FINANCIAL INNOVATIONS STRATEGIES AND FINANCIAL PERFORMANCE OF TELECOMMUNICATION COMPANIES IN KENYA

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DECLARATION

This research endeavor represents my own contribution and has not been previously submitted for evaluation in any academic institution.

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I hereby confirm that this research project has been submitted for assessment under my guidance as the university supervisor.

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DEDICATION

This project paper is dedicated to my entire family for their immense support and understanding during the study's period.

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I extend my profound gratitude to God Almighty, for gracing me with resilience and wisdom throughout this research journey.

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TABLE OF CONTENTS

DECLARATION ii

DEDICATION iii

ACKNOWLEDGEMENT iv

LIST OF TABLES vii

LIST OF FIGURES viii

ABBREVIATIONS AND ACRONYMS ix

ABSTRACT x

CHAPTER ONE: INTRODUCTION 1

1.1 Background of the Study 1

1.1.1 Financial Innovations Strategies 3

1.1.2 Financial Performance 4

1.1.3 Telecommunication Companies in Kenya 5

1.2 Research Problem 6

1.3 Research Objective 9

1.4 Value of the Study 9

CHAPTER TWO: LITERATURE REVIEW 11

2.1 Introduction 11

2.2 Theoretical Foundations 11

2.2.1 The Schumpeter Theory of Innovation 11

2.2.2 The Transaction Cost Theory 13

2.3 Financial Innovations Strategies and Firm Financial Performance 14

2.4 Empirical Literature Review and Research Gaps 15

2.5 Conceptual Framework 18

CHAPTER THREE: RESEARCH METHODOLOGY 20

3.1 Introduction 20

3.2 Research Design 20

3.3 Population 20

3.4 Data Collection 20
3.5 Data Analysis 21
3.5.1 Analytical Model 22
3.5.2 Test of Significance 22

CHAPTER FOUR: DATA ANALYSIS, INTERPRATION, AND DISCUSSION 23
4.1 Introduction.. 23
4.2 Descriptive Statistics.. 23
4.2.1 Financial Performance 23
4.2.2 Digital Payment Models 24
4.2.3 Mobile Money Transfer 25
4.2.4 Introduction of New Products.. 26
4.2.5 Adoption of Advanced Technology.. 27
4.3 Multiple Regression Analysis 28
4.3.1 Model Summary.. 28
4.3.2 ANOVA (Analysis of Variance).. 29
4.3.3 Determination of Coefficients.. 30
4.4 Discussion of the Findings.. 31

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS 33
5.1 Introduction.. 33
5.2 Summary of the Study Findings 33
5.3 Conclusion of the Research Study 34
5.4 The Research Study's Recommendations 35
5.5 Recommendations for Future Research 36

REFERENCES.. 37

LIST OF TABLES

Table 4.1: Financial Performance of Telecommunication Companies.. 24
Table 4.2: Digital Payment Models 25
Table 4.3: Mobile Money Transfer.. 26
Table 4.4: Introduction of New Products.. 27
Table 4.5: Adoption of Advanced Technology.. 28
Table 4.6 Model Summary 29
Table 4.7: ANOVA.. 29
Table 4.8: Coefficients of Determination 30

LIST OF FIGURES

Figure 2.1: Conceptual Framework 19

ABBREVIATIONS AND ACRONYMS

MPESA	Mobile Money Service in Kenya
FIS	Financial Innovations Strategies
ROI	Return on Investment
FP	Financial Performance
GDP	Gross Domestic Product
TC	Telecommunication Companies
ICT	Information and Communication Technology
MDGs	Millennium Development Goals
MFS	Mobile Financial Services
ROA	Return on Assets
DMT	Digital Money Transfer
KPI	Key Performance Indicators

ABSTRACT

The study aimed to assess the impact of financial innovation strategies on the financial performance of telecommunication companies in Kenya, drawing insights from Schumpeter's Theory and Transaction Cost Theory of Innovation. Utilizing secondary data from annual reports spanning the period between 2018 and 2022, the research focused on key financial innovation mechanisms such as the adoption of new technology, mobile money transfer, digital money services, and the introduction of new financial products. The primary objective was to understand how these strategies influenced Return on Assets (ROA), serving as a metric for financial performance. The finding of this study revealed a positive correlation between financial innovation strategies and the financial performance of Kenyan telecommunication entities. Over the five-year period, the companies demonstrated a steady improvement in ROA, indicating enhanced operational efficiency and revenue generation. Digital payment models, mobile money transfer, and the introduction of new products emerged as significant contributors to financial performance, with digital payment models playing a particularly crucial role. The study employed multiple regression analysis, indicating that financial innovation strategies explained a substantial portion (81.75%) of the variation in financial performance. The study established a statistically significant relationship between financial innovation strategies and the financial performance of telecommunication firms in Kenya. It was found that digital payment models, mobile money transfer, and the introduction of new products were key drivers of financial success in the industry. The recommendations for managers within telecommunication companies include a strategic emphasis on these identified innovation strategies to enhance financial performance. Additionally, policymakers are encouraged to foster an enabling environment for digital financial services.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Kamau and Ngugi (2018) posits that financial innovation strategies pertain to the creation and execution of novel financial procedures, offerings, and services by commercial banks. These endeavors serve the purpose of addressing evolving customer demands and maintaining competitiveness within the market. The impact of financial innovation on a company's financial performance has been a focal point in recent investigations. As evidenced by Ng'ang'a and Gakobo's (2018) research, a principal outcome of financial innovation strategies on a firm's financial performance is the augmentation of profitability. Financial innovation leads the development of new revenue streams, such as fees and commissions from new financial products and services. Brigham and Ehrhardt (2013) noted that it is financial innovation that leads to creation of new ideas, automation of operations and efficiency in firm activities leading to high performance levels.

The foundation of this study rested upon the Schumpeter's Theory and Transaction Cost Theory of Innovation. The Transaction Cost Theory (TCT), originally formulated by Ronald Coase and later extended by Oliver Williamson, centers on the expenses connected with interactions among economic entities (Merton, 1992). The theory posits that these transaction costs, encompassing search, monitoring, negotiation, and enforcement expenses, shape decisions about economic structures and the orchestration of economic operations (Frame & White, 2004). As per the TCT, the primary goal of firms is to minimize these transaction costs. When the costs of contracting and coordinating with external parties are high, firms prefer internalizing activities within hierarchical structures. By doing so, firms can reduce transaction costs by relying on the

authority and control mechanisms of the organization (Merton, 1992). Nevertheless, in instances of diminished transaction costs, companies might opt for market dealings and entrust tasks to external entities. Conversely, the Schumpeterian Theory of Innovation, pioneered by Joseph Schumpeter, underscores the significance of entrepreneurs and technological advancements in propelling economic expansion and progress. According to this theory, innovation is the primary force behind long-term economic progress. Schumpeter argued that innovation occurs through a process called "creative destruction (Frame & White, 2004). Entrepreneurs introduce new products, processes, or business models that disrupt existing industries and create new markets. This disruptive innovation leads to the decline or extinction of older, less efficient firms and industries. Schumpeter emphasized the importance of radical innovations, such as technological breakthroughs, in driving economic transformation and growth (Merton, 1992).

In Kenya, many companies in different industries including the financial and telecommunication sectors have realized the importance of financial innovation and how it can improve their operational efficiency and reduce costs, leading to higher profits (Kioko & Njeru, 2019). It has been noted that financial innovation plans improve customer satisfaction and loyalty, leading to increased market share and revenue growth. With financial innovation plans, firms have digital platforms that help firms in providing more convenient and accessible to customers, leading to increased customer loyalty and retention. Notwithstanding its significance, companies have recognized that financial innovation carries the potential to elevate their exposure to risk, particularly when new financial offerings are inadequately assessed and supervised. Additionally, it can introduce heightened competition, compelling firms to reduce their prices and profit margins (Gathu & Njoroge, 2019). Addressing this substantial challenge, this study

examined the impacts of financial innovation strategies on the financial performance of telecommunications firms in Kenya.

1.1.1 Financial Innovations Strategies

Financial innovation strategies encompass the creation and execution of fresh financial products, services, processes, or operational frameworks, aimed at improving efficiency, generating value, and securing a competitive edge within the financial sector (Brigham & Ehrhardt, 2013). According to Merton (1992), financial innovation strategies are the creation and subsequent marketing of a financial instrument or process not previously available, or a change in the terms or distribution of an existing financial instrument or process.

Nonetheless, according to Stiglitz and Weiss (1983), financial innovation strategies encompass actions that amplify the effectiveness of the financial system by enabling more extensive undertaking of financial risks, diminishing transaction expenses, or optimizing capital usage. Frame and White (2004) similarly depict financial innovation strategies as the introduction of fresh financial products, procedures, or establishments, or the adaptation and utilization of pre-existing ones. Moreover, it should be noted that financial innovation strategies can range from the creation of new technologies, such as mobile banking or block-chain, to the development of sophisticated financial products, such as derivatives or securitization, and the implementation of streamlined processes for risk assessment, lending, or payment systems. With financial innovation, firms find new ways to reduce costs and increase efficiency in their major operations (Frame & White, 2004). The main measures of financial innovation strategies include number of new innovations, the level of customer base, the level of research and development, number of cross-sectional opportunities and various transaction cost reduction involved in the firm. This

research gauged the financial innovation strategies based on the count of newly introduced financial innovations and the extent of customer base expansion.

1.1.2 Financial Performance

Financial performance involves assessing and quantifying a firm's financial outcomes, showcasing its capacity to produce profits, handle risks, and generate value for its shareholders. Several authors have provided definitions of financial performance in the literature. According to Pandey (2005), financial performance is "an assessment of the profitability, stability, and liquidity position of a firm based on its financial statements."

Yet, according to Gibson (2012), financial performance is described as "the assessment of how efficiently a company utilizes its resources to yield profits." Brigham and Ehrhardt (2013) describe financial performance as "the degree to which a firm meets its long-term operating and strategic objectives. These definitions highlight the importance of assessing profitability, stability, liquidity, resource utilization, and the achievement of objectives in measuring financial performance. Clearly, the financial performance of companies pertains to the assessment and quantification of a company's financial outcomes, illustrating its capacity to generate profits, efficiently manage resources, and add value for both shareholders and stakeholders. This involves the scrutiny of diverse financial indicators to evaluate the overall fiscal well-being and performance of the company. The analysis of crucial financial statements such as the balance sheet, cash flow statement and income statement constitute a part of financial performance evaluation. Notable metrics encompass return on investment (ROI), operating profit margin, gross profit margin, and net income. This study gauged financial performance using the metric of ROA (return on assets).

1.1.3 Telecommunication Companies in Kenya

Telecommunication firms operating in Kenya hold a critical role within the nation's communication infrastructure and have observed substantial progress and growth over time. The telecommunication sector of Kenya has achieved notable advancements, particularly in the realm of mobile telephony. This industry is characterized by fierce competition, continuous innovation, and a robust regulatory framework. Overseeing the sector and ensuring equitable competition is the responsibility of the Communications Authority of Kenya (CA). The dominant figure within Kenya's telecommunication landscape is Safaricom Limited, established in 2000, which has emerged as the leading mobile network operator in the country. Safaricom offers an extensive array of services, encompassing mobile banking, mobile money transfer (M-Pesa), and mobile voice and data. Notably, M-Pesa has been a transformative force in Kenya, enabling millions to access financial services via their mobile devices. Additional noteworthy contenders in the Kenyan market are Airtel Kenya, Telkom Kenya, and Equitel. These entities deliver services like mobile telephony, internet connectivity, and value-added offerings. While Safaricom claims the largest market share, Airtel and Telkom are actively striving to augment their market presence through dynamic marketing approaches and inventive service propositions.

The telecommunication industry in Kenya has witnessed tremendous growth in mobile phone penetration and internet connectivity. Mobile phones have become an essential tool for communication and financial transactions for millions of Kenyans. The availability of affordable smartphones and data plans has contributed to the widespread adoption of mobile internet services. Innovation and technology have played a crucial role in shaping the telecommunication landscape in Kenya. Mobile money services, particularly M-Pesa, have transformed the way Kenyans handle financial transactions, driving financial inclusion and empowering individuals,

businesses, and the economy as a whole. Additionally, the deployment of 4G and the ongoing rollout of 5G networks have bolstered more reliable and faster internet connections, facilitating digital transformation across various sectors. The telecommunication companies in Kenya face both opportunities and challenges. On one hand, the growing demand for data services, digital solutions, and e-commerce presents significant growth potential.

1.2 Research Problem

Financial innovation constitutes a dynamic procedure encompassing the development and execution of fresh financial methodologies, services, and products within the financial sector. Analysis reveals that financial innovation provide positive financial performance indicators such as profitability, efficiency, risk management, and market valuation among firms. By adopting new innovations firms can manage to increased revenues, cost savings, improved customer satisfaction, and enhanced operational efficiency. In non-banking sectors, firms use financial innovation plans to increased efficiency, reduced costs, and improved risk management, thereby positively influencing financial performance. However, some of the barriers of financial innovation adoption in firms include factors such as organizational culture, technological capabilities, regulatory environment, and market competition. Moreover, the risks associated with certain types of financial innovations, such as complex derivatives or speculative trading practices, can potentially lead to negative financial outcomes if not properly managed (Shehzad et al., 2021).

In Kenya, there are several companies adopting innovations models in their operations. However, how to use innovation and achieve firm success and financial value is still a challenge among many firms in the region. This has led to many firms speculating on how to use different

financial innovation strategies and improve their performance. However, this is not possible without further research and there is need for more studies to determine how financial innovation can help promote success of firms.

Numerous international investigations have scrutinized the ramifications of financial innovations on performance across diverse global organizations. A recent 2021 study in China by Shehzad et al. examined the intersection of Information and Communication Technology (ICT), economic progress, and financial innovations focusing on the Belt and Road Initiative's influence. The research employed quantitative methods, drawing from diverse sources, including regression analysis, to investigate the effects of ICT and financial innovations on China's economic evolution. Their findings underscored the substantial impact of these factors on China's economic development.

Similarly, a study conducted by Rossignoli and Arnaboldi in the UK in 2009 delved into the concept of financial innovation, investigating both empirical evidence and theoretical aspects from the United Kingdom and Italy. Employing statistical techniques and quantitative data, the study evaluated financial innovation's repercussions on pivotal economic indicators, such as productivity, investment and GDP growth. The outcomes suggested a favorable influence of financial innovation on economic growth in both Italy and the UK.

In contrast, Makur's 2014 study in South Sudan looked at the association between the financial success and financial innovation of commercial banks in the country. Indicators of performance including return on assets (ROA), net interest margin (NIM), return on equity (ROE), and non-performing loans (NPLs) were the main topics of the data collection from regional commercial banks. According to the research's findings, South Sudan's commercial banks' financial

performance was positively impacted by financial innovation. However, it is important to note that all these studies were conducted outside the specific context of Kenya.

Cherotich, Sang, Mutung, and Shisia (2015) carried out a study in Kenya that investigated the link existing between financial innovations and the functionality of the nation's commercial banks. Similar to this, Kamau and Ngugi (2018) looked at how financial innovation affected Kenyan commercial banks' financial performance. The success of Kenyan commercial banks was evaluated in the same way by Kioko and Njeru (2019), who credited the banks' success to strong financial performance. Makur (2014) also looked at how financial innovation affected Kenyan commercial banks' financial performance. Using a case study of Standard Chartered Bank Kenya Limited, Muchemi and Kariuki (2018) conducted a review concentrating on the influence of financial innovation on the financial performance of Kenyan commercial banks. Moreover, using a case study of Barclays Bank of Kenya, Mwiti and Muriithi (2018) assessed the effects of financial innovation on financial performance of commercial banks in Kenya. They observed an enhancement in firm performance due to financial innovation. However, these studies primarily centered on the banking sector, rather than the telecommunication sector which is the specific focus of the present study.

Upon analyzing the aforementioned literature, it becomes evident that limited scholarly work has been undertaken to comprehensively understand and determine the implications of financial innovation strategies on the financial performance of telecommunication companies in Kenya. In addition, the few studies reviewed mostly focus outside Kenya leaving contextual gaps. Majority of the past studies also focus on digital systems, especially online banking leaving conceptual gaps on telecommunication companies in Kenya. The few past studies also used cross-sectional research design leaving methodological gaps. Thus, there are conceptual, contextual and

methodological gaps that need to be filled. Hence, this research aimed to bridge the existing gaps in knowledge by addressing the following research inquiry: What is the impact of financial innovation strategies on the financial performance of telecommunication companies in Kenya?

1.3 Research Objective

The objective of this research paper was to determine how financial innovation strategies impact the financial performance of telecommunication companies in Kenya.

1.4 Value of the Study

The outcomes of this study may offer valuable insights to a range of stakeholders, including senior management within Kenyan telecommunication firms. By elucidating the connection between the financial performance and financial innovation strategies of these companies, the study will equip top management with knowledge to enhance organizational performance and long-term success. By integrating optimal financial innovation strategies into their core operations, these firms can drive improved performance. Moreover, policymakers and government agencies within Kenya may find the study results significant. The findings can inform the formulation of policies that foster the advancement of telecommunication companies' performance, in relation to both financial innovation strategies and overall financial outcomes. Such policies are pivotal in propelling the financial performance and achievements of telecommunication firms within the nation.

In addition, the study's impact will extend to forthcoming academics, scholars, and researchers. The study's findings can serve as a basis for future research studies, enabling subsequent scholars and researchers to delve further into the effects of financial innovation strategies on the financial

performance of telecommunication firms in Kenya. Future studies examining the complex link between financial innovation strategies and the financial success of telecommunication businesses will use these findings as a point of reference for direction.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This section offers a comprehensive exploration of the existing body of literature relevant to the study's subject matter. It encompasses both theoretical underpinnings and practical studies, while also identifying areas where research is lacking. The review incorporates established theories such as Schumpeter's Theory of Innovation and Transaction Cost Theory.

2.2. Theoretical Foundations

Theories are well-organized systematic models for explaining a phenomenon. Theories also predict features of subject or issues. The foundation of this study is built upon the Schumpeter's Theory of Innovation and Transaction Cost Theory.

2.2.1 The Schumpeter Theory of Innovation

The Schumpeter Theory of Innovation was formulated by the notable Austrian economist and political scientist Joseph Schumpeter, and it emerged in the early 1900s (Schumpeter, 1911). His seminal work on economic development, particularly in his book "The Theory of Economic Development" published in 1911, laid the foundation for this theory. Schumpeter's central argument revolves around the concept of "creative destruction." He posited that innovation and entrepreneurship are the driving forces of economic progress and long-term growth in capitalist economies. According to Schumpeter, innovation disrupts the existing economic order by replacing old products, technologies, and business models with new and more efficient ones, leading to waves of economic transformation (Schumpeter, 1911).

The Schumpeterian theory makes several key assumptions. Firstly, it assumes that economies are dynamic and evolutionary rather than static. Secondly, it emphasizes the role of entrepreneurs as agents of change, as they are the ones who introduce new ideas and innovations into the market. Thirdly, the theory assumes that innovation is the primary driver of economic growth, enabling economies to move through cyclical periods of boom and recession. Schumpeter also argued that these periods of creative destruction are inherent in the capitalist system and are essential for its long-term vitality.

While the Schumpeter Theory of Innovation has been influential, it has faced some criticism over the years. One critique is that the theory overstates the role of entrepreneurs and underemphasizes the importance of other factors, such as government policies, institutions, and the broader social context in fostering innovation. Additionally, some economists argue that the theory does not adequately address the distributional consequences of creative destruction, as innovation can lead to job displacement and income inequality in the short run. Moreover, the theory's assumption of continuous and disruptive innovation may not hold true for all industries, as some sectors experience slower rates of technological change (Schumpeter, 1911).

Despite the critiques, the Schumpeter Theory of Innovation remains relevant and influential in understanding the dynamics of economic development and technological progress (Schumpeter, 1911). It can help predict and define strategies to encourage innovation and entrepreneurship in organizations in the country. It can help create an enabling environment for innovation-driven industries, especially telecommunications sector in Kenya.

2.2.2 The Transaction Cost Theory

The Transaction Cost Theory was published in 1937 by a British economist Ronald H. Coase (Coase, 1937). For his contributions to this theory, Coase was honored with the Nobel Prize in Economics in 1991. This theory aims to elucidate the existence of firms and the organization of economic activities within them, as opposed to relying solely on market transactions. Coase's argument is that firms emerge as a means to minimize transaction costs, which encompass the expenses of coordinating economic actions within an open market. Coase's introduction of the concept of "transaction costs" played a pivotal role in shaping the firm's boundaries.

The Transaction Cost Theory rests on several key assumptions. Firstly, it assumes that economic agents (individuals or firms) are rational and seek to maximize their utility or profits. Secondly, the theory posits that utilizing the market involves incurring certain expenses, such as enforcement costs, negotiation costs, and search and information costs (Coase, 1937).Thirdly, the theory posits that firms act as alternative governance structures that exist to reduce transaction costs. Firms internalize activities that involve high transaction costs and conduct them within the organization, while outsourcing activities with lower transaction costs to the market.

While the Transaction Cost Theory has been influential in understanding the nature of firms and economic organization, it has faced some criticism (Coase, 1937). One critique is that the theory assumes a clear dichotomy between market and firm, overlooking the possibility of hybrid organizational forms such as franchising or alliances. Critics argue that the boundaries of firms are more complex and may involve a combination of market and hierarchical arrangements. Additionally, the criticism of the theory is because of its focus on efficiency and cost minimization, neglecting other important factors in firm behavior, such as strategic considerations and power dynamics.

Despite the critiques, the Transaction Cost Theory has significant relevance in this study since it help explain how firms can manage their costs using technology and improve their financial performance. The theory provides insights into decision-making processes regarding make-or-buy choices, vertical integration, and the allocation of resources within firms. It is particularly valuable in analyzing situations where market transactions are costly, complex, or prone to information asymmetry, leading to the emergence of firms as an alternative mode of organizing economic activities.

2.3 Financial Innovations Strategies and Firm Financial Performance

The financial performance of firms is substantially impacted by financial innovations and their corresponding strategies (Bender et al., 2017). These innovations encompass various financial instruments, products, and services designed to enhance efficiency, mitigate risk, and optimize capital allocation. Financial innovations often offer new ways for firms to manage risk. For example, derivatives and structured products enable firms to hedge against adverse price movements, interest rate fluctuations, and currency risks (Gupta & Kapoor, 2018). By implementing effective hedging strategies, firms can reduce the impact of market volatility on their financial performance (Chen & Mao, 2020).

Innovative financial instruments, such as securitization and crowdfunding platforms also provide firms with alternative sources of capital (Wang & Huang, 2019). These avenues may offer more flexibility and cost-effectiveness compared to traditional funding methods, potentially improving a firm's financial position. In addition, financial innovations often streamline processes and reduce transaction costs. For instance, the adoption of blockchain technology can facilitate faster

and cheaper cross-border transactions, positively affecting a firm's bottom line (Chen & Mao, 2020).

Moreover, some financial innovations, like asset-backed securities, can enhance the liquidity of underlying assets, allowing firms to monetize illiquid assets (Eom & Kim, 2017). This liquidity boost can strengthen a firm's financial health and enable more agile decision-making. Through innovative financial strategies, firms may gain access to new markets and customer segments. For example, microfinance initiatives enable companies to serve previously unbanked populations, expanding their reach and potential revenue streams (Duran & Udell, 2019).

However, it is essential to note that financial innovations also come with risks. The complexity of some products may expose firms to potential losses and even systemic risks if not managed prudently (Haldane, 2019). Additionally, regulatory changes and compliance requirements may affect the adoption and implementation of certain financial innovations (Bender et al., 2021). It should be noted that financial innovations have significantly impact a firm's financial performance by improving risk management, access to capital, cost efficiency, liquidity, and market opportunities. Nevertheless, careful evaluation, risk assessment, and sound implementation are crucial to harness the benefits while minimizing potential drawbacks.

2.4 Empirical Literature Review and Research Gaps

Numerous studies have been conducted worldwide to assess the impacts of financial innovation strategies on firms' financial performance. In Spain, Fernandes et al. (2013) explored the drivers of firm innovation and examines their effects on firm performance, drawing comparisons across different countries. The study adopted a cross-country perspective, considering data from various nations, which allows for a comprehensive analysis of innovation patterns and outcomes in

diverse economic contexts. The key elements investigated as potential drivers of firm innovation include technological factors, organizational factors, market factors, and financial factors. These elements encompass aspects such as the level of technology adoption, R&D investment, employee training, market orientation, and access to financial resources, among others. The research reveals that firms with higher levels of innovation tend to outperform their counterparts in terms of financial and market indicators. This finding supports the idea that innovation is an important determinant of an organization sustainability and success. However, this study was done in Spain.

A study conducted by De Winne and Sels (2010) in Belgium explored the connections among innovation practices, human resource management (HRM) and human capital and within Belgian start-up companies emphasizing innovation-oriented strategies. Employing a qualitative research methodology, the authors collected data through extensive interviews and surveys involving managers and employees of start-ups in Belgium. The research specifically targeted start-ups that have deliberately integrated innovation into their core business approach. The study's outcomes highlighted the crucial correlation between innovation, HRM practices, and human capital within the context of start-ups. The study highlights that start-ups with a clear innovation strategy tend to prioritize hiring individuals with relevant expertise and experience to drive innovation efforts. Additionally, HRM practices that encourage open communication, knowledge-sharing, and risk-taking are found to positively impact the start-ups' innovation performance. However, this study was done in Belgium.

A study by Du et al. (2022) in China investigated the potential consequences of green finance policies on the financial performance and technological innovation of green enterprises listed on Chinese stock markets. The authors use a quantitative approach and analyze data from Chinese

listed green enterprises. The study focuses on companies that operate in industries with a strong emphasis on environmental sustainability and have received support from green finance policies, which are designed to encourage environmentally friendly practices and investments. The research findings suggests that the support and incentives offered through green finance policies have encouraged these enterprises to adopt and develop innovative technologies related to environmental protection and sustainability. Moreover, the study delves into the correlation linking financial performance and technological innovation in the context of green enterprises. The findings indicate that companies that have effectively leveraged technological innovations to enhance their environmental performance have also experienced improvements in their financial performance. However, this study was done in China.

Young, Ediri, and Daniel (2017) conducted a study in Nigeria that examined the interplay between the performance of oil companies and strategic financial innovations. Employing a quantitative methodology, the research analyzed data from operational oil firms within Nigeria. The study's outcomes offer valuable perspectives on how strategic financial innovations can influence the performance of oil companies in the Nigerian context. The research indicates that proficiently executed financial innovations often lead to a competitive edge and enhanced financial performance in the market. Notably, this investigation centered specifically on oil companies in Nigeria.

In Kenya, Gachanja and Murithi (2020) assessed the impact of financial innovation on financial performance of commercial banks. They employed a case study methodology, focusing on the Cooperative Bank of Kenya as the subject. The study's outcomes revealed that innovations encompassing innovative customer service approaches, enhanced risk management strategies, technology-driven solutions, and new banking products contribute to the success of the

organization. However, the Cooperative Bank of Kenya served as the study's central example in this instance.

Additionally, Ondoro and Kilwake (2019) conducted an analysis of the impact of financial innovation on the financial performance of commercial banks in Kenya. Their study focused on the National Bank of Kenya as a case study and utilized a case study approach. The research revealed that innovations have played a role in shaping the bank's competitive stance, customer satisfaction, efficiency, and profitability in the market. However, it is important to note that this specific study revolved around the National Bank of Kenya and centered within the banking sector as a case study.

2.5 Conceptual Framework

The financial performance of the firms serves as the dependent variable, while the independent variable is represented by financial innovation strategies. This relationship is illustrated below.

Predictor Variables **Dependent Variables**

Financial Innovation Strategies **Financial Performance**

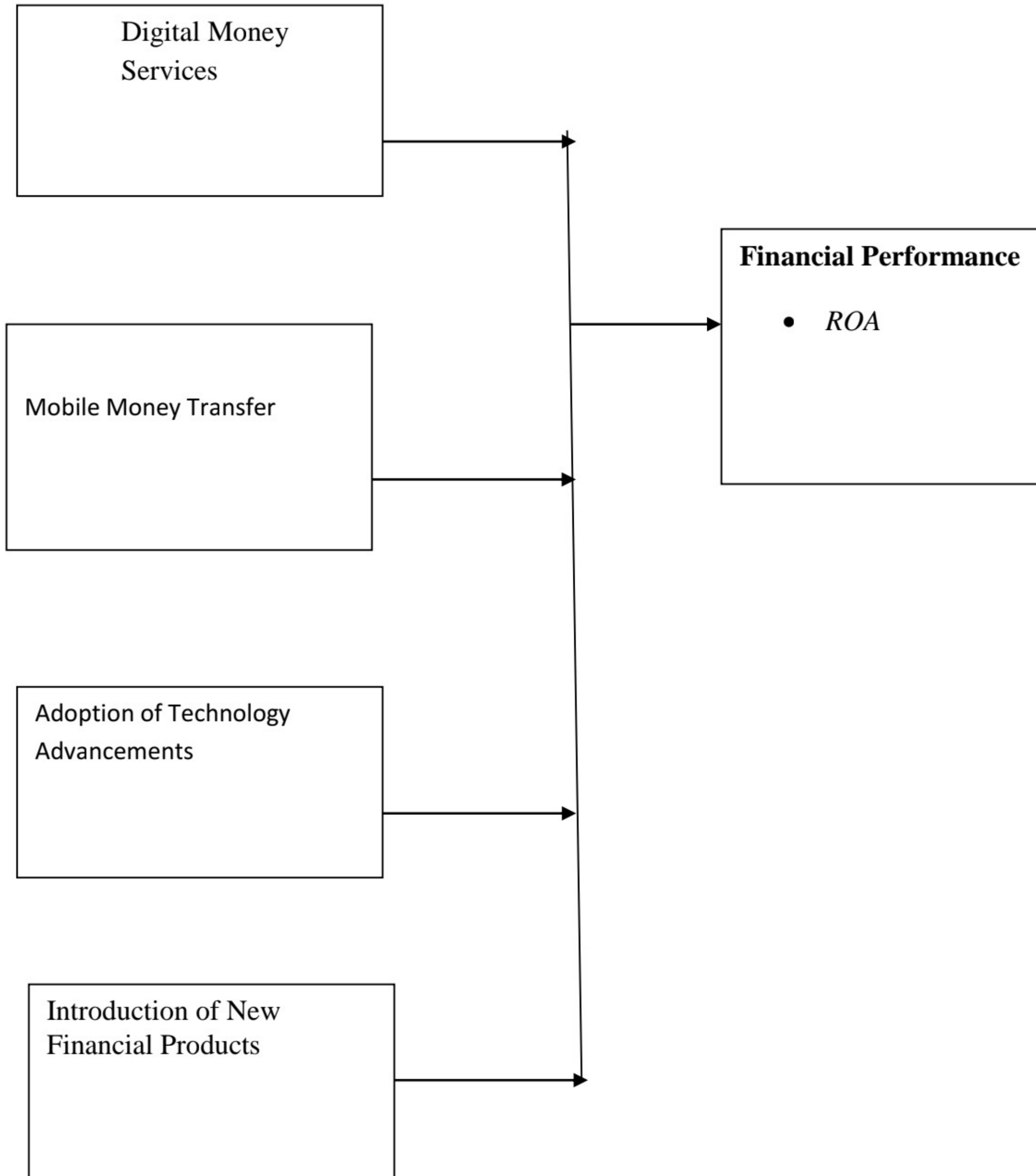

Figure 2.1: Conceptual Framework

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter encompasses aspects such as population, research design, data collection, reliability and validity, and data analysis.

3.2 Research Design

This study utilized a descriptive research design, which aimed to portray the characteristics of Kenyan telecommunication companies, assessed the impact of financial innovations on financial performance, and made predictions. According to Kothari (2004), the design involves defining variables without manipulating predetermined study variables It also facilitates the integration of quantitative and qualitative data, enabling triangulation (Nsubuga, 2006).

3.3 Population

The study's population comprised the three telecommunication companies that have operated in Kenya for a minimum of ten years: Telkom, Airtel, and Safaricom (Communication Authority of Kenya, 2020).

3.4 Data Collection

For this research, reliance was placed on secondary data. Quantitative secondary data was sourced from reports published by the Communication Authority of Kenya (CAK), the regulator of Kenya's telecommunication sector. Data was also drawn from the databases of the three telecommunication companies, covering a five-year period from 2018 to 2022. In relation to the independent variables, secondary data was extracted as follows: data concerning product

innovations encompassed revenue generated through investments in mobile money transfer platforms like Airtel Money, MPESA and other digital transaction platforms. Moreover, data on adoption of modern technology and introduction of new products and the revenue generated upon investment in these tools was gathered. This helped to understand how these financial innovation plans influence the performance of the firm. Performance was reviewed in terms of ROA.

3.5 Data Analysis

SPSS software was employed for data analysis in this study, focusing on quantitative data obtained from secondary sources. Once gathered, the quantitative data was coded and input into SPSS (Version 22) for subsequent manipulation and analysis. Descriptive statistics was employed for analyzing the quantitative data, utilizing measures such as frequencies, percentage, standard deviation, and mean to illustrate result trends. Furthermore, the study incorporated multiple regression analysis to ascertain the direction, magnitude, and nature of the relationships between study variables. The findings were visually presented using tables, complemented by explanatory prose following each presentation.

3.5.1 Analytical Model

The following multiple regression model was used.

$Y= \beta0+ \beta1X1+ \beta2\ X2+ \beta2\ X3 +e$

Where Y= Financial Performance

X1 = Digital Payment Models

$X2$ = Mobile Money Transfer

$X3$ = Introduction of New Products

$X4$ = Adoption of Advance Technology

e = Random error term

3.5.2 Test of Significance

The study's interpretation was conducted with a 95% level confidence and a significance level of 5%. Significance within the results fell within the range of 0 to 0.05 level of significance, underscoring its importance within the study.

CHAPTER FOUR: DATA ANALYSIS, INTERPRATION, AND DISCUSSION

4.1 Introduction

The current chapter presents the analysis of data as well as the interpretation of results, and discussion, as a result of a detailed introspection of the relationship between financial innovation strategies and financial performance of Kenyan telecommunication entities. From the databases of the three companies, the study relied on annual reports over year period between 2018 and 2022. While the dependent variable in the study was financial performance, which centers on ROA, the predictor variable was financial innovation mechanisms such as the adoption of new technology (technological improvements), mobile money transfer, digital money services, as well as the introduction of new financial products.

4.2 Descriptive Statistics

This section analyzed various parameters of the independent variable. The predictor variable highlighted in the introduction section, financial innovation strategies, was used as independent variable in the study.

4.2.1 Financial Performance

To derive the financial performance of an organization(s), the ROA (Return on Asset) is employed over a particular period. ROA is obtained by the net income to total assets ratio over time. This study embraced a five-year period as shown in the table below.

Table 4.1: Financial Performance of Telecommunication Companies

Year	N	Mean	Std. Dev
2018	3	0.089	.81242
2019	3	0.092	.84565
2020	3	0.093	.91644
2021	3	0.095	.73567
2022	3	0.099	.67241

From the table, it is evident that financial performances of the three leading telecommunication companies in Kenya improved steadily over the five-year period, given that the ROA average (mean) for 2016 was 0.089 (which was the lowest value) while that of 2022 was 0.099 (representing the highest value). This improvement indicates enhanced efficiency in operations, which enabled the firms to generate more revenue with the help of their assets. One key aspect of efficiency in operations that might have occasioned these improvements was diversification through innovations. Meanwhile, the standard deviation was a core indicator to the differences in the financial innovation strategies that the firms utilized.

4.2.2 Digital Payment Models

Digital payment models are preferred by the masses because of the convenience they offer in transactions. Thus, most business have embraced the frameworks, which ultimately guarantees high income flows for the three telecommunication firms. On average, the firms generated billions of shillings through their various digital payment systems in the five-year period involved in the study. The table below represents the digital payment models in the five-year period.

Table 4.2: Digital Payment Models

Year	N	Natural logs (10^9) of digital payment models	Std. Dev (Mean = 2.71)
2018	3	1.908	2.125
2019	3	1.989	2.099
2020	3	2.015	3.154
2021	3	2.021	3.245
2022	3	2.150	2.915

The table reveals that the firms have performed impressed following the use of digital payments as occasioned by the figures. The least revenue in this aspect was Kshs 1.908 billion in 2018 while the highest figure was Kshs. 2.150 billion in 2022. The steady increase in revenue for the forms indicates the value of digital payment services. Most Kenyans adopted them because they do not have to carry hard currency everywhere to facilitate transactions. The digital services also tend to be safer since money kept is unlikely to be lost. As Kenyans continued enjoying the digital payment services, the firms continually enhanced their revenue, which increased their profits. On the other hand, the variation that existed in the use of the digital payment models is evident in the standard deviations. The mean deviation of 2.71 shows that a significant difference between Safaricom at the top and Telkom at the lowest position.

4.2.3 Mobile Money Transfer

The measurement of mobile money transfer was based on the revenue that the three firms accumulated annually for the 5-year period as show on the table below.

Table 4.3: Mobile Money Transfer

Year	N	Natural logs (10^9) of mobile money transfer	Std. Dev (Mean = 3.11)
2018	3	0.350	3.105
2019	3	0.605	3.369
2020	3	0.758	3.009
2021	3	0.945	4.015
2022	3	1.450	2.067

As indicated on the table, the three firms witnessed a steady flow in revenue with the lowest value of Kshs 350 million recorded in 2018 while the highest figure being Kshs 1.450 in 2022. This performance showed that mobile money transfer is arguably the most popular digital service in Kenya. The feature has made life easier because individuals do not have to use bureaucratic institutions such as visiting physical banks to send and receive money. Conversely, an average standard deviation of 3.11 implies that minority shareholders in the market, Airtel and Telkom, have worked hard to improve their share in the market.

4.2.4 Introduction of New Products

The efficiency of the introduction of new products was determined by the revenue resulting from the exercise as show on the table below.

Table 4.4: Introduction of New Products

Year	N	Natural logs (10^9) of the introduction of new products	Std. Dev (Mean = 3.86)
2018	3	0.069	4.052
2019	3	0.078	4.045
2020	3	0.099	4.069
2021	3	0.132	4.077
2022	3	0.675	3.068

Introducing new products over the five-year epoch was essential for the firms as their revenue improved by Kshs 69 million in 2018 and Kshs 675 million in 2022. Some new products in the telecommunication industry include data deals, minutes offer, and the ability to covert talk points into money. On the other hand, an average of 3.86 indicates a considerable gap between the topmost and the bottom most firm.

4.2.5 Adoption of Advanced Technology

Advanced technology considered for this study was in various formats such as strategic relationships with banks and improvements in the existing mobile applications. The table below represents the parameter.

Table 4.5: Adoption of Advanced Technology

Year	N	Natural logs (10^9) of the adoption of advanced technology	Std. Dev (Mean = 2.99)
2018	3	0.508	3.004
2019	3	0.885	3.088
2020	3	1.124	3.076
2021	3	1.324	3.199
2022	3	1.668	2.575

By adopting advanced technology, the firms' performances improved as the least revenue (Kshs 508 million) was realized in 2018 while the highest (Kshs 1.668 billion) was witnessed in 2022. Also of concern is that the three firms involved put so much effort in using advanced technology as seen in the average standard deviation, which is 2.99.

4.3 Multiple Regression Analysis

Multiple regression analysis was employed to determine the essence of financial innovation strategies as show in model summary and ANOVA.

4.3.1 Model Summary

The table below shows a summary of the regression model summary.

Table 4.6 Model Summary

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.885[a]	.8175	.815	0.0014

From the table above, financial innovation strategies utilized accounted for 81.75% of the financial performance of telecommunication firms in Kenya, while other innovations or aspects were responsible for the remaining 18.25%.

4.3.2 ANOVA (Analysis of Variance)

Table 4.7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	1.331	4	.305	8.94	.0.45[a]
	Residual	5.503	37	.351		
	Total	6.834	41			

With a significant value of 0.45 on the table above, it can be concluded that the model demonstrates a statistical significance in predicting how financial innovation strategies influence financial performance of telecommunication firms in Kenya. This conclusion is because on the significant value of 0.45 is less than 0.05.

4.3.3 Determination of Coefficients

Table 4.8: Coefficients of Determination

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	sig
Constant	1.051	.754	.865	1.532	.000
Digital payment models	.941	.234	.744	7.898	.002
Mobile money transfer	.901	.435	.654	6.452	.040
Introduction of new products	.884	.276	.540	5.442	.045

The regression equation for the above table is:

Y= β0+ β1X1+ β2 X2+ β2 X3 +e, which can be represented as

$$Y = 1.051 + 0.941X_1 + 0.901X_2 + 0.884X_3 + e.$$

Based on the data above, when all factors are held constant, the financial performance of the three firms is 1.051. However, a unit improvement in digital payment models, mobile, money transfer, and the introduction of new products will introduce financial performance by 0.941, 0.901, and 0.884 respectively. Therefore, digital payment models play the most important role in enhancing financial performance of firms in telecommunication industry.

From the significance values of 0.002 for digital payment models, 0.40 for mobile money transfer, and 0.45 for the introduction of new products, it can be concluded that digital payment models are the most significant aspects in financial performance of the firms in the telecommunication industry.

4.4 Discussion of the Findings

The study aimed to investigated the effects of financial innovation strategies on the financial performance of telecommunication companies in Kenya, focusing on a five-year period from 2018 to 2022. The primary dependent variable was financial performance, obtained viaugh Return on Assets (ROA), while financial innovation strategies, such as the adoption of new technology, mobile money transfer, digital money services, and the introduction of new financial products, were considered as predictor variables. The descriptive statistics provided insights into the financial performance of the three leading telecommunication companies, showcasing an overall improvement in ROA over the study period.

The analysis of digital payment models, mobile money transfer, introduction of new products, and adoption of advanced technology revealed noteworthy patterns. The financial performance, as reflected in ROA, displayed a positive correlation with these financial innovation strategies. Specifically, the study found that digital payment models, mobile money transfer, and the introduction of new products significantly influenced the financial performance of telecommunication firms. The regression model, with an R-square value of 81.75%, indicates that financial innovation strategies accounted for a substantial portion of the variation in financial performance.

In the multiple regression analysis, the coefficients demonstrated the impact of each predictor variable on financial performance. Digital payment models emerged as the most significant contributor, with a beta value of 0.744, followed by mobile money transfer (beta = 0.654) and the introduction of new products (beta = 0.540). These results suggest that the adoption and enhancement of digital payment systems play a pivotal role in driving financial performance in the telecommunication industry. The study concludes that embracing innovative financial

strategies, particularly those related to digital payments, positively influences the financial performance of telecommunication companies in Kenya. This study contributes valuable insights to the existing literature on the relationship between financial innovation and firm performance, specifically within the context of the telecommunication sector in Kenya. The findings underscore the importance of staying at the forefront of financial innovation, especially in the rapidly evolving landscape of digital technologies, to enhance overall financial performance. Policymakers, industry stakeholders, and company executives can leverage these findings to formulate strategies that foster financial innovation and, consequently, contribute to the sustainable growth of telecommunication companies in Kenya.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study's findings and suggestions are discussed here. Based on the data collected and processed, it provided some suggestions. This also offers the recommendations made regarding the topic of the study.

5.2 Summary of the Study Findings

The study delved into the effects of financial innovation strategies on the financial performance of telecommunication companies in Kenya, utilizing data from 2018 to 2022. Notably, the financial performance, measured through Return on Assets (ROA), demonstrated a consistent upward trend over the five-year period, indicating improved operational efficiency and revenue generation. The study identified digital payment models, mobile money transfer, and the introduction of new products as key financial innovation strategies employed by the telecom firms. These strategies were found to significantly influence financial performance, with digital payment models emerging as the most impactful, followed by mobile money transfer and new product introductions.

The multiple regression analysis underscored the substantial contribution of financial innovation strategies, explaining 81.75% of the variation in financial performance. The coefficients revealed that digital payment models had the highest influence (beta = 0.744), followed by mobile money transfer (beta = 0.654) and the introduction of new products (beta = 0.540). This implies that embracing digital payment systems plays a crucial role in driving financial success within the telecommunication industry in Kenya. The findings suggest that the companies that diversified

their financial services, especially through digital platforms, experienced enhanced financial performance.

The study provides actionable insights for telecommunication companies, policymakers, and industry stakeholders in Kenya. It emphasizes the strategic significance of financial innovation, particularly in the realm of digital payments, to bolster financial performance. These findings underscore the imperative for companies to adapt to evolving technological landscapes and leverage innovative financial mechanisms to sustain and enhance their competitiveness in the dynamic telecommunication sector.

5.3 Conclusion of the Research Study

The study concluded that financial innovation strategies exert a significant impact on the financial performance of telecommunication companies in Kenya. Through a comprehensive analysis of five years' worth of data (2018-2022), the research identified key strategies such as digital payment models, mobile money transfer, and the introduction of new products as pivotal drivers of enhanced financial outcomes. The consistent upward trend in Return on Assets (ROA) over the study period reflects the positive influence of these financial innovation mechanisms on operational efficiency and revenue generation within the telecommunications sector. This underscores the importance of strategic diversification and adaptation to technological advancements in ensuring sustained financial success for companies in this industry.

Furthermore, the multiple regression analysis highlighted that financial innovation strategies accounted for a substantial 81.75% of the variation in financial performance among the examined telecommunication firms. The coefficients emphasized the relative significance of each strategy, with digital payment models emerging as the most influential, followed by mobile

money transfer and the introduction of new products. This implies that companies emphasizing digital financial services experienced more robust financial performance compared to their counterparts. The study's conclusions emphasize the transformative potential of embracing innovative financial mechanisms, positioning them as critical drivers of success in the competitive landscape of the Kenyan telecommunication industry.

5.4 The Research Study's Recommendations

The study's findings offer crucial recommendations for both managers within telecommunication companies in Kenya and policymakers aiming to enhance the industry's overall performance. The telecommunication company managers should prioritize the integration and expansion of digital payment models. The study identified digital payment systems as a significant driver of financial performance, highlighting the importance of offering convenient and secure digital transactions. Telecommunication companies should invest in the development and promotion of user-friendly digital payment platforms, fostering widespread adoption and ensuring a seamless user experience. Furthermore, collaboration with financial institutions and continuous technological advancements should be pursued to stay at the forefront of digital financial services.

The study underscores the importance of mobile money transfer services in influencing financial performance. Telecommunication managers should focus on optimizing and innovating mobile money transfer platforms to cater to the evolving needs of consumers. This may involve partnerships with financial institutions, ensuring interoperability, and introducing features that enhance the accessibility and usability of mobile money services. Policymakers, in collaboration with industry stakeholders, can play a role in creating an enabling regulatory environment that

encourages the development and deployment of secure and efficient mobile money transfer solutions.

The introduction of new products was identified as a key factor contributing to financial success in the telecommunications sector. Managers should foster a culture of innovation within their companies, continuously exploring and introducing products that meet the changing demands of consumers. Policymakers can support this by providing incentives for research and development activities within the industry. Additionally, facilitating collaboration between telecommunication companies and other sectors, such as technology and finance, can promote the creation of innovative products and services. The recommendations emphasize the need for a proactive and innovative approach among telecommunication companies and advocate for supportive policies to foster a dynamic and competitive industry in Kenya.

5.5 Recommendations for Future Research

For future research, it is recommended to delve deeper into the specific mechanisms and strategies that contribute to the success of digital payment models within the telecommunications industry in Kenya. Exploring the factors influencing user adoption, identifying potential challenges, and assessing the long-term sustainability of digital payment innovations would provide a more comprehensive understanding of their impact on financial performance. Additionally, examining the evolving regulatory landscape and its implications for digital financial services could offer insights into the role of policy frameworks in shaping the industry. This research could contribute valuable knowledge to guide both industry practitioners and policymakers in further optimizing digital payment strategies and fostering financial innovation within the telecommunications sector..

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