaming, gaming, and social media. Additionally, the findings revealed that the second largest group aged 36-45, formed 22.6% of the customers, 13.7% were aged between 46-55 years, whereas 5.7% which formed the smallest proportion of the customers were aged at least 56 years. Understanding the age distribution of customers is crucial for Safaricom Plc when developing and implementing innovations to enhance customer satisfaction. By considering the needs and preferences of each age bracket, Safaricom can tailor its services to better serve its entire user base, ultimately leading to higher customer satisfaction across all segments.

4.2.3 Level of Education

The respondents were further asked to indicate their highest levels of education. The researcher considered level of education necessary in this research because it would help the researcher to understand technology literacy levels among the customers. Those with higher education levels might be more comfortable using advanced features of telecommunications services, and therefore, might be more open to innovations. Responses on levels of education of respondent are presented in Table 4.4.

Table 4.4: Highest Level of Education

Level of Education	Frequency	Percentage
No formal education	19	5.7
Certificate	111	33
Diploma	100	29.8
Bachelor's degree	70	20.8
Master's degree	30	8.9
Doctorate	6	1.8
Total	336	100

Source: Survey Data, 2023

The findings revealed that the largest segment, representing 33% of customers, had a certificate-level education. These customers likely have a basic understanding of telecommunications

services, and while they may be open to using new technologies, clear instructions and simplified interfaces could enhance their experience and satisfaction levels. Additionally, 29.8% of customers hold a diploma, customers with a bachelor's degree made up 20.8% of the sample, and those with a master's degree (8.9%) and doctorate (1.8%) represented the most educated customer segments. The findings also show that only 5.7% of customers had no formal education, suggesting a need for user-friendly and easily accessible services for this group. The findings imply that Safaricom customers have diverse educational background, highlighting the importance of a differentiated approach to service innovation. Customers with different educational backgrounds might have different needs and expectations from their telecommunications provider. Understanding the education levels of customers can provide valuable insights for Safaricom Plc when developing and implementing new innovations.

4.2.4 Duration of being Customer

Finally, the respondents were asked to indicate the number of years they had been Safaricom customers. This was important in assessing the level of loyalty and satisfaction among the customers, since only satisfied customers can stick along for a longer period of time. Responses on duration of being customer of Safaricom are presented in Table 4.5 and Figure 4.3.

Table 4.5: Duration

	Frequency	Percent
1-2 years	13	3.9
3- 5 years	47	14
6–10 years	39	11.6
>10 years	237	70.5
Total	336	100

Source: Survey Data, 2023

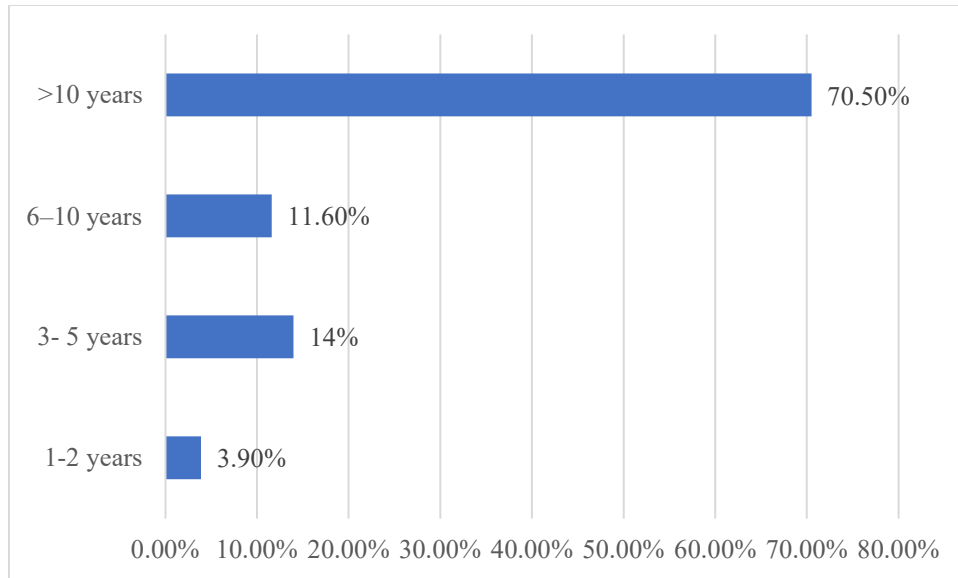


Figure 4.3: Duration of being Customer

Source: Survey Data, 2023

Based on the results, majority (70.5%) of the respondents had been Safaricom subscribers for a period of more than a decade, 14% had been customers of the company for a period of between 3-5 years, 11.6% for between 6-10 years, whereas 3.9% had been customers for at most 2 years. The findings indicate a strong customer loyalty towards Safaricom Plc, with almost three quarters of the customers being subscribers for more than a decade. This loyalty reflects positively on Safaricom's ability to satisfy its customers over a long period. Such long-term customers are likely to have witnessed and adapted to various service changes and innovations. Their satisfaction levels could provide insights into how well Safaricom's innovations have been received over time and how they impact long-term customer retention.

4.4 Descriptive Analysis

Descriptive statistics are used to depict the features of the data in a study. This is because they provide simple summaries about the sample and the measures. Descriptive analysis simply forms the basis of every quantitative analysis of data and includes the mean and standard deviation (Conradie & Paduri 2014). This section presents descriptive analysis results for each of the study variables (product innovation, process innovation, marketing innovation and customer

satisfaction). A Likert scale of 1 to 5 (1 = strongly disagree, 2 = Disagree 3 = Neutral, 4 = Agree, 5 = strongly agree) was used and the mean response rate from the respondents calculated.

4.4.1 Descriptive Statistics on Product Innovation

The first objective was to establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc. The respondents were asked to indicate their levels of agreement/disagreement with statements on product innovation at Safaricom Plc. and their responses were as shown in Table 4.6.

Table 4.6: Descriptive Analysis on Product Innovation

Statement	Mean	Std. Dev.
The company provides innovative products features that have attracted me given my varied needs.	3.86	1.11
The company provides innovative measures that enable me to access money more easily whenever I need it courtesy of mobile money.	3.34	1.44
The company adopts a continuous cycles of product innovations that gives it an edge in meeting my needs.	3.75	1.16
The company has innovative products with high success chances.	3.8	1.36
The company adds features to its products to improve the quality of the product to enhance my satisfaction.	3.58	1.07
The company provides unique options and customizable features that makes its products more attractive.	3.58	1.21
The company ensures improved security by using mobile money.	3.93	1.02
The company has put in place a stable network that enhances communication.	3.74	1.25
Overall Mean	3.70	

Source: Survey Data, 2023

The descriptive statistics results in Table 4.6 indicate that most of the respondents agreed that Safaricom Plc had provided innovative product features that catered to their varied needs (Mean = 3.86, Std. Dev = 1.11). This high percentage suggested a significant level of customer satisfaction regarding Safaricom's product innovation. Additionally, slightly more than half of respondents concurred that Safaricom had implemented innovative measures that facilitated easier access to money through mobile money (Mean = 3.34, Std. Dev = 1.44). This demonstrated the positive impact of mobile money innovations on customer satisfaction, although there was a relatively

higher standard deviation suggesting varied opinions. Moreover, approximately three quarters of respondents believed that Safaricom maintained continuous cycles of product innovations that gave the company an advantage in meeting their needs (Mean = 3.75, Std. Dev = 1.16), indicating that continuous innovation was recognized and appreciated by a majority of customers.

Furthermore, most of respondents constituting the majority agreed that Safaricom had innovative products with high success chances (Mean = 3.8, Std. Dev = 1.36), suggesting confidence in the company's capacity to develop and implement successful innovations. Nearly three quarters of respondents agreed that Safaricom added features to its products to enhance the quality and their satisfaction (Mean = 3.58, Std. Dev = 1.07). This response indicated that the company's efforts to improve product quality through added features were recognized and positively received by a majority of customers. Similarly, majority of the respondents found that Safaricom offered unique options and customizable features, making its products more attractive (Mean = 3.58, Std. Dev = 1.21), reflecting positively on the company's strategy to differentiate their offerings through customization.

Approximately three quarters of respondents agreed that Safaricom ensured improved security by using mobile money (Mean = 3.93, Std. Dev = 1.02). This high percentage showed that the security measures associated with the company's mobile money services were highly regarded by customers. Lastly, most of the respondents agreed that Safaricom had established a stable network that enhanced communication (Mean = 3.74, Std. Dev = 1.25), demonstrating a high level of customer satisfaction with the network stability provided by the company. The overall mean of 3.70 suggested a high level of agreement across all items, indicating a generally positive perception of Safaricom's product innovation. Overall, the data suggested a positive reception to Safaricom's product innovation efforts, with high percentages of agreement across all statements.

4.4.2 Descriptive Statistics on Process Innovation

The second objective was to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc. The respondents were asked to indicate their levels of agreement/disagreement with statements on process innovation at Safaricom Plc. and their responses were as shown in Table 4.7.

Table 4.7: Descriptive Analysis on Process Innovation

Statement	Mean	Std. Dev.
The company has improved its service delivery over the years.	3.93	0.81
The company offers services at competitive rates, and this increases my switching costs.	4.15	1.19
The company offers fair terms on services making it difficult to switch to competitors.	3.79	0.74
The company has improved on its techniques of satisfying my needs	3.96	1.14
I am likely to use Safaricom services given the quality of the services being offered have been improving consistently.	3.95	1.14
The company is focused on implementation of significantly and constantly improved service delivery methods.	3.58	1.15
The company has come up with ways of ensuring customers' needs are addressed promptly.	3.57	1.19
I am likely to use Safaricom products given that it is providing excellent and quality customer support that improves customer satisfaction and loyalty.	4.02	1.00
Overall Mean	3.87	

Source: Survey Data, 2023

The responses in Table 4.7 reflect customers' perceptions of process innovation at Safaricom Plc. The interpretations are based on the combination of 'Agree' and 'Strongly Agree' percentages, and incorporates the mean and standard deviation. Based on the results, a majority of respondents agreed that Safaricom had improved its service delivery over the years (Mean = 3.93, Std. Dev = 0.81). This indicates that customers recognized and most of respondents representing majority agreed that Safaricom offered services at competitive rates, which increased their switching costs (Mean = 4.15, Std. Dev = 1.19). This suggested that the cost-effectiveness of Safaricom's services acted as a barrier to switching to competitors and was therefore a significant factor in customer retention.

Moreover, majority of customers agreed that the company offered fair terms on services, making it difficult to switch to competitors (Mean = 3.79, Std. Dev = 0.74). This indicated that the fairness of Safaricom's terms of service was a key factor in customers' decision to stay with the company. Approximately four fifths of respondents agreed that Safaricom had improved its techniques for satisfying customer needs (Mean = 3.96, Std. Dev = 1.14). This revealed a strong appreciation of Safaricom's efforts to innovate its processes to better meet customer needs. In terms of the

likelihood of using Safaricom services due to consistent quality improvements, majority of respondents agreed (Mean = 3.95, Std. Dev = 1.14). This suggests that customers were highly likely to continue using Safaricom services due to their perception of consistent quality improvements.

Similarly, most of respondents agreed that Safaricom was focused on implementing significantly and constantly improved service delivery methods (Mean = 3.58, Std. Dev = 1.15). This indicated that most customers believed in the company's commitment to continuous process innovation. In addition, most of respondents agreed that Safaricom had developed ways to ensure customers' needs were addressed promptly (Mean = 3.57, Std. Dev = 1.19). This showed that a majority of customers appreciated Safaricom's efforts to promptly address their needs, which is a key aspect of customer satisfaction. Finally, a significant majority of customers agreed they were likely to use Safaricom products given the excellent and quality customer support that improved customer satisfaction and loyalty (Mean = 4.02, Std. Dev = 1.00). This suggested a strong linkage between the quality of customer support and customers' likelihood of using Safaricom products. Overall, the data suggested a positive perception of Safaricom's process innovation among customers, with an overall mean of 3.87 reflecting general agreement across all items.

4.4.3 Descriptive Statistics on Marketing Innovation

The third objective was to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. The respondents were asked to indicate their levels of agreement/disagreement with statements on marketing innovation at Safaricom Plc. and their responses were as shown in Table 4.8.

Table 4.8: Descriptive Analysis on Marketing Innovation

Statement	Mean	Std. Dev.
The company is adopting modern marketing techniques to reach more customers.	3.76	1.08
The company invests in market innovation hence has increased market share and customer base.	3.97	1.09
I am likely to access all the services being offered by Safaricom. Plc. given that they have agents in different regions which ensures that the reach of services and products is wide.	3.85	1.16
I am likely to use the company's products given that I am easily attracted to the products marketed with highlights on their core features.	3.97	1.10

The company is continuously coming up with innovative marketing techniques for new products and services.	3.76	1.01
The company uses innovative marketing techniques to create new campaigns allow them to leap in their customer numbers, helping them to beat the competition that exists in the sector.	4.26	0.84
The company adopts innovative marketing strategies that includes campaigns that combine humor with creativity being adopted by Safaricom Plc. and this is appealing to me as a customer.	3.37	1.25
The company is creating emotional bond that goes beyond rationality, so that I identify with the values and message of their brand.	4.00	1.10
Overall Mean	3.87	

Source: Survey Data, 2023

Based on the results in Table 4.8, a majority of respondents agreed that the company is adopting modern marketing techniques to reach more customers, with a mean response of 3.76 and a standard deviation of 1.08. This indicates that there is a relatively high level of agreement with this statement, but there is also some dispersion in the responses. Second, majority of the respondents agreed that Safaricom invests in market innovation, which has increased its market share and customer base. This statement had a mean score of 3.97 and a standard deviation of 1.09, suggesting a high level of agreement but with some variation in responses.

Additionally, the statement about the accessibility of all services offered by Safaricom due to their agents in different regions received an agreement from most of respondents, with a mean score of 3.85 and a standard deviation of 1.16, implying a positive perception of the company's distribution of services. Moreover, most of respondents agreed that they are likely to use the company's products because they are attracted to the products marketed with highlights on their core features. This statement had a mean score of 3.97 and a standard deviation of 1.10. Further, the statement that the company is continuously coming up with innovative marketing techniques for new products and services garnered an agreement from majority of respondents, with a mean score of 3.76 and a standard deviation of 1.01.

Moreover, a very high proportion of respondents agreed that the company uses innovative marketing techniques to create new campaigns allowing them to increase their customer numbers and beat the competition. This statement had the highest mean score of 4.26 and the lowest standard deviation of 0.84, indicating a strong consensus among respondents. About most of

respondents agreed that the company adopts innovative marketing strategies that include campaigns combining humor and creativity, with a mean score of 3.37 and the highest standard deviation of 1.25, signifying a widespread in responses. Lastly, the statement that the company is creating an emotional bond with customers that goes beyond rationality, enabling customers to identify with the values and message of their brand, received an agreement from majority of respondents. The mean score for this statement was 4.00 and the standard deviation was 1.10. The overall mean score for all the statements was 3.87, suggesting a generally positive perception of the company's marketing innovation, although there is some variation in responses as suggested by the individual standard deviations.

4.4.4 Descriptive Statistics on Customer Satisfaction

The dependent variable was customer satisfaction for customers of Safaricom Plc. The respondents were asked to indicate their levels of agreement/disagreement with statements on customer satisfaction and their responses were as shown in Table 4.9.

Table 4.9: Descriptive Analysis on Customer Satisfaction

Statement	Mean	Std. Dev.
I have been a Safaricom Plc. customer for a long period of time because of its improved customer services.	4.18	0.62
The company has registered significant reduction in fraudulent activities since the introduction of Know your customer by Safaricom Plc.	3.87	0.89
I have remained loyal to Safaricom Plc for the longest time.	4.03	0.81
I refer my friends and colleagues to this company because of their services and products.	4.13	0.82
I have not had any complaints over the past 10 years.	4.67	0.67
I am satisfied with Safaricom Plc products and services because the company has continuously provided automated services to customers.	4.05	0.69
I have established a long-term relationship with Safaricom Plc.	4.26	0.61
I normally give positive feedback about the company services and product.	4.38	0.69
I am satisfied with the services I receive from this company.	4.08	0.65
Overall Mean	4.18	

Source: Survey Data, 2023

Based on the results in Table 4.9, a majority of respondents agreed that they had been a Safaricom Plc. customer for a long period of time because of its improved customer services. This statement had a mean response of 4.18 and a standard deviation of 0.62, indicating a high level of agreement

and relatively low dispersion in the responses. Additionally, most of respondents agreed that the company had registered a significant reduction in fraudulent activities since the introduction of the Know Your Customer initiative by Safaricom Plc. This statement had a mean score of 3.87 and a standard deviation of 0.89, suggesting a positive perception but with some variation in responses. Further, most of respondents agreed that they have remained loyal to Safaricom Plc for the longest time, with a mean score of 4.03 and a standard deviation of 0.81.

Moreover, a vast majority of respondents agreed that they referred their friends and colleagues to the company because of its services and products. This statement had a mean score of 4.13 and a standard deviation of 0.82. An overwhelming majority of respondents agreed that they had not had any complaints over the past 10 years, with a mean score of 4.67 and a standard deviation of 0.67. This statement had the highest mean and indicates a very high level of satisfaction among respondents. Similarly, most of respondents agreed that they were satisfied with Safaricom Plc products and services because the company has continuously provided automated services to customers. This statement had a mean score of 4.05 and a standard deviation of 0.69.

The results show that a high percentage of respondents agreed that they have established a long-term relationship with Safaricom Plc, with a mean score of 4.26 and a standard deviation of 0.61. This statement had the lowest standard deviation, suggesting a strong consensus among respondents. Furthermore, almost all of respondents agreed that they normally give positive feedback about the company services and products. This statement had a mean score of 4.38 and a standard deviation of 0.69. Lastly, majority of respondents agreed that they are satisfied with the services they receive from the company, with a mean score of 4.08 and a standard deviation of 0.65. The overall mean score for all the statements was 4.18, indicating a high level of customer satisfaction for customers of Safaricom Plc. The relatively low standard deviations for each statement suggest that there is a strong consensus among respondents regarding their satisfaction with the company's products and services.

4.5 Inferential Analysis

This section presents both correlation and regression results regarding the influence of innovation on customer satisfaction for customers of Safaricom Plc.

4.5.1 Correlation Analysis Results

Correlation analysis is a statistical method used to determine if there's a significant association between two variables (Shrestha, 2020). This technique is used to determine whether one variable impact another, and to forecast future observations. The strength and direction of this association are measured using a correlation coefficient, typically denoted by the letter 'r'. The correlation coefficient ranges from -1 to 1. A high correlation means that two or more variables have a strong relationship with each other, while a weak correlation means that the variables are hardly related (Jihadi et al., 2021). This analysis is fundamentally based on the assumption of a straight-line linear relationship between the quantitative variables, and it measures the strength or the extent of an association between the variables and also its direction

This study carried out correlations analysis to assess the nature and the strength of the association between innovation and customer satisfaction for customers of Safaricom Plc. Correlation coefficient was computed and used to test whether there existed interdependency between independent variables and also whether the independent variables were associated to the dependent variable. The results for the correlation in the study are as presented on Table 4.10.

Table 4.9: Correlation Matrix

		Customer Satisfaction	Product Innovation	Process Innovation	Marketing Innovation
Customer Satisfaction	Pearson Correlation	1.000			
	Sig. (2-tailed)				
Product Innovation	Pearson Correlation	.795**	1.000		
	Sig. (2-tailed)	0.000		0.000	
Process Innovation	Pearson Correlation	.618**	.518**	1.000	
	Sig. (2-tailed)	0.000	0.000		
Marketing Innovation	Pearson Correlation	.776**	.615**	.560**	1.000
	Sig. (2-tailed)	0.000	0.000	0.000	

** Correlation is significant at the 0.01 level (2-tailed).

Source: Survey Data, 2023

The correlation analysis performed in the study and presented in Table 4.10 revealed significant associations between customer satisfaction and the three types of innovation examined: product innovation, process innovation, and marketing innovation. Customer satisfaction was found to have a strong positive and significant association with product innovation, as denoted by a strong Pearson correlation coefficient of 0.795. This implies that the higher the level of product innovation implemented by Safaricom Plc, the higher the level of customer satisfaction was likely to be. This correlation was statistically significant at the 0.01 level. This is consistent with the findings of Lebdaoui and Robaina (2020) which confirmed a positive link between product innovation and customer satisfaction, highlighting the significance of innovation in attracting and retaining customers in a highly competitive market.

Similarly, process innovation had a positive and significant association with customer satisfaction, as indicated by a strong Pearson correlation coefficient of 0.618. This finding suggests that improvements in process innovation were also associated with increased customer satisfaction, though the relationship was not as strong as it was with product innovation. This correlation was statistically significant at the 0.01 level. This finding concurs with those of Hassan et al. (2019) which underscored the importance of continuous process improvement for organizations aiming to maintain a competitive edge and increase customer satisfaction.

Moreover, marketing innovation demonstrated a strong positive correlation with customer satisfaction, with a strong Pearson correlation coefficient of 0.776, suggesting that more innovative marketing practices were likely associated with higher levels of customer satisfaction. This correlation was statistically significant at the 0.01 level. The findings are in support of the conclusion made by Nawafleh and Al-Khattab (2019) that there exists statistically significant strong positive relationship between customer satisfaction and marketing innovation.

Additionally, there were interdependencies found among the independent variables themselves. Product innovation was moderately correlated with both process innovation ($r = 0.518$) and marketing innovation ($r = 0.615$), suggesting that these different types of innovation often went hand-in-hand within Safaricom Plc. Process and marketing innovation were also moderately correlated ($r = 0.560$), further supporting the idea of interdependency among the independent variables. In general, the correlations were statistically significant at the 0.01 level, providing strong evidence that these relationships were not due to chance. The results of this study highlight

the important role that different types of innovation can play in enhancing customer satisfaction within a company.

4.5.2 Regression between Product Innovation and Customer Satisfaction

Regression analysis was carried out in order to establish the relationship between product innovations and customer satisfaction for customers of Safaricom Plc. The summary of the regression findings is shown in Table 4.11.

Table 4.10 Model Summary for Product Innovation and Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.795a	0.632	0.631	0.48512

a. Predictors: (Constant), Product Innovation

Source: Survey Data, 2023

The regression tests showed an extracted R square value of (0.632). This implies that product innovation explains 63.2% of the change in customer satisfaction for customers of Safaricom Plc. with the remaining 36.8% being attributed to other factors not considered in the regression model. Table 4.11 shows analysis of variance results.

Table 4.12 ANOVA for Product Innovation and Customer Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	135.084	1	135.084	574	.000 ^b
	Residual	78.603	334	0.235		
	Total	213.687	335			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Product Innovation

Source: Survey Data, 2023

The ANOVA findings presented in Table 4.12, show that the F-statistic value is 574 with a p-value of 0.000. This indicates that; $F(1,335) = 574, p = 0.000$ (p-value < 0.000). This implies that the model used was significant in explaining the relationship between product innovations and

customer satisfaction for customers of Safaricom Plc. Table 4.13 shows regression coefficient results.

Table 4.13: Regression Coefficient for Product Innovation and Customer Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.821	0.099		8.293	0.000
	Product Innovation	0.707	0.03	0.795	23.958	0.000

a. Dependent Variable: Customer Satisfaction

Source: Survey Data, 2023

$$Y = 0.821 + 0.707X_1$$

The resulting regression coefficients of the study variables showed a positive and significant relationship between product innovation and customer satisfaction ($\beta=0.707$, $p\text{-value}=0.000<0.05$). This implies that for every unit change in product innovation, there will be an expected 0.707 unit change in customer satisfaction for customers of Safaricom Plc.

4.5.3 Regression between Process Innovation and Customer Satisfaction

Regression analysis was carried out in order to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc. The summary of the regression findings is shown in Table 4.13.

Table 4.14 Model Summary for Process Innovation and Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618a	0.516	0.515	0.55648

a. Predictors: (Constant), Process Innovation

Source: Survey Data, 2023

The regression tests showed an extracted R square value of (0.516). This implies that process innovation explains 51.6% of the change in customer satisfaction for customers of Safaricom Plc. with the remaining 48.4% being attributed to other factors not considered in the regression model. Table 4.14 shows analysis of variance results.

Table 4.15 ANOVA for Process Innovation and Customer Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	110.257	1	110.257	356.043	.000 ^b
	Residual	103.431	334	0.31		
	Total	213.687	335			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Process Innovation

Source: Survey Data, 2023

The ANOVA findings presented in Table 4.14, show that the F-statistic value is 356.043 with a p-value of 0.000. This indicates that; $F(1,335) = 356.043$, $p = 0.000$ ($p\text{-value} < 0.000$). This implies that the model used was significant in explaining the relationship between process innovations and customer satisfaction for customers of Safaricom Plc. Table 4.15 shows regression coefficient results.

Table 4.16: Regression Coefficient for Process Innovation and Customer Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.834	0.124		6.718	0.000
	Process Innovation	0.674	0.036	0.718	18.869	0.000

a. Dependent Variable: Customer Satisfaction

Source: Survey Data, 2023

$$Y = 0.834 + 0.674X_2$$

The resulting regression coefficients of the study variables showed a positive and significant relationship between process innovation and customer satisfaction ($\beta=0.674$, $p\text{-value}=0.000<0.05$). This implies that for every unit change in process innovation, there will be an expected 0.674 unit change in customer satisfaction for customers of Safaricom Plc.

4.5.4 Regression between Marketing Innovation and Customer Satisfaction

Regression analysis was carried out in order to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. The summary of the regression findings is shown in Table 4.17.

Table 4.17 Model Summary for Marketing Innovation and Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776a	0.603	0.602	0.50405

a. Predictors: (Constant), Marketing Innovation

Source: Survey Data, 2023

The regression tests showed an extracted R square value of (0.603). This implies that marketing innovation explains 60.3% of the change in customer satisfaction for customers of Safaricom Plc. with the remaining 39.7% being attributed to other factors not considered in the regression model. Table 4.17 shows analysis of variance results.

Table 4.18 ANOVA for Marketing Innovation and Customer Satisfaction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.828	1	128.828	507.053	.000 ^b
	Residual	84.86	334	0.254		
	Total	213.687	335			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Marketing Innovation

Source: Survey Data, 2023

The ANOVA findings presented in Table 4.17, show that the F-statistic value is 507.053 with a p-value of 0.000. This indicates that; $F(1,335) = 507.053$, $p = 0.000$ ($p\text{-value} < 0.000$). This implies that the model used was significant in explaining the relationship between marketing innovations and customer satisfaction for customers of Safaricom Plc. Table 4.18 shows regression coefficient results.

Table 4.19: Regression Coefficient for Marketing Innovation and Customer Satisfaction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.568	0.116		4.895	0.000

Marketing Innovation	0.755	0.034	0.776	22.518	0.000
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a. Dependent Variable: Customer Satisfaction

Source: Survey Data, 2023

$$Y = 0.568 + 0.755X_3$$

The resulting regression coefficients of the study variables showed a positive and significant relationship between marketing innovation and customer satisfaction ($\beta=0.755$, $p\text{-value}=0.000<0.05$). This implies that for every unit change in marketing innovation, there will be an expected 0.755 unit change in customer satisfaction for customers of Safaricom Plc.

4.5.5 Multiple Linear Regression Analysis Results

Regression analysis is a statistical method that is used to examine the relationship between two or more variables of interest. Regression analyses predict the exact value of the dependent variable for any given value of the independent variable(s), provided that the relationship between these variables is linear. For the case of this study multiple regression analysis was conducted to establish the overall statistical significance and relationship between innovation and customer satisfaction for customers of Safaricom Plc. The model summary results are shown in Table 4.20.

Table 4.20: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.895a	0.802	0.800	0.35742

a Predictors: (Constant), Marketing Innovation, Process Innovation, Product Innovation

Source: Survey Data, 2023

The results in Table 4.19 shows a coefficient of determination (R^2) of 0.802 which implies that 80.2% of the variance in the dependent variable was explained by the model. This is a very high value, indicating a good fit of the model. This coefficient of determination indicates that the independent variables used in this study of product innovation, process innovation and marketing innovation were jointly responsible for 80.2% of the variation in customer satisfaction for customers of Safaricom. The adjusted R squared of 0.800 depicts that the same independent variables in exclusion of the constant variable explains the variation in customer satisfaction by 80.0%. The remaining 19.8% of the variation in customer satisfaction for customers of Safaricom Plc. can be accounted for by other factors which were not part of the current model. In general,

the model summary indicates that marketing innovation, process innovation, and product innovation are strong predictors of the customer satisfaction for customers of Safaricom. These variables collectively explain 80% of the variance in the dependent variable, and the model's predictions are estimated to have a standard deviation of 0.35742. Results in Table 4.20 shows analysis of variance results.

Table 4.21: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	171.274	3	57.091	446.902	.000 ^b
	Residual	42.413	332	0.128		
	Total	213.687	335			

a. Dependent Variable: Customer Satisfaction

b. Predictors: (Constant), Marketing Innovation, Process Innovation, Product Innovation

Source: Survey Data, 2023

The analysis of variance results in Table 4.20 indicate that the model adopted in this study was statistically significant in explaining the influence of innovation (product innovation, process innovation, and marketing innovation) on customer satisfaction for customers of Safaricom Plc. as indicated by a p-value of $0.000 < 0.05$. Table 4.21 depicts regression coefficient results.

Table 4.22: Multiple Regression of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error			
1	(Constant)	0.115	0.092		1.252	0.211
	Product Innovation	0.355	0.03	0.399	11.669	0.000
	Process Innovation	0.239	0.031	0.254	7.829	0.001
	Marketing Innovation	0.378	0.032	0.389	11.996	0.000

a. Dependent Variable: Customer Satisfaction

Source: Survey Data, 2023

The regression model therefore became;

$$Y = 0.115 + 0.355X_1 + 0.239X_2 + 0.378X_3$$

Where:

Y = Customer Satisfaction

X₁ = Product Innovation

X_2 = Process Innovation

X_3 = Marketing Innovation

The results in Table 4.21 depicts the results of a multiple regression analysis examining the relationships between various innovations (product innovation, process innovation, and marketing innovation) and customer satisfaction. The coefficients, standard errors, standardized coefficients (beta), t-statistics, and significance (p-values) are reported for each independent variable. The results revealed a constant term of 0.115, representing the expected value of customer satisfaction when all the three innovations are equal to zero. This implies that if Safaricom were not to implement any of the three innovations, the model would predict their customer satisfaction value of 0.115.

The findings revealed a positive and significant relationship between product innovation and customer satisfaction ($\beta = .355$, $p = .000 < .05$). This suggests that for every one-unit increase in the product innovation adoption by Safaricom, there is an expected 0.355-unit increase in customer satisfaction. This was supported by a t-statistic of 11.669 which is greater than the critical t-statistics of 1.96. This indicates that the product innovation has a statistically significant positive impact on customer satisfaction for customers of Safaricom Plc. These findings suggest that enhancing product innovation can lead to improved customer satisfaction, underlining the crucial role of product innovation in driving customer satisfaction in the context of the company analyzed.

Secondly, the study findings revealed that there existed a positive and significant relationship between process innovation and customer satisfaction ($\beta = .239$, $p = .001 < .05$). The t-statistic is $7.829 > 1.96$. This suggests that for every one-unit increase in the process innovation at Safaricom, there is an expected 0.239-unit increase in customer satisfaction. This implies that the process innovation has a statistically significant positive impact on customer satisfaction for customers of Safaricom Plc. The findings imply that increases in process innovation are associated with increases in customer satisfaction at the company. Essentially, when the company introduces new or improved operational processes, it is likely to result in higher levels of satisfaction among their customers due to various reasons such as improved service delivery, better product quality, or more efficient customer service, all of which could result from effective process innovation. This concurs with the observations of Bergfors and Larsson (2019) who noted that process innovation

is driven by a firm's internal production objectives and process innovation tends to enhance the operational effectiveness and efficiency of a firm.

Finally, the study found a positive and significant relationship between marketing innovation and customer satisfaction ($\beta = .378$, $p = .000 < .05$). This suggests that for every one-unit increase in the marketing innovation, there is a 0.378-unit expected increase in customer satisfaction. The t-statistic is $11.996 > 1.96$, implying that the marketing innovation has a statistically significant positive impact on customer satisfaction for customers of Safaricom Plc. In conclusion, the multiple regression results suggest that all three innovations have a statistically significant positive impact on customer satisfaction at Safaricom. This is in agreement with the conclusion made by Adamu, Hussin and Ismail (2020) that marketing innovation strategies positively impact efficiency and that firms should strive toward adopting marketing innovation in their lines of business operations to achieve customer satisfaction.

CHAPTER FIVE

DISCUSSION OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a discussion of findings, conclusions and recommendations of the study. Firstly, the summary of the entire study is presented. The conclusion and recommendations are presented as per the study objectives. In addition, this chapter presents suggestions for further studies.

5.2 Discussion of Findings

This study determined the influence of innovation on customer satisfaction: A case of customers of Safaricom Plc. Specifically, the study sought to; establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc, to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc and to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. The discussion was done in light of the specific objectives.

5.2.1 Product Innovation and Customer Satisfaction

The first objective was to establish the influence of product innovation on customer satisfaction for customers of Safaricom Plc. Descriptive analysis results revealed that most of the respondents agreed that Safaricom Plc had provided innovative product features that catered to their varied needs. This high percentage suggested a significant level of customer satisfaction regarding Safaricom's product innovation. Additionally, slightly more than half of respondents concurred that Safaricom had implemented innovative measures that facilitated easier access to money through mobile money. This demonstrated the positive impact of mobile money innovations on customer satisfaction, although there was a relatively higher standard deviation suggesting varied opinions. Moreover, approximately three quarters of respondents believed that Safaricom maintained continuous cycles of product innovations that gave the company an advantage in meeting their needs, indicating that continuous innovation was recognized and appreciated by a majority of customers. These findings seem to agree with the assertions by Mwarenge and Kinyua

(2022) who indicated that product innovation has significant influence on microfinance bank performance.

The correlation analysis results revealed that customer satisfaction had a strong positive and significant association with product innovation, implying that the higher the level of product innovation implemented by Safaricom Plc, the higher the level of customer satisfaction was likely to be. Finally, the regression analysis results revealed a positive and significant relationship between product innovation and customer satisfaction. These findings seem to be consistent with the findings of Lebdaoui and Robaina (2020) which confirmed a positive link between product innovation and customer satisfaction, highlighting the significance of innovation in attracting and retaining customers in a highly competitive market. The findings are further consistent with those of Rahman et al. (2019) which examined the impact of product innovation on customer satisfaction in the banking sector, focusing on new financial products and services. The study was done with a primary focus on the introduction of novel financial products and services; Lopes and Rodrigues (2019), which investigated the influence of product innovation on customer satisfaction in the Portuguese telecommunications industry. Moreover, the findings agree with Daragahi (2017) who examined the relationship between innovation and customer satisfaction in health products manufacturing companies in Tehran Province in Iran.

5.2.2 Process Innovation and Customer Satisfaction

The second objective of this study was to establish the influence of process innovation on customer satisfaction for customers of Safaricom Plc. The study findings revealed that a majority of respondents, at 88.8%, agreed that Safaricom had improved its service delivery over the years, most of respondents representing majority agreed that Safaricom offered services at competitive rates, which increased their switching costs and majority of them agreed that the company offered fair terms on services, making it difficult to switch to competitors. This indicated that the fairness of Safaricom's terms of service was a key factor in customers' decision to stay with the company. Approximately four fifths of respondents agreed that Safaricom had improved its techniques for satisfying customer needs. This revealed a strong appreciation of Safaricom's efforts to innovate its processes to better meet customer needs. In terms of the likelihood of using Safaricom services due to consistent quality improvements, most of respondents agreed, suggesting that customers were highly likely to continue using Safaricom services due to their perception of consistent

quality improvements. Similarly, the study found out that most of customers agreed that Safaricom was focused on implementing significantly and constantly improved service delivery methods. These descriptive statistics were found to be consistent with the observation by Tavakoli et al. (2019) that, process innovations, such as the implementation of new technologies, streamlining operations, and enhancing service delivery, positively influences customer satisfaction by improving service quality, reducing waiting times, and increasing overall convenience for customers.

Correlation analysis results indicated that process innovation had a positive and significant association with customer satisfaction. This finding suggests that improvements in process innovation were also associated with increased customer satisfaction, though the relationship was not as strong as it was with product innovation. This finding seems to agree with those of Hassan et al. (2019) which underscored the importance of continuous process improvement for organizations aiming to maintain a competitive edge and increase customer satisfaction. Finally, regression analysis results pointed out a positive and significant relationship between process innovation and customer satisfaction. This implies that the process innovation has a statistically significant positive impact on customer satisfaction for customers of Safaricom Plc. These findings seem to be consistent with the conclusion made by Omachonu and Einspruch, (2020) that process innovation aims to improve supporting activities such as computing, accounting, purchasing and maintenance.

The findings are in agreement with Agbor and Osibanjo (2020) which indicated that process innovations, such as the introduction of new billing systems, enhanced network management, and improved customer service processes, significantly influenced customer satisfaction by providing a more seamless and satisfying experience for subscribers (Agbor & Osibanjo, 2020). Process innovation is intended to decrease unit costs of production, to increase quality and to improve delivery of products and services (Oke et al., 2007).

Moreover, the findings concur with those of Naveed, Akhtar, Cheema (2012) which sought to investigate the benefits (customer satisfaction and loyalty) and cost (customer dissatisfaction) associated with innovation and found a strong significant association between innovation, customer satisfaction and brand loyalty. A study by O'Sullivan and Dooley (2018) indicated that a process involves linking a set of activities designed to change input into output which is offered

to the consumer. Bergfors and Larsson (2019) also noted that process innovation is driven by a firm's internal production objectives. Arguably, process innovation tends to enhance the operational effectiveness and efficiency of a firm. Omachonu and Einspruch, (2020) argue that process innovation involves implementing improved production or a new delivery method using new equipment, techniques and software. They contend that process innovation aims to improve supporting activities such as computing, accounting, purchasing and maintenance. Arguably, process innovation involves several aspects of a business day to day functions such as human resource, manufacturing, commercial activities and management, technical design and commercial activities. Omesa (2015) showed a positive statistically significant relationship between sale of electricity, a measure of the prepaid process innovation and financial performance indicator of return on assets. Since the study focused on KPLC and used process innovation as the main independent variable, both contextual and conceptual gaps are evident.

5.2.3 Marketing Innovation and Customer Satisfaction

The third objective of the study was to establish the influence of marketing innovation on customer satisfaction for customers of Safaricom Plc. Descriptive analysis results revealed that a majority of respondents agreed the company was adopting modern marketing techniques to reach more customers. This indicates that there is a relatively high level of agreement with this statement, but there is also some dispersion in the responses. Second, majority of the respondents agreed that Safaricom invested in market innovation, which had increased its market share and customer base. Additionally, the study found that the statement about the accessibility of all services offered by Safaricom due to their agents in different regions received an agreement from most of respondents. Moreover, the established that most of customers agreed that they were likely to use the company's products because they were attracted to the products marketed with highlights on their core features. Further, the statement that the company is continuously coming up with innovative marketing techniques for new products and services garnered an agreement from majority of respondents. The findings are in agreement with the assertions by Liu (2019) who indicated that how to make customers arrive at the maximum satisfaction is an important issue in marketing.

In addition to descriptive analysis, correlations analysis was conducted to assess the nature and the strength of the association between marketing innovation and customer satisfaction at Safaricom. The study found that marketing innovation demonstrated a strong positive correlation with

customer satisfaction, suggesting that more innovative marketing practices were likely associated with higher levels of customer satisfaction. Finally, regression analysis findings revealed a positive and significant relationship between marketing innovation and customer satisfaction. The findings were found to be in support of the conclusion made by Nawafleh and Al-Khattab (2019) that there exists statistically significant strong positive relationship between customer satisfaction and marketing innovation.

The findings are also in agreement with those of Akroush et al. (2020) who found that that marketing innovations, such as the adoption of new product positioning strategies, creative packaging designs, and innovative distribution channels, positively influenced customer satisfaction by offering unique value propositions and meeting the evolving demands of customers (Akroush, Al-Debei, & Al-Abdallah, 2020). Market innovation is the implementation of a new marketing method involving significant changes in product design or packaging, product placement, product promotion or pricing OECD (Oslo Manual, 2005).

Market innovations target at addressing customer needs better, opening up new markets, or newly positioning a firm's product on the market with the intention of increasing firm's sales (Gunday et al., 2011). Market innovations are strongly related to pricing strategies, product package design properties, product placement and promotion activities along the lines of four Ps of marketing (Kotler, 1991). Also, the study findings concur with those of Ndesaulwa and Kikula (2016) who determine the link between innovative marketing strategies and business efficiency, observed indication from the metal sector in Turkey and outcomes indicated that innovation (such as product and process innovation) improve their efficiency. This implies the technological improvement impact on the efficiency of Turkish automotive supplier industry.

5.3 Conclusions

Based on the findings, this study concludes that various forms of innovations used in this study - product, process, and marketing innovation each have a significant and positive impact on customer satisfaction for customers of Safaricom Plc. This indicates that when the company introduces new or improved products, optimizes its processes, or implements innovative marketing strategies, it tends to result in higher levels of customer satisfaction. Given these findings, it's evident that innovation plays a crucial role in driving customer satisfaction for customers of Safaricom Plc. It highlights the importance of continuous innovation for the company in order to

maintain and enhance customer satisfaction, and ultimately, to succeed in a competitive business environment. These results also suggest that other companies in the industry could potentially increase their own customer satisfaction levels by similarly focusing on various forms of innovation.

The study concludes that product innovation can lead to more attractive and functional offerings that better meet the needs and preferences of customers, thereby increasing satisfaction. When Safaricom Plc. brings about innovative changes in its product offerings, making them more attractive or functional, it can better cater to the needs and preferences of its customers. Such product innovations include the introduction of new features, improvements in user-friendliness, or increased product reliability, among other things. When customers find these offerings more aligned with their needs, it significantly enhances their satisfaction levels. This, in turn, can lead to stronger customer loyalty, positive word-of-mouth, and potentially, an increased market share for the company. Therefore, product innovation is not just a pathway to competitiveness but also a key driver of customer satisfaction.

Additionally, the study concludes that process innovation, enhances the efficiency and effectiveness of the company's operations, which leads to improved product quality, faster service delivery, or other benefits for customers, again boosting satisfaction levels at the company. Based on the findings, process innovation involves changes in the ways services are delivered or products are created and developed, typically aiming at increasing efficiency and effectiveness. At Safaricom these changes include the introduction of new technologies, streamlining of operations, or adoption of new strategies to reduce operational costs. Thus, the study concludes that when Safaricom Plc implements such innovative changes, it is able to improve service delivery, enhance product quality, reduce waiting times, or even pass on cost savings to customers. These improvements directly benefit customers, leading to higher satisfaction levels.

Moreover, marketing innovation helps the company communicate more effectively with its customers, build stronger relationships with them, and provide them with better experiences, all of which can enhance customer satisfaction. Based on the findings above, this study concludes that when Safaricom Plc introduces innovations in its marketing efforts, it is likely to reach its customers, convey its value propositions, and engage in meaningful interactions more effectively. This effective communication can help the company understand its customers better and tailor its

offerings to meet their needs more precisely. Furthermore, innovative marketing can foster stronger relationships by making customers feel valued and understood, thus enhancing their loyalty and satisfaction. The study further concludes that, marketing innovation is not just about promoting the company's products or services, but also about fostering a deeper connection with customers, ultimately leading to increased customer satisfaction.

5.4 Recommendations

The recommendations of the study are provided in terms of policy and managerial recommendations

5.4.1 Policy Recommendations

There is need to foster a culture of innovation within the organization by implementing policies and initiatives that encourage and reward employees for innovative thinking, creativity, and problem-solving. Safaricom Plc can establish dedicated innovation teams or departments tasked with identifying and implementing innovative solutions to meet customer needs and preferences. Providing resources, training, and support for employees to generate and implement innovative ideas can contribute to continuous improvement in products, services, and customer experiences.

Safaricom Plc should create a comprehensive Innovation Investment Policy which prioritizes and facilitates regular and substantial investment in research and development. The policy should include the allocation of resources, a timeline for innovation projects, and guidelines for fostering partnerships with tech startups, universities, and research institutions. It would enhance the company's capability to come up with innovative solutions that meet the dynamic needs of the customers.

Safaricom Plc should implement a policy that ensures all innovations are developed with a customer-centric approach. The policy should enforce the use of regular market research, customer surveys, and feedback systems during the innovation process. It could outline a process for understanding and incorporating customer needs and preferences into new products, services, or improvements.

Safaricom Plc should establish a policy that outlines systematic procedures for monitoring the influence of its innovations on customer satisfaction. This policy could specify metrics for performance evaluation, methods for collecting and analyzing customer feedback, and processes

for refining existing innovations. Through this, the company can continuously adjust its innovation strategies based on direct feedback from customers.

5.4.2 Managerial Recommendation

The management of Safaricom Plc should continue to prioritize and invest in product innovation as a central component of its business strategy. The management should dedicate resources to research and development, fostering a culture of innovation within the organization, and regularly seeking feedback from customers to understand their needs and preferences. The introduction of new features, improvements in user-friendliness, and increased product reliability should be key focus areas. Additionally, the company should consider collaborating with technology partners, industry experts, and thought leaders to gain fresh perspectives and accelerate the pace of product innovation.

Safaricom Plc should implement strategies to gather customer feedback, preferences, and ideas, and incorporate them into the development and improvement of products and services. This can be done through various means, such as conducting customer surveys, focus groups, and usability testing, or creating online platforms or communities where customers can share their ideas and suggestions. By involving customers in the innovation process, Safaricom Plc can ensure that the innovations align with customer expectations and preferences, leading to enhanced customer satisfaction and loyalty.

Further, it would also be beneficial for Safaricom Plc. to establish a robust system for monitoring and evaluating the effectiveness of its process innovations. This should involve regularly tracking key performance indicators related to customer satisfaction, such as customer reviews, net promoter score, or customer retention rate, and using these metrics to continuously refine and enhance its product offerings. Furthermore, management of Safaricom Plc should consider regular training and development programs for its employees to ensure they are equipped with the latest skills and knowledge to drive process innovation. It may also be beneficial to establish a system for tracking and analyzing key operational metrics to identify potential areas for process improvement. By continually focusing on process innovation, Safaricom Plc. can enhance its operational performance, deliver superior value to its customers, and ultimately, boost customer satisfaction levels.

Given the significant positive correlation between marketing innovation and customer satisfaction, it is recommended that Safaricom Plc. should strive to invest in and prioritize marketing innovation by exploring and adopting new marketing technologies, embracing emerging digital platforms, and developing unique and creative advertising campaigns. The company should also consider personalized marketing strategies that can engage customers on a deeper level. Utilizing data analytics to gain insights into customer preferences and behavior can help in crafting such personalized strategies. Moreover, Management of Safaricom Plc. should consider implementing a customer relationship management system if not already in place, which can help in managing customer interactions and improving relationships effectively.

5.5 Theoretical Contribution

This study contributes to Diffusion of Innovation theory by providing empirical evidence of the impact of innovation on customer satisfaction within a specific organizational context. The Diffusion of Innovation theory, developed by Everett Rogers, explains how new ideas, products, or practices spread and are adopted by individuals or organizations. This study's findings add to the body of knowledge by demonstrating the positive relationship between innovation and customer satisfaction, validating the theory's premise that innovative offerings can influence the adoption and acceptance of new ideas or products. By examining the specific case of Safaricom Plc, the study provides real-world insights into how innovations in the telecommunications industry can drive customer satisfaction and potentially influence the diffusion process of new innovations in the market.

5.6 Limitations

One of the limitations of this study is that the study was conducted with a small sample size or limited to customers in Nairobi City County, the findings may thus not be representative of the broader customer base of Safaricom Plc. The results may only apply to the specific sample used in the study, making it difficult to generalize the findings to the entire customer population of the company. Secondly this study relied solely on self-reported measures, therefore there may be a risk of response bias or social desirability bias. This is because customers probably provided answers that they believed were more favorable or expected by the researcher, rather than their true opinions or experiences.

5.7 Suggestions for Further Research

The current study focused on determining the influence of innovation on customer satisfaction for customers of Safaricom Plc. and using three innovations (product, process, and marketing innovations) as independent variables. This study thus suggests that future researchers should consider incorporating other innovation types such as organizational innovation, service innovation, supply chain innovation, business model innovation and technological innovation and the outcome compared with those of the current study.

Additionally, the current study neither included a moderating variable nor a mediating variable. Thus, this study suggests that future studies should consider importing moderating variables such as customer demographics. This is because different groups of people might perceive and react to innovation differently. Future studies should also include mediating variable such as perceived value, which is the customer's evaluation of the benefits and costs of using a particular product or service. In the context of Safaricom Plc., innovation can lead to new or improved services, which could increase the perceived value of their offering. Finally, the current study established that the three innovation types adopted could explain 80.2% of the change in customer satisfaction at Safaricom Plc. Future studies are thus challenged to determine the other factors that are responsible for the remaining 19.8% of the variation in customer satisfaction at the company.

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APPENDICES

Appendix I: Letter of Introduction

Strathmore University

School of Management and Commerce

P.O Box 59857 - 00200

Nairobi

Dear Respondent,

RE: DATA COLLECTION FOR RESEARCH THESIS

My name is **Sheillah Ogogo**, a Strathmore University student undertaking a master's program in Commerce. My study is titled; “*Influence of Innovation on Customer Satisfaction: A Case of customers of Safaricom Plc.*”

You have been chosen as part of the selected samples of Safaricom Plc subscribers. This is to humbly request you to participate in this study by filling the attached questionnaire. Any information you provide towards this study will be treated with utmost confidentiality and will only be used for academic research purpose.

Your participation will greatly contribute to the study, thank you for your support.

Yours sincerely,

Sheillah Ogogo

Appendix II: Questionnaire for the Customers

This questionnaire seeks information on the influence of innovation on customer satisfaction for customers of Safaricom Plc. Kindly read and understand the question before answering so as to ensure your answer is comprehensive and accurately recorded. For confidentiality purposes do not indicate your name.

Section A: Demographic details

1. What is your gender? Male Female
2. What is your age in the age brackets below?
18 –35 36 – 45 46 – 55 56 and above
3. What is your highest educational level?

Educational Level

Please tick the appropriate category

1. No Formal Education
 2. Certificate
 3. Diploma
 4. Bachelor
 5. Masters
 6. PhD
4. How long have you been a customer of this company?

Duration in years

Please tick the appropriate category

- Less than 1 year
- 1 – 2 years
- 3 – 5 years
- 6 – 10 years
- More than 10 years

SECTION B: INNOVATION AND CUSTOMER SATISFACTION

Product Innovation

To what extent are you in agreement or disagreement to each of the statements below in reference to product innovation and its influence on customer satisfaction? Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

	Statements for Product Innovation	SD 1	D 2	N 3	A 4	SA 5
5	The company provides innovative products features that have attracted me given my varied needs.					
6	The company provides innovative measures that enable me to access money more easily whenever I need it courtesy of mobile money.					
7	The company adopts a continuous cycles of product innovations that gives it an edge in meeting my needs.					
8	The company has innovative products with high success chances.					
9	The company adds features to its products to improve the quality of the product to enhance my satisfaction.					
10	The company provides unique options and customizable features that makes its products more attractive.					
11	The company ensures improved security by using mobile money.					
12	The company has put in place a stable network that enhances communication.					

Process Innovation

To what extent are you in agreement or disagreement to each of the statements below in reference to process innovation and its influence on customer satisfaction? Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

	Statements for Process Innovation	SD 1	D 2	N 3	A 4	SA 5
13	The company has improved its service delivery over the years.					
14	The company offers services at competitive rates, and this increases my switching costs.					
15	The company offers fair terms on services making it difficult to switch to competitors.					
16	The company has improved on its techniques of satisfying my needs					
17	I am likely to use Safaricom services given the quality of the services being offered have been improving consistently.					
18	The company is focused on implementation of significantly and constantly improved service delivery methods.					
19	The company has come up with ways of ensuring customers’ needs are addressed promptly.					
20	I am likely to use Safaricom products given that it is providing excellent and quality customer support that improves customer satisfaction and loyalty.					

Marketing Innovation

To what extent are you in agreement or disagreement to each of the statements below in reference to marketing innovation and its influence on customer satisfaction? Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

	Statements for Marketing Innovation	SD 1	D 2	N 3	A 4	SA 5
21	The company is adopting modern marketing techniques to reach more customers.					
22	The company invests in market innovation hence has increased market share and customer base.					
23	I am likely to access all the services being offered by Safaricom. Plc. given that they have agents in different regions which ensures that the reach of services and products is wide.					
24	I am likely to use the company's products given that I am easily attracted to the products marketed with highlights on their core features.					
25	The company is continuously coming up with innovative marketing techniques for new products and services.					
26	The company uses innovative marketing techniques to create new campaigns allow them to leap in their customer numbers, helping them to beat the competition that exists in the sector.					
27	The company adopts innovative marketing strategies that includes campaigns that combine humor with creativity being adopted by Safaricom Plc. and this is appealing to me as a customer.					
28	The company is creating emotional bond that goes beyond rationality, so that I identify with the values and message of their brand.					

Customer Satisfaction

To what extent are you in agreement or disagreement to each of the statements below in reference to customer satisfaction? Please indicate the answers of your choice by use of a tick (√) in the spaces provided in the table below: 1=SD=Strongly Disagree, 2=D=Disagree, 3=N=Neutral, 4=A=Agree, and 5=SA=Strongly Agree.

	Statements for Customer Satisfaction	SD	D	N	A	SA
		1	2	3	4	5
	Repeat Purchase					
29	I have been a Safaricom Plc. customer for a long period of time because of its improved customer services.					
30	The company has registered significant reduction in fraudulent activities since the introduction of Know your customer by Safaricom Plc.					
31	I have remained loyal to Safaricom Plc for the longest time.					
	Likelihood of Referral					
32	I refer my friends and colleagues to this company because of their services and products.					
33	I have not had any complaints over the past 10 years.					
34	I am satisfied with Safaricom Plc products and services because the company has continuously provided automated services to customers.					
	Positive Comments					
35	I have established a long-term relationship with Safaricom Plc.					
36	I normally give positive feedback about the company services and product.					
37	I am satisfied with the services I receive from this company.					

Thank You for Participating in the Study!

Appendix III: Authorization Letter

One Strathmore Place, Mbaraka Estate,
P.O. Box 59857 00300, Nairobi, Kenya
Cell: +254 709 414467, Toll-free 0545848994
Email: info@bsu.ac.ke or visit www.bsustrathmore.ac.ke



2nd May 2023

To Whom It May Concern,

RE: FACILITATION OF RESEARCH – SHEILLAH OGOGO

This is to introduce Sheillah Ogogo who is a Master of Commerce (MCOM) Student at Strathmore University Business School, admission number MCOM/082090. As part of our MCOM Programme, Sheillah is expected to do applied research and undertake a project. This is in partial fulfilment of the requirements of the MCOM course. To this effect, Sheillah would like to request appropriate data from your organization.

Sheillah is undertaking a research paper on **"Influence of innovation on customer satisfaction: A case of Safaricom Plc."** The information obtained shall be treated confidentially and shall be used for academic purposes only.

Our MCOM Programme seeks to establish links with industry, and one of these ways is by directing our research to areas that would be of direct use to industry. We would be glad to share our findings with you after the research, and we trust that you will find them of great interest and of practical value to your organization.

We appreciate your support and shall be willing to provide any further information if required.


Yours sincerely,

A handwritten signature in black ink, appearing to read "Njoki Kiagiri".

Njoki Kiagiri
Manager – Graduate Programmes
Strathmore University Business School.




Appendix IV: NACOSTI LICENCE


REPUBLIC OF KENYA

RefNo: 766147

Date of Issue: 24/May/2023


RESEARCH LICENSE




This is to Certify that Miss.. SHEILLAH OGOGO of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: INFLUENCE OF INNOVATION ON CUSTOMER SATISFACTION : A CASE OF SAFARICOM PLC for the period ending : 24/May/2024.

License No: NACOSTI/P/23/25841

Applicant Identification Number: 766147


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