DIGITAL MONEY PLATFORM AND FINANCIAL INCLUSION AMONG YOUTH GROUPS IN KITUI COUNTY, KENYA

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D53/CTY/PT/37303/2016

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS, DEPARTMENT OF FINANCE AND ACCOUNTING IN PARTIAL FULFILLMENT OF REQUIREMENTS OF DEGRE OF MASTER OF BUSINESS ADMINISTRATION (FINANCE) OF KENYATTA UNIVERSITY

DECEMBER, 2025

DECLARATION

This research work is entirely my work and hasn't been presented for research at any other institution.

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The student worked on this research under my guidance as the appointed University Supervisor.

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DEDICATION

This study project is dedicated to my loved ones for their steadfast inspiration and support.

ACKNOWLEDGEMENT

Firstly, I would want to extend my thankfulness to the Almighty Lord for bestowing upon me many blessings and for providing guidance along my journey. I want to voice sincere thanks to Dr. Charity Njoka, my supervisor, for the invaluable assistance and direction she has provided me with throughout the course of this research endeavor. To my fellow learners and lecturers in the school of Business, Economics and Tourism, I am appreciative for the assistance you have accorded me. The support of those whose identities have not been explicitly stated cannot be disregarded. God bless you all.

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ABBREVIATIONS AND ACRONYMS

CAK: Communications Authority of Kenya

CBK: Central Bank of Kenya

FIT: Financial Intermediation Theory

FinTech: Financial Technologies

FRS: Federal Reserve System

FSD: Financial Sector Deepening

GPFI: Global Partnership for Financial Inclusion

KCB: Kenya Commercial Bank

KNBS: Kenya National Bureau of Statistics

M-PESA: Mobile-Pesa

NBK: National Bank of Kenya

SSPS: Statistical Package for Social Sciences

WBG: World Bank Group

OPERATIONAL DEFINITIONS OF TERMS

Digital Credit Refers to the application of digital platforms by the financial institutions to offer credit facilities to youth groups in a more accessible and efficient manner. Digital credit is characterized by its accessibility via digital channels and may include short-term loans, microloans, or credit lines provided electronically.

Digital Payments It is financial transactions conducted electronically, typically through mobile phones, internet platforms, or other digital devices. These transactions cover payments for products and services, transfers between individuals, and bill settlements, amongst others. Digital payments obviate the necessity for real currency and provide simplicity, rapidity, and security in financial transactions.

Digital Platform: The comprehensive combination of hardware and software that could be applied to digital transactions by unifying and streamlining business operations.

Digital Savings Digital savings describes the act of accumulating funds via digital financial services. This could cover different digital wallets, e-savings accounts, or finance mobile money accounts. Digital savings provide users with a safe and effortless method for storing and managing their savings, frequently including features such as interest

accumulation, auto transfers, and accessible funds via digital platforms.

Financial Inclusion: The process of giving underprivileged groups of people access to banking goods and services. It means providing easily available loans and extra banking facilities to let marginalized populations participate in national economic activity.

Youth Group: These are groups that cater to youth, frequently backed by a church, society center, or analogous institution, offering activities, social engagement, and avenues for personal and social growth.

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ABSTRACT

Financial inclusion across the economic sphere is fundamental as it guarantees that both people and businesses can access inexpensive and vital financial services, which are crucial for sustained expansion and prosperity. Although 80% of Kenyan adults possess mobile phones, hardly 30% have access to mobile banking, resulting in the exclusion of many young people from formal financial services. The research general objective was to determine the effect of digital money platforms on financial inclusion among youth groups in Kitui County, Kenya. The research specific objectives were; to ascertain the effect of digital payments on financial inclusion amongst youth groups in Kitui County, Kenya, to examine how digital credit affects financial inclusion amongst youth groups in Kitui County, Kenya and to determine how digital savings affects financial inclusion among youth groups in Kitui County, Kenya. To achieve this, the research was underpinned on Financial Intermediation Theory, Innovation Diffusion theory, Transactional cost theory and the Technological Acceptance Model. The study used casual research design where quantitative data was obtained. The unit of observation was 6 youth's groups while the unit of analysis was the officials from these youth groups within the region. This study employed purposive sampling to select youth groups, ensuring that groups relevant to the research objectives are included. Hence a sample size of 92 youth. Data was gathered utilizing structured questionnaires, which was tested for validity and reliability. Multiple regression was employed to test the connection between the variables and the study hypothesis was tested using SPSS version 21. Correlation analysis and diagnostic tests were also be performed. The research findings were displayed utilizing tables, graphs and charts. The study found that digital payments, digital credit and digital savings affected financial inclusion amongst the youth groups in Kitui County, Kenya. There wasn't multicollinearity in the predictor variables since no variable had a VIF>10. Data was normally distributed. The study concluded that there existed a substantial connection between digital payments and financial inclusion, digital credit and financial inclusion, digital savings and financial inclusion among the youth groups in Kitui County, Kenya. The p-value in all variables was below the threshold of significance level, hence rejecting all hypotheses. The study recommends that firms that own mobile money platforms should ensure that no business is discriminated in money transfer regardless of their size. Mobile money transfer should be convenient. Firms with mobile banking apps should offer more credit opportunities for youth with businesses and enable them to access top up loans through mobile banking which are flexible enough and with lower interest rates and operational cost to support their business financial needs. Youth groups should embrace mobile money platforms savings since they are faster and convenient. This will save them a lot of cost and time.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Financial inclusion signifies the accessibility and equity of chances to get financial services. Globally, financial inclusion is acknowledged as an essential consideration in reducing poverty and boosting prosperity. World Bank reported that about 69% of adults globally had a bank account in 2017, up from 62% in 2014 (Demirgüç-Kunt et al., 2018). This growth has primarily been propelled by digital financial services that have streamlined access to financial services for individuals.

India, China, and Indonesia have made substantial advancements in financial inclusion, especially with digital technologies. The Pradhan Mantri Jan Dhan Yojana (PMJDY) initiative in India has significantly enhanced financial inclusion, incorporating approximately 430 million persons into the banking system after its introduction in 2014. Moreover, e-payment systems like UPI have revolutionized transaction processes, expediting financial inclusion (Reserve Bank of India, 2023; NPCI, 2022). By 2021, China had a rapid improvement in financial inclusion, with more than 80% of its citizens having access to a formal financial account, primarily due to mobile payment platforms like Alipay and WeChat Pay (World Bank, 2021). In Indonesia, financial inclusion has improved due to mobile banking and digital wallets, with around 51% of adults holding a bank account as of 2021. The government and the banking sector have been actively promoting digital financial services to serve the unbanked populace (Demirgüç-Kunt et al., 2021).

In 2021, more than 43% of adults in Albania had a bank account, with efforts to improve financial inclusion centered around digital banking and financial literacy programs (World Bank, 2021). In Belarus, financial inclusion is at approximately 83%, emphasizing mobile banking and e-payment systems (National Bank of the Republic of Belarus, 2021). In Bosnia and Herzegovina, financial inclusion is roughly 61%, with digital banking initiatives aimed at improving access to financial services (World Bank, 2021). Approximately 85% of individuals in Serbia possess access to a formal financial account, and the implementation of digital payment systems has been essential in improving financial inclusion (World Bank, 2021). African nations encounter obstacles in financial inclusion; yet, substantial advancements are occurring via digital financial services. In Ethiopia, financial inclusion stands at approximately 39%, with mobile banking and digital wallets significantly contributing to the outreach of the unbanked populace (National Bank of Ethiopia, 2022). Mekonnen and Tadesse (2022) assert that mobile banking projects have proven especially effective in rural regions, where traditional banking infrastructure is limited. In Uganda, almost 61% of individuals possess a bank account, and mobile money services such as MTN Mobile Money have played a crucial role in enhancing financial inclusion (Bank of Uganda, 2022). Nsubuga (2021) emphasized that the widespread acceptance of mobile money has facilitated access to financial services for several Ugandans for the first time, thus enhancing their economic prospects. In Madagascar, financial inclusion is low, at about 21%, but mobile banking services are beginning to bridge the gap (World Bank, 2021). Raharinosy and Rakotomalala (2021) point out that digital financial service are crucial in providing access to banking for those in remote

regions, consequently, making substantial contributions to the expansion of financial inclusion in Madagascar.

Kenya is a leader in financial inclusion in Africa, chiefly attributable to the success of mobile money services like M-Pesa. As of 2022, about 84% of adults in Kenya had access to a formal financial account (CBK, 2022). The broad utilization of mobile banking and digital payment platforms has considerably increased financial inclusion, providing an essential tool for youth groups in accessing financial services. Muthiora (2021) aver that the growth of M-Pesa has not only simplified daily transactions but also provided a platform for other financial services such as savings and loans, which are crucial for youth empowerment. Additionally, Kamau and Wanjohi (2021) found that digital financial services have empowered many young individuals in both rural and urban settings to start and develop small enterprises, therefore fostering economic growth and alleviating unemployment.

1.1.1 Financial Inclusion

Financial inclusion is primarily characterized as the provision of a preponderance of financial services to marginalized individuals at a comparatively low cost (Demirguc, 2008). The World Bank (2018) describes financial inclusion as the provision of sufficient access to beneficial and accessible financial products and services for people and enterprises to satisfy their diverse banking requirements. Access to financial products and services is fundamentally a human right and a mechanism to mitigate financial inequalities. Donovan (2012) proceeds to state that financial inclusion is also important in poverty eradication, especially in the developing world. According to Aker and Wilson (2013), lack

of access to financial services may compromise individuals' aptitude to save and subject them to the long-term effects of poverty. Honahan (2008) revealed that financial inclusion is vital at the macroeconomic level to minimize the problem of financial resource disparities.

Unfortunately, a significant amount of people worldwide face financial exclusion at various levels. Gakure, *et al* (2013) aver that the majority of the world's population is financially excluded. These people cannot access credit, banking and other financial products and services mainly due to cost, geography and literacy factors. Various efforts have been tried to alleviate the situation. For instance, the World Bank Group rolled out the Universal Financial Access 2020 Initiative to ensure that marginalized populations can access a basic transaction account (World Bank, 2018). In Kenya, Ngugi (2015) indicated that the credit facilities advanced by mobile platforms has led to the inclusion of the underprivileged class into mainstream financial sector. According to the Central Bank Governor, the popularity of mobile banking platforms is a result of the strict restrictions that have been placed by the formal banking system, which requires various forms of collateral and also has few branches spreading to areas- especially rural regions – which are in much need for cheaper credit (Musango, 2018).

Currently, Kenya ranks highly in the global financial sector and is renowned for some of the most innovative mobile money services, especially M-PESA. According to the Communication Commission of Kenya (2017), mobile subscription in Kenya rose to 42.8 million people, translating to 94.3% penetration. The engagement of the Kenyan population in mobile banking platforms has also increased alongside an increased usage of

mobile phones. FSD (2016), for instance, reveals that 22.3% of bank accounts were dormant by 2015 and these figures might indicate that more people prefer to transact through mobile banking as their major operating platform. Thus, statistics indicate that more Kenyans are getting increasingly included into the financial sector through affordable and convenient platforms of financial operations.

The demand side of financial inclusion also indicates increased need for borrowing. At a global level, 42% of adults were indicated to have borrowed from mobile money platforms over the entire year of 2016 (Klapper & Singer, 2017). The data also revealed that youth and young adults sub-Saharan Africa accounted for 54% of global borrowing. The majority of the borrowing was used as support for financial emergencies rather than investment. This shows that there is still inadequate access to sufficient funds to engage in productive economic activities. In Kenya, mobile money payments attained an unprecedented high of Kes. 7.9 trillion in 2022 which was fueled by increased demand for cashless transactions (Wakarima, 2023). However, the majority of the mobile app users were the banked population. Thus, the data provides little support for unbanked masses that seek financial access.

However, there are indications that digital banking platforms have a high demand among the youth. For instance, 68% of digital loans are given to the youth in Kenya and a most them are in the CRB as a result of loan default (Veronicah et al., 2022). This data indicates that the majority of the youth in Kenya are financially unstable yet the demand for loans among them is high. In support of this implication, Rutten and Fanou (2015) revealed that only 48% of Kenya youth have a formal bank account. Thus, the majority of youth still

lack financial access and have sought to bridge the finance gap through non-bank digital money platforms

1.1.2 Digital Money Platforms

Digital money platforms are a 21st Century innovation that has transformed access to financial resources. They consist of digital currency, which is intangible and transferable through online systems. The baking sector was the first industry to add a digital dimension into their mainstream banking activities. However, there are other platforms that have been integrated into the financial system in Kenya. According to Statista (2022), 83% of digital platforms were directly linked to debit and credit card payments in Kenya, while 31% of payments were through Paypal. Mobile money platforms accounted for 57% of transactions, followed by cash payments and account transfers are 39% and 9%, respectively. This data indicates that Kenya is shifting from cash transactions to digital modes at a significantly fast rate.

Digital platforms in Kenya can be largely characterized into banking and non-banking platforms. Non-banking platforms are those that are not linked to the mainstream banking industry. Thus, they consist of standalone financial technologies (FinTech) that support intangible money transfer as the major business model. The first phase of FinTech emerged in the US via the introduction of the Diners Club Card, which presented a more efficient means of payments. However, this innovation did not support borrowing functions outside the mainstream banking system. Consequently, there developed a second wave of the 2000s, championed by Asia, and China in particular. By 2018, non-bank FinTech accounted for 46% of global investments as people were able to borrow through digital

platforms outside the banking system (Chitavi et al., 2021). Kenya is among the leading FinTech hotbeds alongside Nigeria. FinTech penetration in Kenya is supported by a high mobile penetration rate and demand for digital money services. For instance, the Kenyan telecommunications giant, Safaricom, launched the M-Pesa service, which provides infrastructural support for mobile money transactions through a text system. This innovation alone increased mobile money access to 83% in 2021 compared to 26% in 2006 (Chitavi et al., 2021). Currently, Kenya's demand for digital platforms has attracted many FinTech startups that have helped increase credit to the private sector.

Banking digital platforms are those that are linked to the mainstream banking activity. Shallone and Simon (2013) define mobile banking as the capacity to perform banking transactions through mobile phone devices. The major transactions are checking account balances, transferring funds and accessing other mobile operations such as loan facilities, withdrawals and deposits. Thus, mobile operations provide various economies, which have led Asfaw et al. (2015) to suggest that they are integral to progress, development, competitiveness and innovation in the banking industry. According to Ivatury (2009), most of these developments are increasingly occurring in developing countries. For instance, there is increasing adoption of Financial Technologies (FinTech) in Latin America, Africa and Asia due to their potential to meet the needs of the unbanked (Tidjani, 2020). Lauer and Michael (2012) have also stated that private companies in developing countries are coming up with unique custom-made facilities to reach populations that lack access to formal banking services. These results likewise correspond with the U.S Federal Reserve Report (2012), which revealed that mobile banking platforms were quickly revolutionizing finance and growing monetary facilities to individuals and organizations without formal

access to the mainstream banking sector. The World Bank (2012) also emphasized on the importance of mobile banking in boosting economic development through adequate inclusion of marginalized populations.

According to the Kenya Bankers Association (2014), the mobile banking sector in Kenya saw a boost after the passing of the Kenya Communications Act of 1998. This Act allowed mobile networks to extend financial services to the public. Safaricom's M-PESA, Orange Money by Orange, Airtel Money by Airtel and Yu Cash by Essar became dominant players and grew the mobile money market size by 17 million users. This was a significant rise from a year before when the mobile financial services usage only accounted for 38% of mobile phone subscribers (FSD Kenya, 2016). However, the market growth was lop-sided since approximately 85% of these users were Safaricom subscribers. This situation has been documented by Musango (2018) who called for an increase in mobile banking platforms to service the increasing demand.

However, despite the calls for increased mobile banking operations, some countries have made more significant strides than others. In Kenya, the M-PESA facility has been the leading and most successful mobile transmission platform. As per the World Bank (2012), the success of M-PESA arises from its low costs and wide availability, considering most people even in developing countries have smart phones. Nguena (2019) has also suggested that a significant share of the 1.3 billion people that own mobile phones globally are found in Africa. The study further showed the passion with which African populations have adopted mobile banking and how the mobile phones has moved from being a luxury to a

necessity in the continent. Thus, mobile banking has become a necessary tool for economic development through integration of banking activities.

Digital payment platforms will be assessed based on their usage frequency, transaction volumes, and the number of youth group members who use these platforms. The research will also look at the accessibility and usability of digital payment services, as well as the cost associated with transactions.

The uptake of digital credit will be evaluated based on the number of youth members accessing digital loans, loan approval rates, repayment terms, and the ease of obtaining credit via digital platforms. Digital savings will be measured by examining the number of savings accounts opened through digital platforms, the regularity of savings, and the amount saved by youth members over a specific period.

1.1.3 Youth in Kitui County

According to City Population (2023), total number of youths, aged 20-39, in Kitui country in 2019 was approximately 280,000. This figure has remained relatively stable due to consistent birth and death rates. The survey indicates that most young people are involved in the informal sector owing to insufficient work prospects and poor educational attainment. The major economic activities among the self-employed youth in Kitui County are agribusiness, *bodaboda* transportation, wood curving, pottery, and merchandise. The economic activities occur within a larger youth group such as the Kitui Township Bodaboda Sacco, which is an umbrella body for all bodaboda operators. Other prominent youth groups are CAP Youth Empowerment, Jua Kazi Youth Development Center,

Kasonge Sana Self Help Group, Ngwatanio Nzeo Self Help Group, and Able by Faith Self Help Group. All these groups support savings and credit and also seek to create financial economies through large scale borrowing from digital platforms.

However, lack of access to financial resources is a prominent challenge among the Kitui youth. Thus, a significant majority of the youth seek to supplement their incomes by borrowing from non-bank financing platforms. Mutisya (2016) revealed that the majority of Kitui youth prefer non-banking money platforms due to the ease of access and less formalities. Additionally, the research suggested the majority of the youth were unbanked and thus could not access bank digital platforms.

Furthermore, most of the youths require the money for business purposes in the informal sector and are discouraged by the high bank transaction costs. After the institution of devolved government, Kitui youth has begun to venture into government partnerships in various projects. This development has led the county government to reserving special slots for youth tenders, especially in road construction. However, the gap between access to economic activities and funds remains a big challenge that has led most of the youth to rely on non-banking digital financing.

1.2 Statement of the Problem

Financial inclusion is essential for empowering individuals, particularly youth, by granting access to financial services necessary for economic participation and growth. Despite the increasing ownership of mobile phones among Kenyan adults—80% owning mobile phones and 30% possessing smartphones capable of supporting mobile banking operations

(GeoPoll, 2021)—many remain excluded from formal banking services due to stringent requirements like collateral and evidence of financial stability (World Bank, 2018). Similarly, although there are significant advancements in technology, financial inclusion among youth remains inadequate. According to the latest FinAccess Survey (2021), only 32% of Kenyan youth are financially included in formal systems, compared to higher inclusion rates among other age groups. This disparity is concerning, given that youth are a critical demographic for driving future economic growth. The gap in financial inclusion is further illustrated by the reliance on informal financial services, which often present higher risks and fewer benefits compared to formal services.

A report on Kitui County (2015) showed that Kitui County's population is predominantly youthful, with 46.6 percent under the age of 15 and a notably high dependency ratio of 108. The proportion of individuals under age 15 is anticipated to decrease to 34 percent by 2030 and to 25 percent by 2050, whilst the working-age population (15-64) is expected to rise to 63 percent in 2030 and to 70 percent in 2050. The cumulative impacts will lead to a reduction in the dependency ratio from 107.6 to 42.5 by 2050. The primary job and income prospects for youth in the county included agriculture, motorcycle taxi services, and informal labor. Farming/agriculture and boda boda were reported as main employment and income opportunities among mixed youth age (20-24 years).

Several studies have addressed financial inclusion in various contexts, highlighting gaps that are relevant to this study. For example, Mbuva, Wachira, and Kevin (2019) studied the impact of financial access on the economic success of SMEs in Kitui County, discovering a favorable association between financial access and performance. However, their research

did not expressly target adolescents, a demographic confronting distinct financial obstacle. Kosmas, Raphael, and Mpofu (2020) studied financial inclusion in African countries, emphasizing its importance in promoting social inclusion and alleviating poverty. They identified age, education, and access to banking services as critical parameters, although did not specifically address juvenile financial inclusion in Kitui County. Keli (2018) analyzed the impact of mobile devices on financial inclusion in Kitui County, emphasizing SMEs and those who have inadequate educational backgrounds. This research emphasized the advantages of mobile technology but failed to explore the impact of specific digital financial products, among them digital payments, credit, and savings, on youth financial inclusion.

Kitui County, characterized by a substantial youth demographic and evolving digital infrastructure, offers a distinctive potential to bridge these research deficiencies. Notwithstanding the presence of digital financial services, numerous youths in Kitui County continue to be marginalized from formal financial institutions, constraining their economic prospects. Previous studies have not sufficiently addressed how digital financial products impact youth financial inclusion in this region. Hence, this research sought to examine the effect of digital payments, digital credit, and digital savings on financial inclusion in the youth groups in Kitui County, Kenya.

1.3 Study Objectives

The research had the following general and specific objectives.

1.3.1 General Objective

The main goal of the research was to investigate the effect of digital money platforms on financial inclusion among the youth in Kitui County, Kenya

1.3.2 Specific Objectives

The explicit goals of the research were;

i) To assess the effect of digital payments on financial inclusion amongst youth groups in Kitui County, Kenya.
ii) To ascertain how digital credit affects financial inclusion amongst youth groups in Kitui County, Kenya.
iii) To determine how digital savings affects financial inclusion amongst youth groups in Kitui County, Kenya.

1.4 Research Hypotheses

The research aimed test the following hypotheses:

H_0 1: There is no significant relationship between digital payments and financial inclusion among youth groups in Kitui County, Kenya**.**

H_0 2: There is no significant relationship between digital credit and financial inclusion among youth groups in Kitui County, Kenya.

H_0 3: There is no significant relationship between digital savings and financial inclusion amongst youth groups in Kitui County, Kenya.

1.5 Significance of the Study

The results of this research may benefit numerous stakeholders in the banking system, including policymakers. The banking industry may derive significant lessons from the study's conclusions about the influence of mobile banking on improving financial inclusion. This information can be instrumental in shaping strategies that help banks bring more individuals, particularly those marginalized by the traditional banking system, into the financial fold.

Additionally, the research can be beneficial to regulators, particularly the CBK. The CBK, as the regulatory authority charged with advancing financial inclusion and enhancing economic results, could apply the research's findings to ascertain the principal variables influencing the adoption of mobile banking services and products. This information could assist in the development and execution of initiatives that improve access to financial services, particularly for marginalized groups.

The results could help policymakers better understand the structural and operational elements of mobile banking, hence guiding national financial inclusion ventures. This information facilitates legislators create rules and regulations improving financial service accessibility and promoting digital banking sector innovation.

In the end, this study might help those who embrace mobile banking by offering understanding of the decision-making processes influencing their financial service consumption. By identifying the factors that affect their banking choices and how these are

leveraged by the banking industry, consumers can be better informed, leading to increased awareness and more sound financial decisions.

1.6 Scope of the Study

The specific research area was Kitui County, where the majority of the population is engaged in SMEs but lacks access to mobile banking functions. The target audience for the research was 192 youth representatives, specifically the executives of various youth organizations in the region. Each group typically has a membership ranging from a minimum of 10 to a maximum of 36 individuals, with 5 officials per group. The focus was on youth groups that were officially registered within the five-year period from 2013 to 2018. Then 2 officials from the youth group were selected purposively resulting to 92 as the sample size.

1.7 Limitations of the Study

The banking sector handles highly sensitive information. Therefore, the researcher anticipated that some of the banks to reluctantly divulge any information that may lead to possible breach or violation of privacy and confidentiality. Likewise, the researcher anticipated the reluctance of the staff to engage in the research process due to chances of possible victimization by their superiors. The research mitigated these issues by ensuring participants that the study was conducted only for scholarly reasons. The researcher obtained informed consent from the participants before to their involvement in the research.

1.8 Organization of the Study

The project was organized into five major sections. The first chapter was the introduction, which outlines the background of the study, problem statement, objectives, questions and hypotheses. The aim of the chapter was to lay groundwork for the comprehension on the important variables under study and their hypothesized relationship. The second chapter was on the literature review, which consisted of previous empirical studies in the area, the foundational theories and conceptual framework. This chapter assisted in identifying the study gaps that existed and how the researcher aimed at addressing them. The third chapter was on the methodology, which comprised of the population and sample designs, data gathering, data analysis and presentation. Chapter four deliberates the results and discussions. Chapter five discussed the summary, assumptions, and commendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explains the findings of prior research about the connection between mobile banking and financial inclusion. The sections address the impacts that financial inclusion has experienced due to money transfer, mobile loans access and mobile goods' payment. The chapter delineates the theoretical underpinnings of the research and the conceptual framework. Ultimately, it delineates the summary of the literature review and identified gaps.

2.2 Theoretical Framework

This research was underpinned on the; Financial Intermediation theory, Innovation Diffusion theory, TAM theory and Transaction Cost theory.

2.2.1 Financial Intermediation Theory

This Theory, introduced by Gurley and Shaw in the 1960s, emphasizes the role of financial intermediaries in allocating funds from savers to borrowers, thereby promoting economic growth (Gurley & Shaw, 1960). This theory asserts that intermediaries, such as banks, mitigate risks by diversification and lower transaction costs, hence promoting effective utilization of resources and economic stability. As per the theory, diverse portfolios help to lower risks by efficiently guiding funds into profitable investments (Diamond, 1984). Still, its conventional model might not fully capture the transformational impact of digital

currency platforms on financial inclusion. By giving direct access to financial services, digital platforms challenge established banking operations and could potentially assist to avoid intermediaries and associated costs (GSMA, 2021). Additionally, the theory's importance for marginalized populations, such youths in Kitui County, is uncertain as it might disregard obstacles such as access to conventional banking facilities and financial services in remote places.

The Theory asserts that efficient digital payment systems can enhance financial inclusion by lowering transaction expenses and expanding access to financial services (ITU, 2020). The theory posits that digital lending platforms may enhance financial accessibility for vulnerable populations, particularly children (Morawczynski & Pickens, 2009). The theory posits that digital savings platforms can improve savings mobilization and financial resilience amongst youths (Lusardi & Mitchell, 2014).

Financial Intermediation Theory helps one to analyze digital financial services—that is, loans, investments, and payments. Dependable digital payment systems could improve access to financial services and reduce transaction expenses. Particularly for rural teenagers, digital credit systems improve loan availability for those traditionally excluded by conventional lenders. On the other hand, digital savings systems help youths to mobilize money and improve their financial resilience, therefore promoting their involvement in the financial system. Although the Financial Intermediation Theory provides a basic understanding of conventional financial systems, its adaptation to the modern world of digital financial services is necessary to appreciate how inventions change financial accessibility in places like Kitui County.

In conclusion, even while the Financial Intermediation Theory provides a basic understanding of traditional financial systems, its adaptation to fit the evolving environment of digital money platforms is important. By employing this theory, the researcher studied at how digital technologies change financial intermediation roles, improve financial accessibility, and economically empower youths in impoverished places like Kitui County, Kenya. Including these ideas can help policies and strategies meant to make utilization of digital financial services to increase financial inclusion and economic growth for youths to steer their own lives.

2.2.2 Innovation Diffusion Theory

The theory proposed by Everett Rogers in 1962, examines the progressive distribution and acceptance of novel technology within society at large (Rogers, 1962). Rogers recognized critical aspects affecting the diffusion process, such as communication channels, social networks, perceived advantages, and obstacles to adoption. This theory has been widely utilized to understand the adoption and impact of technological advancements, especially in digital financial services. The theory posits that the acceptance of innovations progresses systematically from early adopters to laggards, shaped by characteristics like comparative advantage, compatibility, complexity, trialability, and observability (Rogers, 1962). However, its execution in digital currency systems faces challenges. Digital financial services may encounter challenges such as limited infrastructure, poor digital literacy amongst users, and regulatory constraints (ITU, 2020).

The Theory suggests that by lowering transaction costs and increasing access to financial services, the deployment of effective payment systems could improve financial inclusion

(GSMA, 201). According to the theory, changes in credit accessibility via digital platforms might boost financial inclusion by giving underprivileged individuals better access to credit (Morawczynski & Pickens, 2009). Furthermore, the theory underlines how developments in savings platforms might improve financial understanding and save practices across youths (Lusardi & Mitchell, 2014).

Finally, the theory offers a major framework for examining the acceptance and consequences of digital money platforms on financial inclusion across youthful demographics in Kitui County, Kenya. Through the analysis of the factors of adoption behaviors and the dissemination mechanism for digital financial innovations, researchers could direct policies and strategies aiming at enhancing the accessibility, usability, and efficacy of digital financial services for young people in rural and impoverished areas. Including these findings will help to forward general goals for economic growth in the area.

The theory is particularly relevant in considering how digital financial services may help Kitui County achieve financial inclusion. By reaching underprivileged people, digital payment solutions that lower prices and increase accessibility help advance financial inclusion. Developments in digital credit can help youths to acquire loans, hence increasing their involvement in the economy. Likewise, digital savings systems can enhance financial literacy and foster constructive financial habits, including heightened savings. By examining the determinants that affect the adoption of these technologies, researchers may formulate strategies that improve the implementation and effectiveness of digital financial services for youth in impoverished regions.

2.2.3 Theory of Technological Acceptance Model (TAM)

Davis (2009) proposed this model to describe how customers acknowledge and use technological innovations. Mobile banking is a disruptive innovation that influenced how individuals transact. The theory demonstrates how resistance to technology may affect the uptake of innovations and the general operations of the sector. The model highlights various elements that influence individuals' choice on if and how to adopt technology in their operations. These elements include convenience, which shows the perception of the user on ease of operations and how they could best achieve desired outcomes at the least time possible, and usability, which is characterized as how the user views the user-friendliness of the platform as well as how well the platform provides the intended benefit. These two components are viewed as the major determinants of the process of embracing and utilizing new innovations and are moderated by concerns such as comfort, security, cost and satisfaction (Lu et al., 2003). TAM was therefore viewed as appropriate for the study since it covers how new innovations are perceived by the potential market and what innovators consider to increase usage and penetration rates.

Mobile banking has significantly transformed individual transactions, especially in areas with limited access to conventional financial services. The Technology Acceptance Model posits that customers are more inclined to accept mobile banking services if they see them as convenient, secure, and user-friendly. Trust, cost, and client satisfaction significantly influence adoption trends. The usability and perceived advantages of digital payment, credit, and savings systems are essential for encouraging their use amongst youths in rural regions such as Kitui County. These platforms are more probable to be embraced if they

satisfy the demands of the intended demographic and are easy for utilization, therefore enhancing financial inclusion.

2.2.4 Transaction Cost Theory

Proposed by Ronald Coase in 1937, this theory holds that individuals and businesses try to lower transaction-related costs. Regarding financial services, the theory implies that innovations could lower transaction costs, thus enhancing the availability of financial services for underprivileged people (Coase, 1937). These developments reduce the expenses connected with traditional banking practices including physical branch operations, documentation, and individuals' records management via digital platforms. More particularly in areas like Kitui County, where access to conventional banking infrastructure is restricted, this reduction in transaction expenses encourages more participation in the financial system. By offering affordable and easily available alternatives to conventional banking for rural communities, digital platforms thus help to increase financial inclusion, hence promoting economic growth and development in these underprivileged places.

2.3 Empirical Review

This section offers a synopsis of previous researches regarding Kenya's mobile money platforms' connection to financial inclusion.

2.3.1 Digital Payments and Financial Inclusion

Veronicah, Jagongo, and Musau (2022) investigated how digital payments affected financial inclusion among Kenyan youth Emphasizing interactions between customers and their payments to businesses. The study which was done at universities in Nairobi County and used questionnaires to compile source data over the course of one year. Digital payments and financial inclusion showed a notable positive association in the findings. Suggestions included improving digital payment systems by cutting transaction fees and eliminating levies that increase mobile money transfer costs. The study focused on university students while the current study focused on youth groups in Kitui County.

Neelam and Bhattacharya (2023) studied the impact of mobile payment applications on enhancing financial inclusion in urban settings, specifically targeting impoverished households in Pune, Maharashtra, India. Their research finds multiple essential facilitators that affect the uptake and utilization of mobile banking applications. The research employed the UTAUT-2 model as its theoretical framework to elucidate how these elements, mediated by behavioral intention, facilitate financial inclusion activities. They also analyze demographic characteristics including age, education level, occupation, and income, observing that men demonstrate a greater frequency of mobile payment app usage. The study was done in India and thus cannot be generalized in Kenyan context.

Wamuyu (2022) researched the impact of digital financial services and financial literacy on financial inclusion amongst young adults at chosen colleges in Nairobi City County, Kenya. Employing the Technology Acceptance Model, Rational Choice Theory, and Financial Literacy Theory. The research utilized an explanatory research strategy, aligned

with the positivist research philosophy. The research targeted youth from specific universities in Nairobi City County in 2020, totaling around 84,848 individuals. The research utilized a stratified sampling method to guarantee representation across various strata and randomly selected a sample size of 385 youths. The study adopted simple random and stratified random sampling techniques. The sample was divided into several strata—that is, groups—based on specific criteria pertinent to the research, including age group or university affiliation. Simple random sampling then chose participants from every strata such that every member of the population had an equal opportunity of being part of the sample. According to the studies, for youths, digital payments significantly improve financial inclusion. Still, digital credit and savings showed minimal relationship with financial inclusion. The study argued for the improvement of digital payment systems by means of tax abolition and lower transaction costs thereby fostering financial inclusion among youths. The study employed the Technology Acceptance Model, Rational Choice Theory, and Financial Literacy Theory thus creating a theoretical gap.

Musango (2018) examined mobile banking services and financial inclusion policies among commercial banks in Nairobi City County, Kenya. The study underlined how greatly mobile fund transfers, mobile payments for products and services, mobile account management, and mobile credit availability improve financial inclusion. The results showed that mobile banking services have expanded financial service availability, particularly helping individuals deprived of official access to traditional banks. Mobile banking has driving up transaction volumes through commercial banks since services like pay bill numbers reduce customer wait times and attract more business because of reduced transaction costs and maintenance requirements. The study focused on mobile banking thus

creating a contextual gap which the current study sought to fill by focusing on digital money platforms.

Alrabei et al. (2022) explored the impact of mobile payment systems on enhancing financial inclusion rates applying a quantitative and analytical methodology. A feedback form of two dimensions and 22 items was utilized, focusing on the Arab Bank and the Housing Bank. The research demonstrated substantial impacts of service price, service quality, usability, and security on financial inclusion via mobile payments. The study advocates for the incorporation of mobile payment systems across all banks operating in Jordan to enhance financial inclusion rates and tackle issues related to mobile money adoption and regulatory frameworks for mobile money services. The study focused on Arab banks in Jordan while the current study focused on youth groups in Kitui campus.

Isabwa (2021) investigated the impact of mobile banking on financial inclusion amongst Kenyan financial institutions. The research employed a positivism research philosophy and an expo-facto research design due to the reliance on secondary data. The study targeted 43 Kenyan financial institutions, with a sample size of 39 banks, specifically selecting ten banks based on their superior mobile banking applications. The research employed inferential statistics, specifically Pearson correlation and regression analysis, revealing substantial beneficial effects of mobile funds transfers (β=1.697, p=0.000), cash withdrawals through mobile platforms (β=1.195, p=0.000), and deposits via mobile platforms (β=0.354, p=0.000) on financial inclusion. The findings indicate that mobile banking substantially improves financial inclusion in Kenyan financial institutions. The report advocates for the adoption of mobile banking by all financial institutions in Kenya

to enhance financial inclusion. It also underlines the significance of using efficient mobile banking solutions catered to the needs of different client segments to optimize its influence on financial inclusion. The research employed a positivism research philosophy and an expo-facto research design due to the reliance on secondary data creating a methodological gap.

2.3.2 Digital Credit and Financial Inclusion

Wamuyu, Jagongo, and Musau (2022) examined the impact of digital credits on financial inclusion among Kenyan youths, with particular emphasis on borrowing for essential and personal requirements. Their research, employing questionnaires to gather data from public and private university students in Nairobi City County aged 18 to 35, determined that digital credits presently do not substantially improve financial inclusion among Kenyan youth. They recommended that authorities and digital financial service providers enhance transparency concerning credit offering procedures, including on interest rates, security standards, and payback terms. Additionally, they proposed governmental programs to educate the public about digital credit utilization to promote entrepreneurial and financial accountability among young, hence reducing risks such as payment defaults or inclusion in credit reference bureaus. This research examined the influence of digital credits on the financial inclusion of students from public and private universities in Nairobi City County, while the present study investigates the effect of digital credit on financial inclusion across youths' groups in Kitui County, Kenya. The research emphasized on borrowing for essential and personal requirements thus creating a contextual gap.

Wathome (2020) examined the impact of digital credit on the financial inclusion of youth in Kangemi, Nairobi County, Kenya. The research utilized a descriptive design and quantitative technique, surveying 384 individual who engaged with digital credit services. Research indicated that digital credit had both advantageous and adverse effects on financial inclusion. Favorable outcomes encompassed improved access to capital, job development, poverty alleviation, and heightened financial autonomy among the youth. Negative effects include over-indebtedness, listings with CRB owing to defaults, and imprudent financial habits. The study revealed that digital credit substantially influenced children's financial inclusion by enhancing loan accessibility and fostering credit history development. Recommendations encompassed improving financial knowledge among young individuals and utilizing innovative digital credit solutions to reduce risks and encourage responsible borrowing practices. The previous study examined the effect of digital credit on the financial inclusion of youth in Kangemi, Nairobi County, Kenya, whereas the current research evaluated the impact of digital loans on financial inclusion among youth in Kitui County, Kenya.

Tiony (2023) looked at how digital financial services affect Kenyan financial inclusion. Utilizing secondary data analysis from organizations including the KNBS, Financial Sector Deepening (FSD) Kenya, and Safaricom, the study examined the expansion and use patterns of digital financial services—more especially, mobile money platforms like M-Pesa. The results showed notable progress in financial inclusion, which was typified by better access to credit options via digital platforms, savings, and official banking services. These achievements connected with better living conditions, increased financial independence, and lower poverty and inequality among Kenyan people. Still, identified

were challenges like infrastructure shortcomings, poor financial literacy, security issues, and regulatory complexity. Policy proposals to improve regulatory systems, raise financial literacy initiatives, promote stakeholder involvement, and fix infrastructure flaws to attain financial inclusion in Kenya came out of the research. For scholars working on digital finance and financial inclusion projects as well as for legislators and practitioners, this study provides significant new perspectives. The study used secondary data while the current study used both primary and secondary data.

Wandeda et al. (2023) studied the influence of digital financial inclusion on the financial performance of women in Kenya, employing propensity score matching with data from the Financial Access Survey 2021. The study highlighted socio-demographic characteristics, including education, married status, beliefs, age, and urban or rural residence, as key predictors affecting women's utilization of digital financial services. The ownership of mobile phones and televisions is positively correlated with the use of digital finance amongst women. The study revealed that women utilizing digital finance achieved improved financial well-being. Recommendations included targeted initiatives to improve digital literacy among women, subsidizing mobile device costs, enhancing rural network accessibility, and employing communication channels such as mobile phones, radio, and community outreach programs to promote digital financial inclusion in Kenya. The study offers guidance for policymakers and financial institutions aiming to mitigate gender gaps in financial access and enhance financial health outcomes via digital financial services. The study focused on women in Kenya while the current study focused on youth group in Kitui County, Kenya.

Kamau (2021) conducted a research to determine the costs, applications, and borrower characteristics associated with digital credit in Kenya. The study focused on the usage of mobile phones and online platforms for acquiring short-term borrowing, which has steadily increased in Kenya since 2012, particularly benefiting low-income households. The study employed secondary data analysis and online surveys, utilizing paired sample t-tests and regression analysis for data evaluation. The key findings revealed that the cost of digital loans was not significantly different from traditional bank lending rates in Kenya. The study indicated that work position and the loan application process substantially affected loan uptake, nevertheless age and other loan characteristics did not exert statistically significant influence on loan uptake. This research improves comprehension of the dynamics of digital credit in Kenya and elucidates the elements influencing its uptake and usage trends among borrowers. The study focused on the costs, applications, and borrower characteristics associated with digital credit in Kenya while the current study concentrated on effect of digital payments, digital credit, digital savings on financial inclusion amongst youth groups in Kitui County, Kenya

2.3.3 Digital Savings and Financial Inclusion

Bharadwaj and Suri (2020) analyzed the impact of the promotional campaign "Stawisha Na M-Shwari," conducted by M-Shwari, Kenya's leading digital banking platform, from April 2016 to June 2016. The study aimed to enhance participation in digital banking and promote financial inclusion by encouraging savings and loan repayment practices. The study demonstrated substantial and enduring effects of the campaign on loan acquisition, indicating increased borrowing behavior among participants. Notwithstanding a substantial

rise in savings throughout the promotional time, the study observed an absence of sustained growth in savings after the campaign concluded. The study underscores the effectiveness of focused marketing in influencing financial behavior and suggests potential ramifications for sustaining long-term financial inclusion initiatives using digital banking systems. The study focused on marketing while the current study focused on financial inclusion.

Loaba (2021) conducted a study to examine the influence of mobile banking services on savings practices in West Africa, utilizing data from the Global Findex Database 2017. The study employed multinomial logit and probit models to concurrently assess the influence of mobile banking on formal and informal saving techniques. The findings indicated that the use of mobile banking services enhanced the probability of persons participating in formal savings by 2.4% and informal savings by 0.83%. Women exhibited a higher inclination for informal savings; yet, their probability of participating in formal savings rose when employing mobile banking services. Furthermore, factors such as higher educational attainment, public sector employment, and increasing income were associated with a greater utilization of mobile banking services. The study determined that strengthening collaborations between mobile phone infrastructure and financial institutions could amplify the beneficial effects of mobile banking on saving practices in West Africa, hence advancing financial inclusion. These findings give guidance for governments and financial service providers seeking to improve access to formal financial services via mobile technologies. The study was done in West Africa thus cannot be generalized in Kenyan context.

Houenou and Djogbenou (2020) predicted Western Kenyan household mobile banking saving trends using machine learning. Their study examined several factors affecting savings behavior, including livelihoods, assets, income generation, food consumption, housing quality, demographics, and social level, using a generalized regression model. Research results showed that although impacting changing savings balances and dissaving practices, particularly among young workers, mobile phone use is a strong predictor of savings account ownership. The study focused on saving trends while the current study focused on financial inclusion.

Batista and Vicente (2020) carried out a randomized controlled trial to investigate the influence of mobile money on boosting agricultural investment by smallholder farmers in rural Mozambique. They revealed that offering remunerated mobile savings accounts increased savings behavior and encouraged investment in fertilizer. However, these effects were only observed while the accounts were incentivized. The study also noted that the intervention did not substantially influence investment in other agricultural inputs not explicitly addressed by the savings incentive. Additionally, delivering analogous interventions to farmers nearest agricultural associates resulted in diminished motivations to save and invest, presumably owing to network free-riding in the social structure. The study focused on smallholder farmers in rural Mozambique while the current study focused on youth groups in Kitui County, Kenya.

Nzyoka (2020) studied the impact of mobile money services on financial inclusion amongst SMEs in Mavoko Sub County. The research utilized a descriptive methodology and utilized the Innovation Diffusion Theory (IDT) and TAM, revealing that mobile banking services

substantially improve financial inclusion for SMEs. Particularly, credit facilitation via mobile phones and mobile payments for goods and services were shown to be favorably impacting financial inclusion; payment for goods and services exhibited an almost negligible correlation. The report urged banks to support mobile-based services to SMEs and advised higher use of mobile phones for financial transactions. They study solely employed Innovation Diffusion Theory (IDT) and TAM while the current study used Financial Intermediation Theory, Innovation Diffusion Theory (IDT) and TAM and transaction cost theory.

2.4 Summary of Literature Review and Research Gaps

Several studies highlight the transformative impact of digital financial services on improving financial inclusion in diverse situations. Veronicah, Jagongo, and Musau (2022) investigated the impact of digital payments on financial inclusion among Kenyan youth, revealing a substantial beneficial correlation, especially in transactions between individuals and businesses in Nairobi County. They recommended reducing transaction fees and eliminating taxes on mobile money to enhance accessibility. Neelam and Bhattacharya (2023) examined mobile payment applications in Pune, India, highlighting attributes such as performance expectancy and economic benefits that encourage adoption among the urban poor, hence advancing financial inclusion. Wamuyu (2022) examined the impact of digital financial services on Nairobi's youth, emphasizing the importance of digital payments in enhancing financial inclusion, while observing the limited effect of digital savings and loans. Musango (2018) analyzed mobile banking in Nairobi, emphasizing its role in improving financial accessibility and reducing transaction costs, hence assisting

individuals disenfranchised by traditional banking institutions. These studies collectively underscore the capacity of digital financial services to enhance financial inclusion through improved access and cost.

Studies on digital credit and financial inclusion highlight different consequences and restrictions in different settings inside Kenya. Wathome (2020) noted both positive results—more financial access—along with negative ones including young people in Kangemi, Nairobi County's over-indebtedness. Likewise, Tiony (2023) underlined, in spite of infrastructure and financial literacy challenges, the great beneficial benefits of digital financial services in Kenya, including improved access to banking and poverty reduction via platforms like M-Pesa. Kamau's (2021) study of digital credit use among low-income Kenyan households underlined its importance in providing short-term funding choices, much influenced by loan application policies and employment status. These research together look at the nuances and opportunities of digital credit in advancing financial inclusion in Kenya.

Bharadwaj and Suri (2020) examined M-Shwari's "Stawisha Na M-Shwari" initiative, which effectively enhanced loan uptake but failed to sustain a rise in savings following the campaign. Loaba (2021) found that mobile banking enhances both formal and informal savings, particularly among educated and affluent individuals. Houenou and Djogbenou (2020) employed machine learning to ascertain the impact of mobile phone ownership on savings practices in Western Kenya, highlighting its effect on savings account ownership and periodic variations in balances. Batista and Vicente (2020) conducted a trial showing that incentivized mobile savings accounts increased agricultural investments among

smallholder farmers in Mozambique temporarily. Nzyoka (2020) emphasized mobile money's role in improving SME financial inclusion in Mavoko Sub County, Kenya, especially through payments and credit facilitation. The summary is shown on Table 2.1

Table 2.1 Summary of Reviewed Literature and Research Gaps

Study	Research Title	Research Findings	Knowledge Gap	Focus of the current study
Veronicah et al (2022)	Digital payments and financial inclusion amongst Kenyas youth.	Findings demonstrated a substantial positive correlation between digital payments and financial inclusion.	Conducted at universities in Nairobi County	The current research assessed the effects of digital payments on financial inclusion amongst youth groups in Kitui County, Kenya.
Neelam et al (2023)	The role of mobile payment apps in inclusive financial growth pact of Mobile Financial Services on Household's Welfare and Disparity	Economic Benefit, Convenience, Technical conditions, Hedonic motivation, and social influence the adoption and utilization of mobile financial apps	Evaluated the role of mobile payment apps in bolstering financial inclusion within urban areas, particularly focusing on the urban poor households in Pune, Maharashtra, India se	The current research explored the influence of mobile banking specifically on financial inclusion
Wathome (2020)	Effects of digital credit on financial inclusion of Kenyan youth: A survey of Kangemi, Nairobi County	Digital credit demonstrated both beneficial and detrimental spillover effects on financial inclusion.	The research concentrated on youths in Kangemi, Nairobi County	The current research analyzed the effect of digital loans on financial inclusion amongst youth groups in

				Kitui County, Kenya.
Tiony (2023)	The impact of digital financial services on financial inclusion in Kenya	Significant gains in financial inclusion occurred due to enhanced access to formal banking services, savings, and credit facilities via digital media.	The study use Using secondary data analysis from sources including the KNBS, FSD Kenya, and Safaricom	The research adopted primary data obtained from respondents and assessed the effect of digital credit on financial inclusion amongst Youths' Groups in Kitui County
Kamau's (2021)	Digital credit in Kenya: An analysis of expenses, applications, and borrower factors concerning loan acquisition	It was revealed that employment status and the process of loan application significantly influenced the level of loan uptake	The analysis focused on how mobile phones and online platforms influence borrowing by low-income households	This research intended at examining how mobile credit financial inclusion of Youth Groups in Kitui County
Bharadwaj and Suri (2020)	Successful financial inclusion through digital savings and credit.	The found substantial and enduring effects of the promotion on loan uptake.	The research analyzed the impact of mobile banking on official and informal savings.	The current research was done in Kenya and examined effect of digital savings on financial inclusion of Youth Groups in Kitui County
Loaba (2021)	The impact of mobile banking services on saving behavior in West Africa.	Application of mobile banking services increased the probability of individuals engaging in formal savings by 2.4% and informal savings by 0.83%	The study was done in West Africa and focused on saving behavior	The current research was undertaken in Kenya and examined effect of digital savings on financial inclusion of Youth Groups in Kitui County

Nzyoka (2020)	Role of mobile money services on financial inclusion amongst SMEs in Mavoko Sub County	Mobile banking services significantly enhance financial inclusion for SMEs	The study focused on financial inclusion for SMEs in Mavoko Sub County	The current study examined financial inclusion of Youth Groups in Kitui County

Source: Researcher 2024

2.5 Conceptual Framework

Mugenda and Mugenda (2019) aver that conceptual framework serves as a structured system of variables constructed by the researcher to guide the investigation towards achieving its defined objectives. In the context of this study, the conceptual framework outlines the key elements under examination. The independent variables, namely digital payments, digital credit and digital savings are fundamental factors believed to exert influence on the dependent variable, which is financial inclusion.

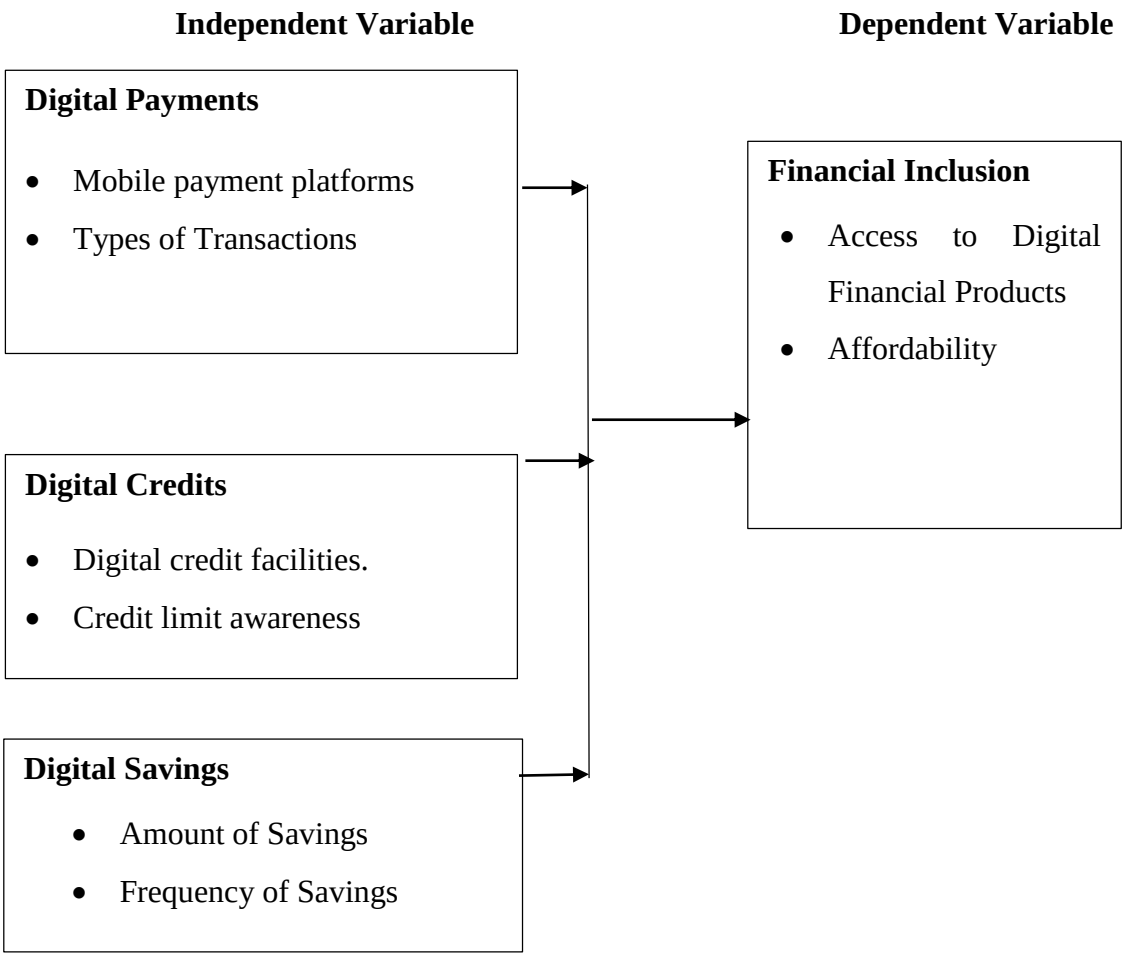

Figure 2.1 Conceptual Framework

Source: Researcher (2024)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research design and study approach that was adopted to gather, analyze and present data. The sections of the chapter included research design, target audience and sample designs, data gathering method and procedures, testing of soundness and dependability and data analysis and presentation.

3.2 Research Design

The research used descriptive design that gather quantitative data. This design is most appropriate to describe the variables of the study in more in-depth and also provide useful descriptions. Descriptive research design also gathers information with a specific end goal in mind regarding the study (Mugenda & Mugenda, 2019). It also assists in gathering detailed information from the study respondents by subjecting them to quantitative data collection methods such as questionnaires. It supports the use of structured questionnaires that could collect data concerning the study variables.

The research deemed this design suitable as it enabled the collection of trustworthy data elucidating the links between the study variables. It also served in obtaining quantitative metrics that facilitate conclusions about potential links between independent and dependent variables (Babbie, 2010).

3.3 Study Population

Population is making inferences often involves analyzing a group of elements in a study (Cooper & Schindler, 2013). These elements typically share observable characteristics that make them suitable for analysis. Additionally, the target audience of a study is a particular segment to which the study's results will be applicable or generalized (Mugenda & Mugenda, 2019). The unit of observation was 6 youth's groups while the unit of analysis was the officials from these youth groups within the region. Each region had youth groups ranging between 5 and 7 which were represented by two official. The focus was on youth groups that were officially registered by Kitui County Government within the five-year period from 2018 to 2023.

3.4 Sample Size

Sampling is the procedure of selecting a subset of persons or units from a broader population to serve as a representative for research or study purposes. It is an essential methodological procedure in research, particularly when it is unrealistic or unfeasible to examine the whole population owing to limitations such as time, expense, or logistical restrictions (Mugenda & Mugenda, 2019). This study employed purposive sampling to select youth groups, ensuring that groups relevant to the research objectives are included. Youth groups were crucial in the study because they are often marginalized in formal financial systems, yet they represent a significant portion of the population with the potential for economic growth. Within these purposively selected youth groups, the individual youths were sampled using simple random sampling. This approach allowed for a more focused selection of groups while ensuring that every individual youth within the

selected groups possesses an equivalent probability of being incorporated into the study. This method was chosen due to the constraints of available resources, which may not be sufficient to study the entire population comprehensively. A sample size of 10% to 30% is recommended for descriptive studies (Kothari, 2019). Therefore, the researcher purposively sampled 2 respondents from the youth group leaders as exhibited in Table 3.1.

Table 3.1 Sampling Frame

Category	**No. of youth officials (Sample size)**
Kitui West	14
Kitui Central	10
Kitui Rural	12
Kitui South	10
Kitui East,	10
Mwingi North,	12
Mwingi West	12
Mwingi Central	12
Total	**92**

Source: County Government of Kitui (2024)

3.5 Data Collection Method

Data was collected through questionnaires. The primary data was collected through questionnaires. The questionnaires were structured to allow for the collection of close-

ended questions. These features were important to the study since they assist in capturing both quantitative aspects of the study. Secondary data included document analysis on the groups' financial reports and membership data. These data sources were important in linking various organizational policies of inclusion to the adoption of digital money platforms. The research tool is shown on Appendix II.

3.6 Reliability and Validity of Research Instruments

3.6 Reliability of Research Instruments

Reliability is the level to which a data collection instruments yield reliable outcomes when tested repeatedly. The study utilized Cronbach's Alpha Test to check the internal dependability of scores of individual items in the research instrument. This test is instrumental in adapting the instruments to suit the study objectives (Orodho, 2004). The test results considered reliable if they fall above an alpha score of 0.7. The results are presented in Table 3.2 below

Table 3.2 Reliability Test

Variable	Cronbach's Alpha Value	Conclusion
Digital Payments	0.925	Excellent
Digital Credit	0.914	Excellent
Digital Savings	0.972	Excellent
Financial Inclusion	0.884	Good
Average Score	**0.924**	Excellent

Source: Researcher (2024)

The results in Table 3.2 shows that digital payments had an alpha value of 0.925, digital credit 0.914, digital savings 0.972, and financial inclusion 0.884. The mean score of all

alpha values was 0.924, signifying that the feedback form was dependable as all values exceeded 0.7.

3.6.1 Validity of Research Instruments

Kothari (2004) aver that validity assesses the level to which data collection instruments obtain information pertinent to the research objectives. The researcher sought to ensure the validity of the research instruments through expert judgment. Additionally, the researcher piloted the research questionnaire to 10 respondents in youth groups located in Mwingi Town to identify areas that needed improvement.

3.7 Operationalization and Measurement of Variables

Table 3.1 provides an overview of the operationalization and measurement of variables used in this research to establish the effect of digital payments, digital credit and digital savings on financial inclusion among youth groups of Kitui County in Kenya. Each variable was defined and operationalized to facilitate data collection and analysis.

Table 3.3 Operationalization and Measurement of Study Variables

Variables	Variable Type	Operationalization	Measurement Scales
Digital Payments	Independent	• Youth group members with active mobile money accounts. • Frequency and volume of transactions conducted via mobile payment platforms. • Types of Transactions • Cost of Transactions	5-point Likert Scale
Digital Credit	Independent	• Access to digital credit facilities. • Repayment rates and creditworthiness of youth group members. • Credit limit awareness • Purpose of credit	5-point Likert Scale
Digital Savings	Independent	• Savings Goal Achievement • Amount of Savings • Frequency of Savings:	5-point Likert Scale
Financial inclusion	Dependent	• Account Ownership • Access to Digital Financial Products • Affordability • Digital transaction volume • Inclusivity of financial institutions	5-point Likert Scale

Source: Researcher (2024)

3.8 Empirical Model

This research employed inferential data analysis methodologies. The data was assessed utilizing version SPSS 25.0 software. Analytical methods, particularly descriptive statistics, was used to examine demographics via frequencies, percentages, and charts. The principal research objective was to examine the impact of digital money platforms on financial inclusion, utilizing a multiple regression model to quantify the amount of this effect. A multiple linear regression model was employed in data analysis.

$$Y=\beta 0+\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\varepsilon,$$

Where;

Y =Financial inclusion

$\beta 0$ = constant term

X_1= Digital Payments

X_2= Digital Credit

X_3= Digital savings

ε=Error term

β_1, β_2, β_3= beta coefficients.

The data gathered was presented in tables for better visualization. Qualitative data from interviews was organized into prominent themes in the form of narratives.

3.9 Diagnostic Tests

The following diagnostic tools were employed with this model:

3.9.1 Multicollinearity

Multicollinearity develops when outcome variable means and explanatory variable values are perfectly linear (YanHorne, 2018). A multicollinearity test was conducted to ascertain the correlations between the variables and identify outliers. This phenomenon will manifest

anywhere there exists a proportional (or almost proportional) relationship between two or more variables. Multicollinearity was assessed by the VIF. When the VIF values are between 1 and 10, multicollinearity is not present, but the standardisation option remains in the regression dialogue box. Researcher used the variance inflation factor introduced by Kreft and de Leeuw (2018) to quantify multicollinearity.

3.9.2 Normality Test

As stated by Osborne and Waters (2012), multiple regression is most effective when the variables follow a normal distribution. There will be a normal distribution of errors and a normal distribution of the residual histogram. Therefore, a normality test is run (Hoekstra, Kiers., and Johnson, 2018) to check whether the distribution of the sampled population is normally distributed. If the study's variables follow a normal distribution, the Shapiro-Wilk test's findings may be relied upon. Assuming the data have a normal distribution, we shall proceed with the statistical analysis. Thus, the study's independent variables must have p-values below 0.05 to reject H0.

3.9.3 Heteroscedasticity Test

It is said that heteroscedasticity exists when the range of values for the predictor variable is much less than that of the independent variable. The use the Breusch-Pagan test to see whether the residuals have been stable. If the p-value of the independent variables is less than 0.05, the residual will be heteroskedastic, thus avoid the standard error. This is according to research (Darlington, 2018).

3.10 Ethical Considerations

The researcher was well aware of the ethical implications of research and addressed them in the following ways. The study was carried out in accordance with all rules and regulations regulating research in Kenya, after given the approvals by the Graduate School and NACOSTI. Then, the study treated all respondent information with utmost confidentiality and privacy. Also, the researcher sought informed consent and educate the respondents on the research implications. The researcher also committed to upholding the ethical values of beneficence, non-malevolence, dignity and autonomy. Finally, the researcher applied the highest standards of objective research to ensure that the results are free from bias and manipulation.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter offers an analysis of the research conclusions to interpret the results. The analysis employed two key methodologies: descriptive statistical analysis for a summary and contextualize subsequent analysis, and inferential analysis to empirically elucidate the individual and collective effect of digital money platforms—namely, digital payments, digital credit, and digital savings—on financial inclusion amongst youth groups in Kitui County, Kenya. The findings are presented as table, graphs, and in narrative style. Themes aligned with the research objectives were utilized to organize the analyzed data.

4.2 Response Rate

The research's results were derived from fully completed questionnaires that were received from the field. Table 4.2 below exbits the number of questionnaires returned, those unreturned, and the corresponding response rate.

Table 4.1 Response rate

Status	Frequency	Percentage
Complete questionnaires	82	9%8
Incomplete questionnaires	10	11%
Total	**92**	**100.0%**

Source: Field Data, (2024)

The results in Table 4.2 illustrates that 92 questionnaires were distributed to youth representatives, specifically the officials from various youth groups in Kitui County, of which 82 were completely filled and returned, while 10 were not returned, and some were disregarded due to incomplete responses. This showed a total response rate of 89%, an outstanding statistic that enabled an analysis of results, discussion, and extrapolation from the sampled responders. Kothari (2007) asserts that a response level of 50% is enough for analysis and publication, 60% is regarded as good, 70% as very good, and rates exceeding 80% are classified as excellent. Saunders *et al*. (2003) suggest that a response rate of 30% to 50% is permissible for statistical extrapolations.

4.3 Demographic Characteristics

This section provides the biographical data of the participants. The bio data analyzed included gender, highest educational attainment, and the length of business existence. The results are explained below.

4.3.1 Gender of the Respondents

The research aimed to establish the respondents' gender. The findings are illustrated in Figure 4.1 below.

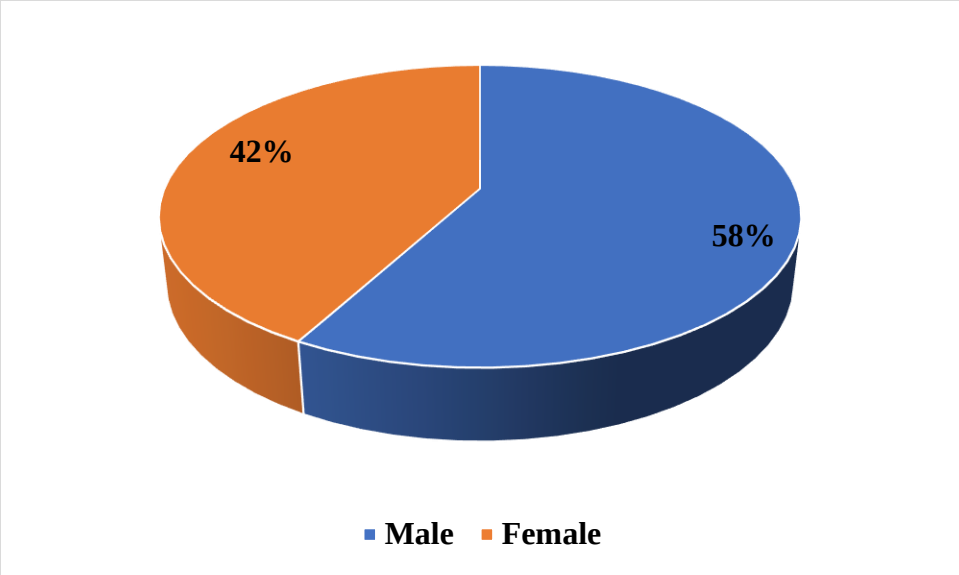

Figure 4.1 Gender of the Respondents

Source: Field Data, (2024)

The results in Figure 4.1 indicates 58% respondents were male, whereas 42% were female. The research suggests a higher participation rate of males equated to females. The finding indicates that the research was balanced in terms of gender representation, including both sexes, therefore offering a vast array of perspectives from both genders.

4.3.2 Respondents' Highest Educational Attainment

The research intended to ascertain the responders' uppermost educational attainment. The findings are exhibited in Figure 4.2 below.

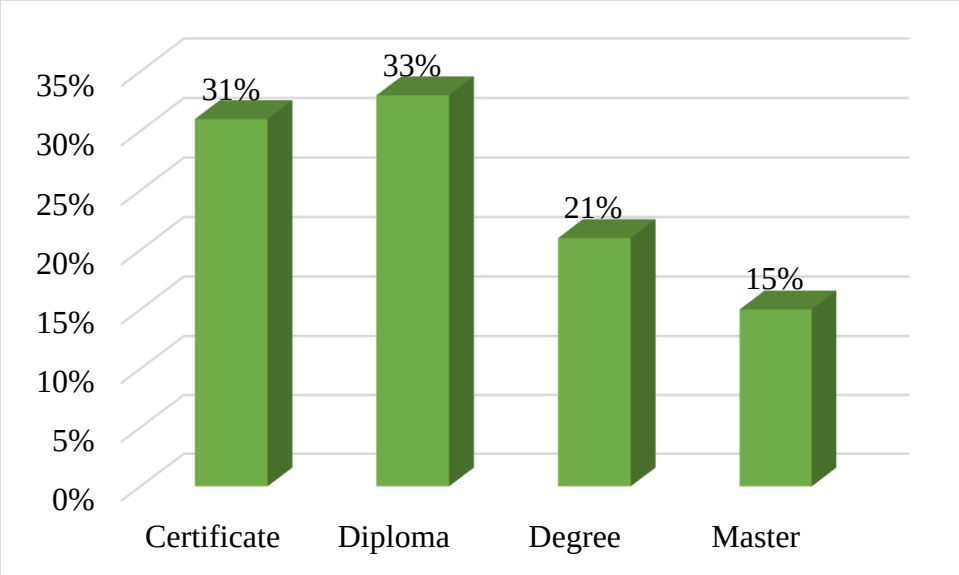

Figure 4.2 Respondents' Highest Level of Education
Source: Field Data, (2024)

Results in Figure 4.2 reveals that 31% of responders had a certificate as their highest level of education, whereas 33% had diploma. 21% had Bachelor Degree as their highest educational level while 15% had Master Degree. The results suggest that respondents had sufficient education and comprehended the effect of digital money apps on financial inclusion amongst the youth groups in Kitui County, Kenya.

4.3.3 Length of Business Existence

The research sought to ascertain the length the business has been existence. The findings were as displayed in Figure 4.3 below.

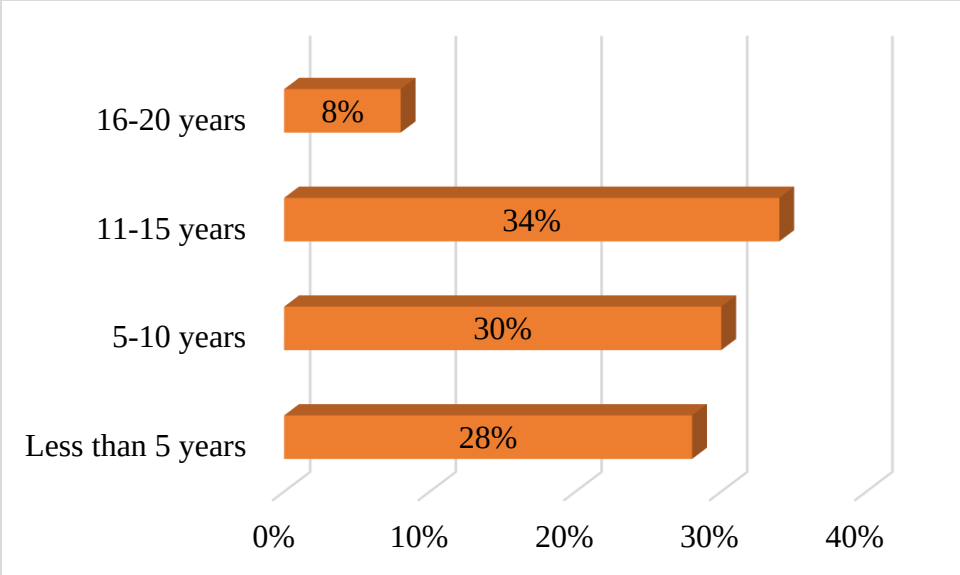

Figure 4.3 Length of Business Existence

Source: Field Data, (2024)

The results in Figure 4.3 above indicate that majority of responders 34% indicated that the business had been existence for a period of 11 to 15 years. 30% indicated that their business had been existing for a period of 5 to 10 years. 28% of the responders indicated that they have been in business for less than 5 years while 8% indicated that their business had been existence for a period of 16 to 20 years. These discoveries indicate that most of responders had an experience in business and thus had enough experience to comprehend the effect of digital money apps on financial inclusion amongst the youth groups in Kitui County, Kenya.

4.4 Descriptive Analysis

This section discusses results from the descriptive analysis done concerning the research's variables. A detailed descriptive analysis was performed for each research variable. This

was executed based on data collected from the field. The study used a Likert scale. The researcher achieved relevant findings by the application of frequency, mean, and standard deviation. The research's main goal was to assess the effect of digital money platforms on financial inclusion amongst the youth groups in Kitui County, Kenya.

4.4.1 Digital Payments and Financial Inclusion

The research pursued to ascertain the effect of digital payments on financial inclusion amongst the youth groups in Kitui County, Kenya as displayed in Table 4.3 below.

Table 4.2 Digital Payments and Financial Inclusion

Statements	N	Mean	Std. Deviation
I have at least one mobile banking platform I use regularly	86	3.9419	1.09925
Mobile money transfer is safe compared to mainstream banking	86	3.6279	1.05213
Sending money through mobile transfer is the first option for my business	86	4.1977	.71652
I have made significant savings for my business through mobile money transfer	86	3.6349	1.22424
Mobile money transfer does not discriminate my business due to small size	86	4.4535	.54572
Mobile money transfer is convenient than mainstream banking	86	4.2791	.62593
Mobile money transfer is cheaper than other methods	86	3.7791	1.04489
I use mobile money for most of business payments	86	4.2209	.72601
Aggregate Score	**86**	**4.0169**	**.87934**

Source: Field Data, (2024)

The results in Table 4.3 above shows that majority of responders strongly agreed statements that; mobile money transfer did not discriminate their business due to small size as suggested by a mean of 4.4535 with a standard deviation of 0.5457, mobile money transfer was convenient than mainstream banking as evinced by a mean of 4.2791 and a

variation of 0.6259. Participants also strongly agreed that they used mobile money for most of their business payments as evinced by a mean of 4.2209 and a variation of 0.7260 and that sending money through mobile transfer was the first option for their businesses as exhibited by a mean of 4.1977 and a deviation of 0.7165. Most of the participants agreed that they had at least one mobile banking platform that they used regularly (mean=3.9419, std. dev.=1.0992) and that mobile money transfer was cheaper than other transfer methods (mean=3.7791, std. dev.=1.0449). They also agreed that they had made significant savings for their businesses through mobile money transfer (mean=3.6349, deviation=1.2242) and that mobile money transfer was safer compared to mainstream banking (mean=3.6279, std. dev.=1.0521). With an cumulative mean score of 4.0169 and a variation of 0.8793, it can be determined that digital payments affects financial inclusion amongst the youth groups in Kitui County, Kenya.

These findings concur with a study by Wamuyu (2022) on the impact of digital financial services and financial literacy on financial inclusion amongst youth in selected universities in Nairobi City County, Kenya. Using the TAM, Rational Choice Theory, and Financial Literacy Theory. The study found that digital payments significantly contribute to financial inclusion among youth. However, digital savings and digital credit showed insignificant relationships with financial inclusion. The study recommended improving digital payment services by reducing transaction costs and eliminating taxes to enhance financial inclusion amongst youth.

4.4.2 Digital Credit and Financial Inclusion

The research aimed to ascertain the effect of digital credit on financial inclusion amongst the youth groups in Kitui County, Kenya. The results are presented in Table 4.4 below.

Table 4.3 Digital Credit and Financial Inclusion

Statements	N	Mean	Std. Deviation
Mobile banking has more credit opportunities for my business	86	4.2595	.78460
I access a top up loan through mobile banking than through mainstream banking	86	4.2463	1.05057
Mobile banking loans have a lower cost than those of mainstream banking	86	3.6512	1.04900
I know other SME business people that access mobile banking loans	86	3.5233	1.21488
I have less loan defaults in mobile loans compared to loans from mainstream banking	86	2.9979	1.21555
Mobile banking loans are flexible enough to support business financial needs	86	3.9535	.82472
Mobile banking loans have enabled me to expand my business compared to loans from mainstream banks	86	3.8721	.90484
Mobile banking loans have improved the credit rating of the business	86	3.5302	1.05764
Aggregate Score	**86**	**3.2702**	**1.01273**

Source: Field Data, (2024)

The results in Table 4.4 above demonstrates that majority of responders strongly agreed that mobile banking had more credit opportunities for their businesses as evinced by a mean of 4.2595 and a deviation of 0.7846 and that they were able to access top up loans through mobile banking than through mainstream banking as validated by a mean of 4.2463 and a variation of 1.0506. Most of the responders agreed that mobile banking loans are flexible enough to support their business financial needs as prescribed by a mean of 3.9535 and a variation of 0.8247, mobile banking loans had enabled them to expand their businesses

compared to loans from mainstream banks as evidenced by a mean of 3.8721 and a variance 0.9048, mobile banking loans had lower costs than those of mainstream banking as validated by a mean of 3.6512 and a variation of 1.0490, mobile banking loans had improved the credit rating of their businesses as exhibited by a mean of 3.5302 and a variation of 1.0576 and that they knew other SME business people that accessed mobile banking loans as publicized by a mean of 3.5233 and a variation of 1.2149. Respondents also disagreed that they had less loan defaults in mobile loans compared to loans from mainstream banking as displayed by a mean of 2.9979 and a variation of 1.2156. The findings indicate that digital credit affects financial inclusion amongst the youth groups in Kitui County, Kenya as evinced by a cumulative mean score of 3.2702 and a variance of 1.0127.

The research results are congruent to those of Wathome (2020) on the effects of digital credit on the financial inclusion of youths in Kangemi, Nairobi County, Kenya. The research employed a descriptive design and quantitative methodology, surveying 384 participants who utilized digital credit services. Findings indicated that digital credit had both positive and negative spillover effects on financial inclusion. Positive effects included increased access to financing, job creation, poverty reduction, and enhanced financial independence among youth. However, negative effects such as over-indebtedness, Credit Reference Bureau listings due to defaults, and reckless financial behaviors were also observed.

4.4.3 Digital Savings and Financial Inclusion

The research sought to ascertain the effect of digital savings on financial inclusion amongst the youth groups in Kitui County, Kenya as presented in Table 4.5 below.

Table 4.4 Digital Savings and Financial Inclusion

Statements	N	Mean	Std. Deviation
I save money for my business through mobile money transfer	86	3.6860	1.10891
Saving money through mobile money platforms saves me a lot of cost and time	86	3.9186	.92310
Mobile platform has enabled me to acquire more savings avenues.	86	3.7674	1.09194
Mobile banking payment for goods and services has enhanced savings for my business	86	3.7628	1.03667
Mobile payment for goods and services has increased the flow of savings	86	3.8837	1.07833
Mobile payment for goods and services has faster and convenient than other modes of payment	86	3.8739	1.03377
I have made significant savings for my business through mobile money transfer	86	3.5233	1.14508
Mobile money platforms saving is faster and convenient	86	4.1977	.76420
Aggregate Score	**86**	**3.8267**	**1.02275**

Source: Field Data, (2024)

The results in Table 4.5 above suggests that most of responders strongly agreed that mobile money platforms saving was faster and convenient as supported by a mean of 4.1977 and a variance of 0.7642. The results suggests that most of responders agreed that saving money

through mobile money platforms saved them a lot of cost and time as evidenced by a mean of 3.9186 and a variation of 0.9231, mobile payment for goods and services had increased the flow of their savings as clarified by a mean of 3.8837 and a variation of 1.0783 and that mobile payment for goods and services was faster and convenient than other modes of payment as proved by a mean of 3.8739 and a variation of 1.0338. They also concurred that mobile platform had enabled them to acquire more savings avenues as exhibited by a mean of 3.7674 and a variance of 1.0919, mobile banking payment for goods and services had enhanced their business savings as demonstrated by a mean of 3.7628 and a std. dev. of 1.0367. They also agreed that they were able to save money for their businesses through mobile money transfer as publicized by a mean of 3.6860 and a variance of 1.1089 and that they had made significant savings for their businesses through mobile money transfer as indicated by a mean of 3.5233 and a variance of 1.1451. With an cumulative mean score of 3.8267 and a variation of 1.0228, the research determined that digital savings affects financial inclusion amongst the youth groups in Kitui County, Kenya.

A study by Houenou and Djogbenou (2020) that utilized machine learning to predict household mobile banking saving behavior in Western Kenya. Their study employed a generalized regression model to analyze various factors impacting savings behavior, including livelihoods, assets, income generation, food consumption, housing quality, demographics, and social status. Findings indicated that mobile phone ownership significantly predicts savings account ownership, but also contributes to fluctuating savings balances and dissaving behaviors, particularly among younger individuals in the workforce.

4.4.4 Financial Inclusion

The respondents were asked questions about ownership, availability, affordability and inclusivity, accessibility, adequacy, and linkage of digital financial platforms. The findings are exhibited in Table 4.6 below.

Table 4.5 Financial Inclusion

Statements	N	Mean	Std. Deviation
I own a digital money account for my business	86	3.9651	1.01109
I have easy access to digital lending and savings platforms	86	3.9433	.86020
Digital money platform is affordable and inclusive for my business	86	3.8837	.87338
I can easily borrow and save money for my business using digital money platforms	86	3.9336	.82472
I can access enough money for my business through digital money platforms	86	3.8488	.91417
Digital money platforms have increased access to finance for my business compared to mainstream banking	86	3.8729	.91775
I can carry out several business transactions using digital money platform	86	3.9186	.84317
The digital money platforms are linked to mainstream banking	86	4.1279	.77909
Aggregate Score	**86**	**3.8117**	**.87795**

Source: Field Data, (2024)

The results in Table 4.6 illustrates that most of the responders strongly agreed that digital money platforms were linked to mainstream banking as specified by a mean of 4.1279 and a variation of 0.7791. The responders concurred that they owned digital money accounts for their businesses as advocated by a mean of 3.9651 and a variation of 1.0111, they were able to easily access digital lending and savings platforms as confirmed by a mean of 3.9433 and a variation of 0.8602 and easily borrowed and saved money for their businesses through digital money platforms as proved by a mean of 3.9336 and a variation of 0.8247. They also concurred that they carried out several business transactions using digital money platform as proved by a mean of 3.9186 and a variation of 0.8432 and that digital money platform was affordable and inclusive for their businesses as validated by a mean of 3.8837 and a variation of 0.8734. Responders also concurred that digital money platforms had increased access to finance for their businesses compared to mainstream banking as proposed by a mean of 3.8729 and a variation of 0.9178 and that they could access enough money for their business through digital money platforms as proposed by a mean of 3.8488 and a std. dev. of 0.9142.

4.5 Diagnostic Test Results

In multiple regression analysis, diagnostic tests are essential for testing the assumptions underlying the model to ensure it provides unbiased estimates of the study parameters. The diagnostic tests performed included: multicollinearity, normality and heteroskedasticity test and the results presented below.

4.5.1 Multicollinearity Test

The researcher aimed to ascertain the likelihood of multicollinearity among the independent variables. Leech, *et al* (2014) asserted that detecting multicollinearity in a model is crucial, which can be assessed through the forbearance level and the VIF. Allison (2015) indicated that a VIF >10 signifies significant multicollinearity that requires rectification.

Table 4.6 Multicollinearity Test Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Digital Payments	.218	4.583
	Digital Credit	.148	6.754
	Digital Savings	.186	5.387

a. Dependent Variable: Financial Inclusion

Source: Field Data, (2024)

Table 4.7 depicts the absence of multicollinearity between the predictor variables, as no variable exhibited a VIF>10.

4.5.2 Normality Test

The data must be normally distributed, which is a fundamental assumption of linear regression. Consequently, the Shapiro-Wilk test was performed to assess normality. This test was utilized due of its prevalence and superior sensitivity in identifying non-normality. The test contradicts the normality hypothesis when the p-value≤0.05. Should the normality

test be unsuccessful, it can be asserted that the data is inappropriate for normal distribution with 95% confidence. If it meets the normalcy criterion, it can only be asserted that there was no significant divergence from normality. The results are as in Table 4.8 below.

Table 4.7 Tests of Normality

	Kolmogorov – Smirnov[a]			Shapiro – Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Digital Payments	.109	86	.053	.932	86	.062
Digital Credit	.130	86	.061	.953	86	.073
Digital Savings	.154	86	.090	.888	86	.058
Financial Inclusion	.202	86	.059	.905	86	.072

a. Lilliefors. Significance Correction

Source: Field Data, (2024)

The results in Table 4.8 reveals that the obtained data have a normal distribution in all variables; henceforward, the null hypothesis isn't rejected. The p value, signified as sig, for all variables exceeds 0.05, suggesting that the data is normally distributed.

4.5.3 Heteroscedasticity

The research utilized the Breusch-Pagan test to assess heteroscedasticity. This test assesses if the discrepancies of samples are roughly equivalent. If the significance level exceeds 0.05, the Breusch-Pagan test is deemed non-significant, indicating the assumption of homoscedasticity. If the p-value from the Breusch-Pagan test is below a specified

significance level (often 0.05), the experiential variances in the samples are improbable to have arisen from random sampling within a populace exhibiting identical variances. Consequently, the null hypothesis of equal variances is rejected, confirming the existence of variance disparity within the population.

Table 4.8: Breusch-Pagan Test for Heteroskedasticity[a,b,c]

Chi-Square	df	Sig.
83.342	1	.000

a. Dependent variable: Financial Inclusion
b. Tests the null hypothesis that the variance of the errors does not rely on the values of the independent variables.
c. Predicted values from design: Intercept + X1 + X2 + X3 + X1 * X2 + X1 * X3 + X1 * X2 * X3 + X2 * X3 *+ X1 * X2 * X3 + X1 * X2 * X1 * X3 + X2 * X3 + X1 * X2 * X3

Source: Field Data (2024)

Given that the p-value <0.05, the null hypothesis is rejected, signifying sufficient evidence to assert that the variation among digital money platforms is considerably heterogeneous.

4.6 Correlation Analysis

This section analyzes the correlation between the research variables. The results are exhibited in Table 4.10.

Table 4.9 Correlations

		Digital Payments	Digital Credit	Digital Savings	Financial Inclusion
Digital Payments	Pearson Correlation	1	.875**	.840**	.778**
	Sig. (2-tailed)		.000	.000	.000
	N	86	86	86	86
Digital Credit	Pearson Correlation	.875**	1	.895**	.838**
	Sig. (2-tailed)	.000		.000	.000
	N	86	86	86	86
Digital Savings	Pearson Correlation	.840**	.895**	1	.899**
	Sig. (2-tailed)	.000	.000		.000
	N	86	86	86	86
Financial Inclusion	Pearson Correlation	.778**	.838**	.899**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	86	86	86	86

$**$ Correlation is significant at the 0.01 level $(2-$ tailed)
Source: Field Data, (2024)

The findings of the correlation analysis suggests that the financial inclusion among the youth groups in Kitui County, Kenya and all analyzed elements of digital money platforms were positively and significantly correlated, however the strength of the association varied.

The results in Table 4.10 exhibit a favorable and substantial correlation between digital payments and financial inclusion (r = 0.778, p = .000). This indicated a substantial correlation between digital payments and financial inclusion amongst the youth groups in Kitui County, Kenya.

These findings concur with a study by Isabwa (2021) on the impact of mobile banking on financial inclusion amongst Kenyan financial institutions. Using inferential statistics

including Pearson correlation and regression analysis, the study identified substantial beneficial effects of mobile money transfers (β=1.697, p=0.000), cash withdrawals utilizing mobile platforms (β=1.195, p=0.000), and deposits via mobile platforms (β=0.354, p=0.000) on financial inclusion.

The results in Table 4.10 imply a substantial and beneficial connection between digital credit and financial inclusion (r = 0.838, p = .000). This point to a substantial correlation between digital credit and financial inclusion amongst the youth groups in Kitui County, Kenya.

The research findings are differed with a study by Kamau (2021) that analyzed the cost, uses, and borrower considerations associated with digital credit in Kenya. The research focused on how mobile phones and online platforms are utilized for securing short-term credit, which has steadily increased in Kenya since 2012, particularly benefiting low-income households. Key findings included that the cost of digital loans did not significantly differ from traditional bank lending rates in Kenya.

Table 4.10 illustrates a beneficial and substantial correlation between digital savings and financial inclusion (r = 0.899, p = .000). This demonstrates a substantial correlation between digital savings and financial inclusion amongst the youth groups in Kitui County, Kenya.

The research findings are similar to a study by Bharadwaj and Suri (2020) that investigated the impact of a promotional campaign, "Stawisha Na M-Shwari," conducted by M-Shwari, Kenya's leading digital banking platform, from mid-April 2016 to early June 2016 that

found substantial and enduring effects of the promotion on loan uptake, indicating increased borrowing activity among participants.

4.7 Multiple Regression Analysis

Regression analysis was utilized to ascertain the effects of digital money platforms on financial inclusion among the youth groups in Kitui County, Kenya. The results from the multiple regression analysis are provided in Tables 4.11, 4.12, and 4.13.

4.7.1 Model Summary

The model summary presents the coefficient of correlation and coefficient of determination based on the digital savings, digital payments and digital credits

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.902[a]	.814	.807	.36268

a. Predictors: (Constant), Digital Savings, Digital Payments, Digital Credit

Source: Field Data, (2024)

The R value was 0.814, signifying a robust association between the variables. The modified R^2 value of 0.807 signifies that 80.6% of the variance in financial inclusion amongst the youth groups in Kitui County, Kenya is attributable to alterations in digital savings, digital payments and digital credit. The remainder of 19.4% can be ascribed to other aspects not studied in this research.

4.7.2 ANOVA

The research conducted an analysis of the variance utilizing the SPSS. The result for the overall model was as illustrated in Table 4.12.

Table 4.11 ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.111	3	15.704	119.389	.000[b]
	Residual	10.786	82	.132		
	Total	57.897	85			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Digital Savings, Digital Payments, Digital Credit

Source: Field Data, (2024)

Table 4.12 provides a p-value of 0.000, which is <0.05, alongside a F statistic of 119.389. This suggests that the research's model effectively predicted the dependent variable and exhibited statistical significance (superior fit). This illustrates the substantial effect of digital money apps on financial inclusion amongst youth in Kitui County, Kenya.

Table 4.12 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.798	.220		3.627	.000
	Digital Credit	.160	.123	.162	1.304	.013
	Digital Payments	.563	.114	.010	.101	.020
	Digital Savings	.012	.097	.746	6.741	.000

a. Dependent Variable: Financial Inclusion

Source: Field Data, (2024)

The study adopted model was;

$Y=0.798X+0.160X_1+0.563X_2+0.012X_3+ Ɛ.$

Where: Y = Financial Inclusion, $\mathbf{X_1}$= Digital Credit, $\mathbf{X_2}$= Digital Payments and $\mathbf{X_3}$= Digital Savings

Table 4.13 shows that digital credit had a favorable and substantial effect on financial inclusion amongst the youth groups in Kitui County, Kenya ($\beta = 0.160$, $p< 0.013$). This infers that a unit improvement in digital credit would culminate to 0.16 unit improvement in financial inclusion among the youth groups in Kitui County, Kenya.

Table 4.13 also shows that digital payments had a favorable and substantial effect on financial inclusion amongst the youth groups in Kitui County, Kenya ($\beta = 0.563$, $p< 0.02$). This demonstrates that a unit augmentation in digital payments would culminate to 0.563 unit improvement in financial inclusion amongst the youth groups in Kitui County, Kenya.

Lastly, Table 4.13 indicate that digital savings had a positive and substantial effect on financial inclusion amongst the youth groups in Kitui County, Kenya ($\beta = 0.012$, $p < 0.00$). This proposes that a unit enhancement in digital savings would culminate to 0.012 unit improvement in financial inclusion amongst the youth groups in Kitui County, Kenya.

4.8 Hypothesis Testing and Discussion of the Findings

4.8.1 H_{01} Digital Payments does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya

The research sought to test hypothesis that; **H_{01}**: Digital payments does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya. The outcomes show that a unit rise in digital payments would result to 0.563 increase in financial inclusion amongst the youth groups in Kitui County, Kenya. The results further suggests that the p-value was below the threshold of significance level ($0.020<0.05$), indicating that it was favorable and statistically significant. Consequently, on the basis of principle of significance, the research rejected the null hypothesis (H01) and concludes that digital payments influence financial inclusion amongst youth groups in Kitui County, Kenya. The study findings thus indicates that digital payments is a major determinant of financial inclusion financial inclusion amongst the youth groups in Kitui County, Kenya.

These outcomes concur with a study by Wamuyu (2022) on the influence of digital financial services and financial literacy on financial inclusion amongst youth in selected institution of higher learning in Nairobi City County, Kenya. The research found that digital payments considerably contribute to financial inclusion among youth.

4.8.2 H_{02} Digital Credit does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya

The research sought to test hypothesis that; **H_{02}**: Digital credit does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya. The outcomes suggests that a unit intensification in digital payments would result to 0.160 increase in financial inclusion amongst the youth groups in Kitui County, Kenya. The outcomes further suggests that the p-value was below the threshold of significance level (0.013<0.05), indicating that it was favorable and statistically significant Consequently, in accordance with the concept of significance, the research rejects the null hypothesis (H02) and concludes that digital credit influences financial inclusion amongst youth groups in Kitui County, Kenya. The study findings therefore point out that digital payments is a major contributor to financial inclusion financial inclusion amongst the youth groups in Kitui County, Kenya.

The results align with a research by Wathome (2020), which examined the impact of digital credit on the financial inclusion of youth in Kangemi, Nairobi County, Kenya. The study concluded that digital credit significantly impacted the financial inclusion of youth by improving access to loans and fostering credit history.

4.8.3 H_{03} Digital Savings does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya

The research intended to evaluate the hypothesis H03: Digital savings did not exhibit a statistically significant impact on financial inclusion amongst youth groups in Kitui

County, Kenya. The data suggests that a one-unit rise in digital savings would translate to a 0.012 rise in financial inclusion among youth groups in Kitui County, Kenya. The data also indicate that the p-value was below the significance threshold ($0.00 < 0.05$), exhibiting statistical significance. Thus, on the basis of principle of significance, the research rejects the null hypothesis (H03) and concludes that digital savings influence financial inclusion amongst youth groups in Kitui County, Kenya.

The outcomes are congruent to a research by Nzyoka (2020) on the impact of mobile money services on financial inclusion amongst SMEs in Mavoko Sub County. The study used a descriptive approach and applied the IDT and TAM to show that mobile banking services greatly improve financial inclusion for SMEs. Whereas the link between payment for goods and services was determined to be little, mobile payments for goods and services as well as credit facilitation via mobile phones were acknowledged as significantly improving financial inclusion.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter provides a synthesis of findings, results, and conclusions from studies. The objectives of the research, which sought to assess how digital money platforms affect financial inclusion among youth groups in Kitui County, Kenya, helped to guide its conclusions. The inferential results and recommendations guided by the results related to each objective helped to derive the conclusions.

5.2 Summary of the Findings

This study intends to investigate the influence of digital money platforms on financial inclusion amongst youths in Kitui County, Kenya. The research results are conveyed as follows.

5.2.1 Digital Payments and Financial Inclusion amongst the youth groups in Kitui County, Kenya

This study sought to investigate the impact of digital payments on financial inclusion amongst youth in Kitui County, Kenya. According to the study, digital payments affect financial inclusion for different young groups in Kitui County, Kenya. The results implied that mobile money transfer does not discriminate against companies depending on their modest scale. Transferring mobile money was easy than using regular banking. Since mobile transfer was the first choice for their businesses, most young group members paid

most of their business expenses with mobile money. Most young people in the cohort had at least one regular mobile banking platform used. Mobile money transfers were less expensive than other methods of transfer. They also said that using mobile money transfer has helped their businesses save rather significant amounts and that it was more safe than conventional banking.

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5.2.2 Digital Credit and Financial Inclusion amongst the youth groups in Kitui County, Kenya

This study sought to investigate how digital credit affected financial inclusion among youths in Kitui County, Kenya. According to the study, youths in Kitui County, Kenya's digital credit affects their level of financial inclusion. Most youth group members said that mobile banking allowed them to get top-up loans and that it provided more credit possibilities for their businesses than more conventional banking, which were sufficiently adaptable to meet their corporate financial needs. Mobile banking loans had enabled them to expand their businesses compared to loans from mainstream banks since these loans had lower costs than those of mainstream banking. Mobile banking loans had raised the creditworthiness of their ventures. They also know coworkers who applied for mobile banking loans. Participants disapproved that mobile loans had less loan defaults than loans from conventional banking.

5.2.3 Digital Savings and Financial Inclusion amongst the youth groups in Kitui County, Kenya

The study sought to investigate how digital savings affect financial inclusion among youths in Kitui County, Kenya. The study revealed that digital savings affect financial inclusion among youths in Kitui County, Kenya. The study found that faster and more practical savings were made possible via mobile money services. Most members of the group said that using mobile money apps greatly cut their time and expenses. Since mobile payments for goods and services is faster and more practical than other payment options, their adoption has improved the efficiency of savings. They said that mobile banking payments for products and services have enhanced their business savings and that the mobile platform has helped them to acquire more chances for saves. They also said that using mobile money transfers helped them effectively save money for their business.

5.2.4 Digital Financial Inclusion amongst the youth groups in Kitui County, Kenya

The objective of this study was to investigate digital financial system ownership, availability, affordability, inclusiveness, accessibility, appropriateness, and connectivity. According to the study, most digital money systems connected themselves with traditional financial systems. As shown, most young group members have digital currency accounts for their businesses, which helps them to easily use digital lending and savings systems. They effortlessly acquired and conserved capital for their enterprises via digital money platforms. They also indicated that they carried out several business transactions using digital money platform and that digital money platform was affordable and inclusive for their businesses. Respondents also indicated that digital money platforms had increased

access to finance for their businesses compared to mainstream banking and that they could access enough money for their business through digital money platforms.

5.3 Conclusions

The research findings led to the subsequent conclusions;

The multicollinearity test confirmed the absence of multicollinearity among the predictor variables, as no variable exhibited a VIF greater than 10. The normality test revealed that the gathered data were normally distributed across all variables. The p value, denoted as sig, for all variables exceeds 0.05, suggesting that the data is regularly distributed. On Heteroscedasticity test, null hypothesis was rejected since this p-value was less than 0.05, suggesting that there was adequate proof to say that the variance in the digital money platforms was significantly diverse.

The first research objective aimed to evaluate the effectst of digital payments on financial inclusion amongst the youth groups in Kitui County, Kenya. The research determined a beneficial and substantial connection between digital payments and financial inclusion. The study sought to test hypothesis that; **H_{01}**: Digital payments does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya. The research concluded that the p-value was below the threshold of significance level, indicating that it was favorable and statistically significant thus, trejected the null hypothesis (**H_{01}**) and concluded that digital payments affect financial inclusion amongst the youth groups in Kitui County, Kenya.

The second goal of the research was to establish the effects of digital credit on financial inclusion among young groups in Kitui County, Kenya. The study found a positive and noteworthy relationship between financial inclusion and digital credit. The study aimed to evaluate the hypothesis H02: Digital credit does not statistically significantly affect financial inclusion among young demographics in Kitui County, Kenya. The study found that the p-value was below the significance level, so suggesting statistical relevance and so rejecting the null hypothesis (H02) and confirming that digital credit affects financial inclusion among the youth in Kitui County, Kenya.

Table 4.10 illustrates a substantial and affirmative correlation between digital savings and financial inclusion ($r = 0.899$, $p = .000$). There exists a substantial correlation between digital savings and financial inclusion among the youth in Kitui County, Kenya.

The final objective of the research sought to assess the impact of digital savings on financial inclusion among youth demographics in Kitui County, Kenya. The research determined that digital savings and financial inclusion had a favorable and substantial correlation. The study also sought to test hypothesis that; **H_{03}**: Digital savings does not statistically affect financial inclusion amongst the youth groups in Kitui County, Kenya. The analysis concluded that the p-value was below the threshold of significance level, indicating that it was favorable and statistically significant therefore, the study rejected the null hypothesis (**H_{03}**) and decided that digital savings affect financial inclusion amongst the youth groups in Kitui County, Kenya.

5.4 Recommendations.

On the first research objective was to examine the effect of digital payments on financial inclusion amongst the youth groups in Kitui County, Kenya, the research recommends that firms that own mobile money platforms should ensure that they do not discriminate money transfer of any business due to small size. Mobile money transfer should be convenient as this will enable many youths to use mobile money for most of their business payments hence making sending money through mobile transfer their first option. Youth group members should be encouraged to have at least one mobile banking platform that they use since mobile money transfer is cheaper than other transfer methods. This will enable them make significant savings for their businesses through mobile money platforms.

On the second study objective which was to ascertain the effect of digital credit on financial inclusion amongst the youth groups in Kitui County, Kenya, the study recommends that firms with mobile banking apps should offer more credit opportunities for youth with businesses and enable them to access top up loans through mobile banking which are flexible enough and with lower interest rates and operational cost to support their business financial needs. This will enable them to expand their businesses. Youth group members should improve their credit rating of their businesses through mobile money platforms by ensuring that they repay their loans on time without defaulting as this will enable them access higher loans.

On the third and third objective of the research which was to establish the effect of digital credit on financial inclusion amongst the youth groups in Kitui County, Kenya, the study recommends that youth groups should embrace mobile money platforms savings since they

are faster and convenient. This will save them a lot of cost and time. They should also embrace mobile payment for goods and services so as to enhance the flow of their savings hence improve their credit rating. Embracing mobile platform will enable them to acquire more savings avenues and enhance their business savings.

5.5 Suggestions for Further Studies

The researcher advocates for further studies to involve a broader spectrum beyond the youth groups in Kitui County. Therefore, more studies can examine conduction comparable studies in the other youth and women groups in other counties. The researcher may gather data from various regions of the country to evaluate the effect of digital money platforms on financial inclusion amongst the different groups in Kenya. Furthermore, future studies might explore additional dimensions and varied measuring approaches to assess the effect of digital money platforms on financial inclusion in other Kenyan enterprises.

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APPENDICES

APPENDIX I:INTRODUCTION LETTER

RE: PERMISSION TO COLLECT DATA

My name is Antony Mwendwa**,** undertaking a MBA (Finance) courses at Kenyatta University. I am undertaking academic research titled *"*The effect of digital money platforms on financial inclusion amongst the youth in Kitui County, Kenya**"**, as a prerequisite for the conferral of the master's degree. I respectfully seek your involvement by giving data via the accompanying questionnaire. The provided information will be handled with utmost confidentially and employed solely for educational reasons. You will get access to the research results and can apply them for decision-making purposes.

Yours sincerely,

Antony Mwendwa

APPENDIX II: RESEARCH QUESTIONNAIRE

Section A: Bio Data

1. Gender

   Male[ ] Female[ ]

2. Highest educational level

   Certificate[ ] Diploma[ ]

   Undergraduate[ ] Master[ ] Ph. D. [ ]

3. Length of business existence

Less than 5 yrs. [ ] 5-10 yrs. [ ]

11-15 yrs. [ ] 16-20 yrs. [ ]

Over 20 yrs. [ ]

Section B: The impact of digital payments on financial inclusion in Kitui County

What is your level of concurrence with the below claims about the influence of digital payments on financial inclusion in Kitui County? Use the scale of 1=strongly disagrees, 2=disagrees, 3=moderately agrees 4=agrees, and 5=strongly agrees.

		1	2	3	4	5
1	I have at least one mobile banking platform I use regularly					
2	Mobile money transfer is safe compared to mainstream banking					
3	Sending money through mobile transfer is the first option for my business					
4	I have made significant savings for my business through mobile money transfer					
5	Mobile money transfer does not discriminate my business due to small size					
6	Mobile money transfer is convenient than mainstream banking					
7	Mobile money transfer is cheaper than other methods					
8	I use mobile money for most of business payments					

Section C: The impact of digital credit on financial inclusion in Kitui County

What is your level of concurrence with the below claims about the influence of digital credit on financial inclusion in Kitui County? Use the scale of 1=strongly disagrees, 2=disagrees, 3=moderately agrees 4=agrees, and 5=strongly agrees.

		1	2	3	4	5
1	Mobile banking has more credit opportunities for my business					
2	I access a top up loan through mobile banking than through mainstream banking					

3	Mobile banking loans have a lower cost than those of mainstream banking					
4	I know other SME business people that access mobile banking loans					
5	I have less loan defaults in mobile loans compared to loans from mainstream banking					
6	Mobile banking loans are flexible enough to support business financial needs					
7	Mobile banking loans have enabled me to expand my business compared to loans from mainstream banks					
8	Mobile banking loans have improved the credit rating of the business					

Section D: The impact of digital savings on financial inclusion in Kitui County

What is your level of concurrence with the below claims about the influence of digital savings on financial inclusion in Kitui County? Use the scale of 1=strongly disagrees, 2=disagrees, 3=moderately agrees 4=agrees, and 5=strongly agrees.

		1	2	3	4	5
1	I save money for my business through mobile money transfer					
2	Saving money through mobile money platforms saves me a lot of cost and time					
3	Mobile platform has enabled me to acquire more savings avenues.					

4	Mobile banking payment for goods and services has enhanced savings for my business					
5	Mobile payment for goods and services has increased the flow of savings					
6	Mobile payment for goods and services has faster and convenient than other modes of payment					
7	I have made significant savings for my business through mobile money transfer					
8	Mobile money platforms saving is faster and convenient					

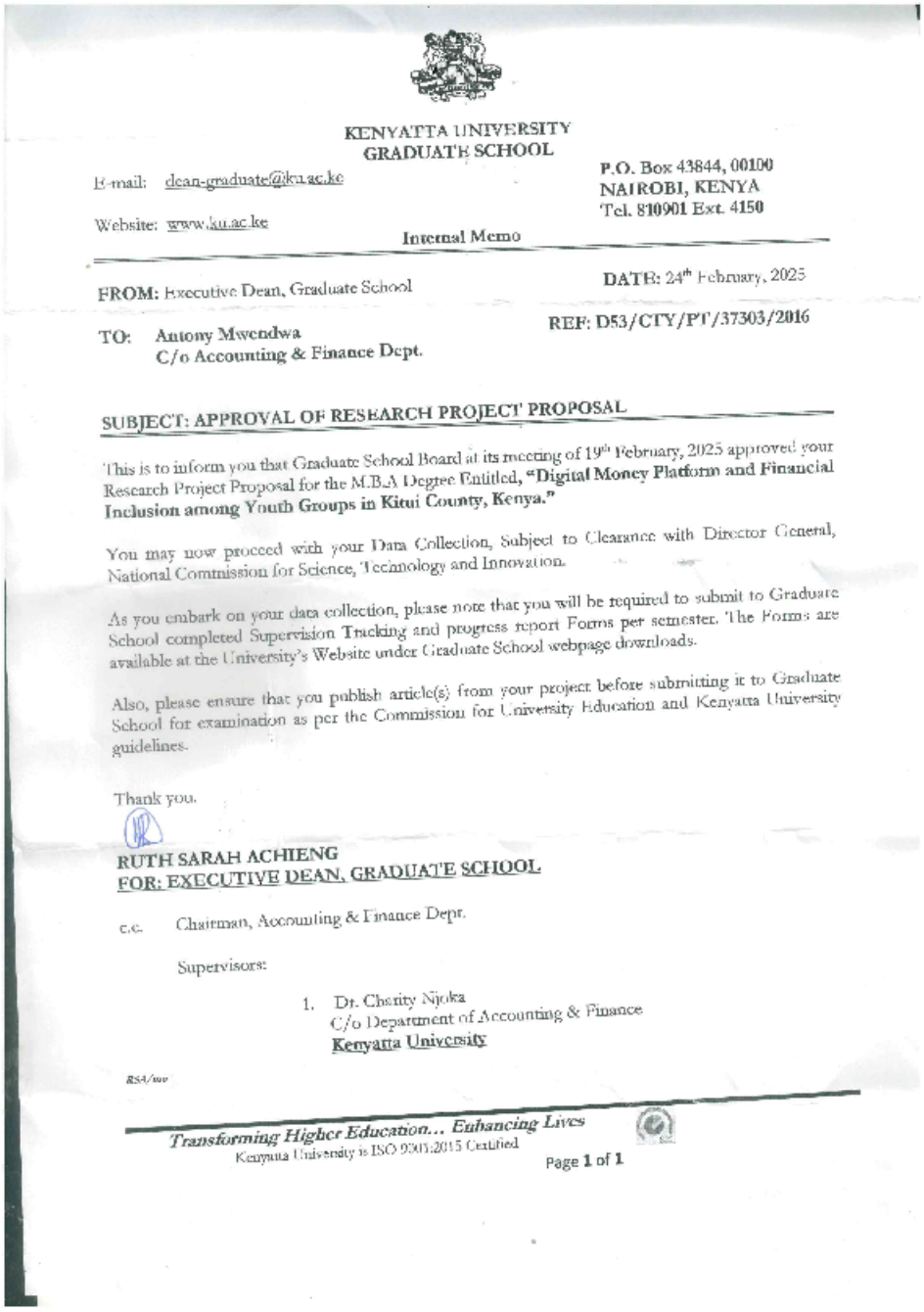
Section E: Financial inclusion in Kitui County

What is your level of concurrence with the below claims about financial inclusion in Kitui County? Use the scale of 1=strongly disagrees, 2=disagrees, 3=moderately agrees 4=agrees, and 5=strongly agrees.

		1	2	3	4	5
1	I own a digital money account for my business					
2	I have easy access to digital lending and savings platforms					
3	Digital money platform is affordable and inclusive for my business					
4	I can easily borrow and save money for my business using digital money platforms					

5	I can access enough money for my business through digital money platforms					
6	Digital money platforms have increased access to finance for my business compared to mainstream banking					
7	I can carry out several business transactions using digital money platform					
8	The digital money platforms are linked to mainstream banking					

APPENDIX III: APPROVAL LETTER



KENYATTA UNIVERSITY
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NAIROBI, KENYA
Tel. 810901 Ext. 4150

Internal Memo

FROM: Executive Dean, Graduate School

DATE: 24th February, 2025

TO: **Antony Mwendwa**
C/o Accounting & Finance Dept.

REF: D53/CTY/PT/37303/2016

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

This is to inform you that Graduate School Board at its meeting of 19th February, 2025 approved your Research Project Proposal for the M.B.A Degree Entitled, **"Digital Money Platform and Financial Inclusion among Youth Groups in Kitui County, Kenya."**

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking and progress report Forms per semester. The Forms are available at the University's Website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

RUTH SARAH ACHIENG
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL

c.c. Chairman, Accounting & Finance Dept.

Supervisors:

1. Dr. Charity Njoka
C/o Department of Accounting & Finance
Kenyatta University

RSA/ww

Transforming Higher Education... Enhancing Lives
Kenyatta University is ISO 9001:2015 Certified

Page 1 of 1

APPENDIX IV: NACOSTI PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 256004

Date of Issue: 10/May/2025

RESEARCH LICENSE

This is to Certify that Mr.. MWENDWA ANTONY of Kenyatta University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kitui on the topic: DIGITAL MONEY PLATFORM AND FINANCIAL INCLUSION AMONG YOUTH GROUPS IN KITUI COUNTY, KENYA for the period ending : 10/May/2026.

License No: **NACOSTI/P/25/4173312**

256004

Applicant Identification Number

Deputy Director
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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