INFLUENCE OF DIGITAL FINANCIAL SERVICES ON FINANCIAL INCLUSION AMONG WOMEN-OWNED ENTERPRISES IN KAJIADO CENTRAL SUB-COUNTY

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SEPTEMBER, 2026

DECLARATION

This project is my original work and has not been submitted for a degree in any other institution.

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DEDICATION

To my children, other family members and the almighty God for their love, care and understanding during the entire study period.

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My sincere gratitude to God for guiding me through the process I am. I sincerely appreciate Kenya Methodist University for granting me the chance to pursue my studies. I am as well grateful to my supervisors, Dr. Moses Kithinji and Barbara Namiinda for their irreplaceable guidance and professional support during the entire study period. I also extend my heartfelt gratitude to my wife, Zeinab Sein Leparkiras and my daughter, Rubby Leparmarai for the moral and financial support.

ABSTRACT

Financial inclusion aims to close gaps in the access enterprises have to financial products and services, though uptake remains weak among businesses owned by women. Figures reveal that merely 15.6% of SMEs obtain bank credit, whereas only 10% have fully woven digital financial services into their transactions. Numerous SMEs still encounter difficulties when trying to reach financial services, which raises their exposure to financial exclusion. In response, a range of digital financial services has been rolled out and taken up by small enterprises. This study explored how digital financial services influence financial inclusion among women-owned enterprises in Kajiado Central Sub-County. In particular, it evaluated the impact of digital payment, withdrawal, savings, and credit services. The research drew on financial intermediation theory and technology acceptance model (TAM) together with rational choice theory and employed a quantitative explanatory survey research design. Altogether, 138 questionnaires were issued to respondents in chosen women-owned enterprises in Kajiado Central Sub-County, of which 116 were filled out and returned, producing a response rate of 84.1%, deemed sufficient for analysis. Results reveal that digital payment systems enjoy broad acceptance and are viewed as advantageous. A positive link between digital payments and financial inclusion underscores their part in boosting transaction efficiency, broadening access to financial services, and bringing women-owned enterprises into the formal financial system. The research likewise established that having withdrawal point's close by sustains business operations by allowing easy conversion of digital funds into cash. The favourable influence of digital withdrawal services implies that better access strengthens entrepreneurs' capacity to make effective use of financial services. Moreover, digital savings services were found to encourage consistent saving habits through incentives like interest earnings, bonuses, and rewards. A robust positive link between digital savings and financial inclusion shows that these services carry a considerable impact relative to other variables. In addition, digital credit services were demonstrated to deliver quicker loan approvals and wider accessibility than conventional lending systems. Regression outcomes verified that digital credit exerts a statistically significant effect on financial inclusion. The study concludes that digital financial services payments, withdrawals, savings, and credit perform a meaningful and mutually reinforcing role in strengthening financial inclusion among women entrepreneurs. Their accessibility, efficiency, and user-focused features render them potent instruments for economic empowerment. The study recommends that policymakers and financial service providers broaden digital infrastructure, especially agent networks and ATM coverage, to enhance accessibility. Financial institutions ought to improve digital savings products via incentives and user-friendly features, while digital credit systems should emphasize affordability, transparency, and responsible lending. Lastly, targeted financial literacy programs are vital to furnish women entrepreneurs with the knowledge and skills required to fully harness digital financial services.

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ABBREVIATIONS AND ACRONYMS

ARDL: Autoregressive Distributed Lag

ATM: Automatic Teller Machines

CBK: Central Bank of Kenya

DFS: Digital Financial Services

FGDs: Focused Group Discussions

KCB: Kenya Commercial Bank

MBT: Mobile Banking Technology

MNOs: Mobile Network Operators

MTFX: Money Transfer Foreign Exchange

MTN: Mobile Telephone Networks

NACOSTI: National Commission for Sciences, Technology and Innovation

PEOU: Perceived Ease of Uses

POS: Point of Sale

RCT: Rational choice theory

SPSS: Statistical Packages for Social Science

UK: United Kingdom

WBT: Web Banking Technology

WEKH: Women Entrepreneurship Knowledge Hub

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial inclusion is becoming a significant pillar of initiatives meant to enhance development and reduction of poverty (Mbodj & Laye, 2025). It is the capability of enterprises to get and use financial services like savings, credit, payments and withdrawals (Adam & Kulmie, 2024). According to Sherwani and Siddiqui (2024), financial inclusion is important to women-owned enterprises. Accessing formal financial services like savings, credit and online systems of payment allows women entrepreneurs to mobilize capital and invest in productivity-enhancing assets (Fazal, et al., 2025). However, financial inclusion amongst women owned enterprises depends on various digital financial services (DFS) (Oyasor, 2026).

According to Nizam and Rashidi (2025), digital financial services (DFS) provide convenient, secure, and inclusive ways for enterprises to get financial services. Oyasor (2026) noted that the DFS continues to reduce the reliance on traditional banking as it advocates for mobile banking, digital wallets and online credit sites. The usage of DFS make financial services more accessible amongst enterprises owned by women that remain financially excluded in most cases (Fazal, et al., 2025). DFS enhance transparency and efficiency in financial transactions, lessen costs of transaction, and facilitate quicker payments and remittances. The digital payments, withdrawals, savings and credit are the main online financial services (Oniore & Aiyedogbon, 2024).

1.1.1 Digital Financial Services

Digital financial services (DFS) are the delivery of financial services via online channels like mobile phones, the internet, automated teller machine (ATM) and point-of-sale device (Oyasor, 2026). The services are offered by financial institutions, telecommunications companies and fintech firms. The emergence of DFS has been driven by advances in ICT, increased mobile phone penetration and the need for expanding access to monetary services (Arora, 2021). They include digital payment service, digital withdrawal service, digital saving service and digital credit service.

Digital payment service refers to financial transactions conducted online without the usage of physical cash (Minarni, 2025). Channels like M-Pesa have transformed how people and enterprises exchange money, enabling fast, secure, and convenient payments for goods, services, bills, and peer-to-peer transfers (Putrevu & Mertzanis, 2024). On the other hand, digital withdrawal service involves accessing cash from a digital account through electronic channels. This may include withdrawing money from automated teller machines (ATMs), mobile money agents and transferring funds from a mobile wallet to bank accounts (Raghunath, et al., 2024).

Digital saving service is the usage of online platforms like mobile apps, e-banking, or mobile wallets to store and manage money securely (Bharadwaj & Suri, 2022). These platforms provide features like automated savings, goal-setting tools, and interest-earning accounts. Digital saving service platforms enable users to store money electronically through mobile banking applications, mobile money wallets and agency banking channels (Pazarbasioglu, et al., 202l). Digital credit service is

process that ensures the short-term loans delivered via online channels like mobile phones, mobile banking applications and fintech apps (Josephat, 2021). It has transformed credit markets in developing economies by removing traditional barriers such as collateral requirements, lengthy processing times and physical visits to banking halls (Ndung'u & Oguso, 2021).

1.1.2 Financial Inclusion Among Women Owned Enterprises

Financial inclusion is the extent to which women entrepreneurs are capable of accessing and efficiently using formal financial services like bank accounts, credit and e-payment system (Sherwani, et al., 2024). Financial inclusions are the efforts of making sure that enterprises could get suitable, cheap and timely financial services. The services include saving, loan and payment solutions offered in a way that is accountable and justifiable (Peter, et al., 2025). According to Tubastuvi, et al. (2023), financial inclusion plays crucial roles in reducing poverty, promoting growth of the economy and enhancing social equity. People are empowered by inclusive financial systems which enables them to securely save money, access loans for investment and manage financial risks (Tiwari, et al., 2025).

Financial inclusion has been significantly enhanced through technological innovations like m-banking and online finance platforms. Services like M-Pesa have transformed how people send, receive, and store money in remote regions in which traditional infrastructure of banking is limited (Rani & Sundaram, 2023). Despite these advancements, difficulties like low financial literacy, income inequality, regulatory barriers and limited access to formal identification still hinder full inclusion. Access to finance enables women entrepreneurs in investing in productive

assets, expanding operations, managing risks as well as improving cash flow management (Nguse, et al., 2022).

1.1.3 Global Perspective of Digital Financial Services and Financial Inclusion

Globally, enterprises owned by women play significant roles in enhancing the economy, creating jobs and supporting livelihoods (Sharma & Paudel, 2025). However, there is exclusions of women entrepreneurs from official monetary services because of limited collateral, lower income levels and lower financial literacy. Digital financial services have developed as a solution for enhancing financial inclusions among women entrepreneurs (Hasan, et al., 2023). In Canada, digital financial services aim at enhancing financial inclusion and accessing capital for women business owners. National initiatives such as the Women Entrepreneurship Knowledge Hub (WEKH) continues to advocate for strategies that strengthen digital and financial capability among women SME owners (Perrin, 2023). According to Hassannezhad et al, (2021), digital financial tools like money transfer foreign exchange (MTFX) provide Canadian women entrepreneurs with convenient alternatives to manage business transactions.

In Brazil, the rapid evolution of fintech companies continues to play significant roles in expansion of monetary services amongst marginalized people including women SME owners (DelSarto, 2025). Most Brazilian SMEs have frequently used Nubank as it lowers barriers to accessing financial services through no-fee digital accounts and credit products tailored to consumers and small businesses (Losanoff & Bonomo, 2021). In Kuwait, Al-Khub (2024) noted that digital financial services are still emerging and Enterprises owned by women are leveraging them in bridging

the gaps in financial inclusions. In the UK, digital platform like *Pockit* is designed to serve customers who are marginalized by traditional banks such as poor people and owners of small businesses (McCarthy, 2025).

In Iran, digital financial services have played a growing role in integrating women into formal financial systems. Platforms like Takhfifan, founded by a female entrepreneur, demonstrate how digital ecosystems can connect women-led enterprises to markets and financial tools and enhance access to finance (Oyasor, 2026). In India, platforms such as Mahila Money provide microloans and digital financial tools specifically tailored for women entrepreneurs. This enables women to start and expand businesses without traditional collateral requirements (Gayathri, 2025). In Australia, fintech solutions such e-banking systems, online lending, and mobile payment systems, have improved accessibility of capital for women-led small enterprises. This streamlines loan application processes and minimizing dependence on physical infrastructure in banks (Moro-Visconti & Cesaretti, 2023). Collectively, the evidence demonstrates that digital financial services are increasingly serving as an important mechanism for reducing financial exclusion among women-owned enterprises by improving access to financial services, capital, markets, and convenient digital transaction platforms.

1.1.4 Regional Perspective of Digital Financial Services and Financial Inclusion

In Africa, the growth of digital financial services is driven mobile phone penetration and innovative mobile money systems. Women-owned enterprises often lag behind in the adoption and efficient usage of advanced digital financial products like digital loans and savings platforms (Lashitew, et al., 2022). In Nigeria, the rapid expansion

of mobile money providers and fintech solutions like *Paga* and *Opay* has lowered traditional barriers such as distance to bank branches and the need for large paperwork. This helps many women business owners to save earnings, pay suppliers and receive customer payments directly on phones (Abolade, 2024).

In Ghana, digital financial services have played a transformative role in expanding financial inclusion including among women entrepreneurs. Ghana experienced rapid growth in mobile money adoption, with account ownership rising dramatically from about 13% in 2014 to approximately 60% by 2021 (Raheem, et al., 2024). This expansion has enabled women-owned enterprises in informal sectors, to access payment systems, savings platforms, and micro-transactions without relying on traditional banking infrastructure (Raheem, et al., 2024). In Ethiopia, regulatory reforms allowing non-bank entities to offer mobile money services have accelerated growth, with mobile money accounts surpassing 100 million in 2024. Digital platforms such as mobile banking and mobile wallets are progressively recognized as instruments for enhancing financial inclusion and supporting micro and small enterprises owned by women (Abatihun, 2025).

In Botswana, digital financial services (DFS) have been recognized as a key driver of financial inclusions. It expands accessibility of cheap and appropriate monetary services. DFS have helped reduce geographical and cost barriers that traditionally excluded small enterprises from the formal financial systems (Svotwa, et al., 2023). In Rwanda, there is a partnership between government and the mobile network operators (MNOs) for enhancing financial inclusion through the expansion of platforms like *MTN Mobile Money* and *Airtel Cash* (Iddrisu, et al., 2025). In

Tanzania, Longa (2022) argued that services like *M-Pesa* have allowed women SME owners to build digital records of financial activity that lenders and fintech credit scoring models can use to assess creditworthiness. Further in South Africa, fintech lenders and banks are increasingly using digital footprints and alternative scoring mechanisms to extend small loans to women-owned SMEs (Mhlongo, et al., 2025). Collectively, the evidence demonstrates that digital financial services are increasingly reducing geographical, cost, and institutional barriers to finance across Africa, while providing women-owned enterprises with greater opportunities to access payments, savings, credit, and financial records.

1.1.5 Local Perspective of Digital Financial Services and Financial Inclusion

In Kenya, digital financial services are deeply entrenched in the financial ecosystem. The mobile money sites have substantial roles in payments, savings and provision of loans (Mallinguh, et al., 2021). According to Sommer et al. (2025), Kenya has been recognized as a global pioneer in digital financial innovation, largely attributed to the success of M-Pesa, Airtel-Money and T-Kash. Tiony (2023) noted that the introduction of mobile-based transactions, digital loans, and mobile savings platforms has revolutionized how people manage their finances. These innovations have lowered transaction costs, improved convenience, and broadened access to financial products. As a result, Kenya's financial inclusions rate augmented from 26% in 2006 to 83% in 2021 (Kiptoo, 2022). Despite this progress, significant challenges persist, including digital credit over-indebtedness and exclusion of women from sustainable usage of digital financial products (Githaiga, 2025).

In Kajiado Central Sub-County, financial inclusion among enterprises was hindered by barriers that made it either hard to access conventional banking services (Chege, 2023a). The 2021 FinAccess Household Survey reported that 7.5% of adults in Kajiado were financially excluded, while 88.7% were formally included in financial services. However, formal inclusion did not necessarily translate into convenient access or equal utilization of financial services. Only 46% of residents were sufficiently close to walk to a bank agent, while only 25% were within walking distance of a bank branch. Moreover, many SMEs owners faced barriers like long distance to banks and high costs of transactions prior to the extensive adoption of DFS. However, with the initiation of agency banking models, SMEs can now access deposit services, account opening among other services closer to the businesses (Makau & Olando, 2021). As per Ndung'u (2018), the proliferation of mobile money sites like M-Pesa has been a significant in reducing financial inclusion barriers. Products like M-Shwari and KCB M-Pesa combine the convenience of mobile money with formal banking services to allow the users to save, borrow, and earn interest all from the phones (Mulili, 2022). Collectively, this evidence demonstrates that the expansion of digital financial services has substantially reduced geographical, cost, and accessibility barriers to financial inclusion in Kenya, particularly for SMEs, while also highlighting the need to address persistent inequalities in access, affordability, and sustainable utilization of these services. Hence, the research seeks to establish how digital financial services influences financial inclusions amongst enterprises owned by women in Kajiado Central Sub-County.

1.2 Problem Statement

Financial inclusion denotes the process of guaranteeing that individuals and enterprises can access and effectively use affordable, suitable, and quality financial products and services, encompassing payments, savings, credit, and insurance. It is broadly recognized as a vital engine of economic growth, enterprise development, and poverty reduction, especially among small and medium-sized enterprises (SMEs) (World Bank, 2022). In Kenya, financial inclusion has advanced markedly over the years, largely owing to the growth of digital financial services (DFS), with formal financial access extending to roughly 84.8% of the adult population (Kenya National Bureau of Statistics [KNBS], 2024).

Notwithstanding these advances, considerable disparities endure, particularly among women-owned enterprises. While the gender gap in access to financial services has shrunk, inequalities persist regarding the quality of access, usage, and financial outcomes (Financial Sector Deepening [FSD] Kenya, 2024). Women entrepreneurs frequently confront structural obstacles such as scarce collateral, weaker levels of financial literacy, and limited access to formal credit, which impede their capacity to participate fully in the financial system (World Bank, 2023). Recent evidence additionally suggests that although access to financial services has widened, the effective use of formal financial products among SMEs stays comparatively low, especially in domains like credit uptake and the incorporation of digital financial services into business operations (KNBS, 2024). Furthermore, a portion of the population remains financially excluded, with exclusion rates running higher among vulnerable and underserved groups, including women-owned

enterprises (FSD Kenya, 2024). These challenges continue to leave such enterprises exposed to financial vulnerability and constrain their growth potential.

In response, governments and financial sector stakeholders have increasingly promoted the adoption of digital financial services including digital payments, savings, withdrawals, and credit as a strategy to enhance financial inclusion. Digital finance has been instrumental in expanding access and reducing traditional barriers associated with distance, cost, and documentation requirements (World Bank, 2022). However, despite the rapid growth and widespread adoption of DFS in Kenya, significant segments of women-owned enterprises remain financially excluded, underscoring the need to examine how specific digital financial services influence financial inclusion outcomes.

In Kajiado Central Sub-County, a considerable proportion of women-owned enterprises remain financially excluded despite ongoing efforts to enhance access to financial services. Women entrepreneurs in the region continue to face persistent constraints in accessing formal financial systems, which limits business growth and sustainability (Chege, 2023b). Key barriers include limited access to affordable credit, low savings mobilization, high transaction costs, and continued reliance on informal financial arrangements such as rotating savings and credit associations. These challenges persist even as digital financial services (DFS) including mobile payments, digital savings, and digital credit continue to expand across Kenya and similar developing economies (FSD Kenya, 2024; KNBS, 2024). Further, the 2021 FinAccess Household Survey reported that 7.5% of adults in Kajiado were financially excluded, while 88.7% were formally included in financial services. However, formal inclusion did not necessarily translate into convenient access or

equal utilization of financial services. Only 46% of residents were sufficiently close to walk to a bank agent, while only 25% were within walking distance of a bank branch.

Although DFS has been widely promoted as a tool for advancing financial inclusion, its effectiveness among women-owned enterprises remains uneven. Empirical evidence suggests that while digital finance reduces transaction costs and improves convenience, structural barriers such as low digital literacy, limited access to smartphones, and socio-cultural constraints continue to hinder full participation by women entrepreneurs (Alliance for Financial Inclusion, 2023; Suri, 2017). A study by Ozili (2021) found that digital financial services significantly improve financial inclusion; however, the benefits are often skewed toward populations with better digital access and financial capability. Similarly, a study by Demirgüç-Kunt et al. (2022) using Global Findex data revealed that although digital payments have expanded rapidly, disparities persist in usage, particularly among women and small enterprises in developing countries.

Recent empirical studies in Africa further highlight mixed outcomes. For instance, a study by Kikulwe et al. (2021) established that mobile money services significantly enhance financial inclusion and household welfare, but the level of impact depends on user characteristics such as income and education. In Kenya, Jack and Suri (2021) found that mobile money platforms contribute to improved financial resilience; however, access to advanced services such as digital credit and savings remains limited among marginalized groups, including women entrepreneurs. Additionally, a study by Evans (2022) showed that while digital financial services increase access

to basic financial tools, challenges such as high transaction costs and trust issues still limit deeper financial inclusion.

Despite these insights, gaps remain in the existing literature. For example, Githaiga (2025) focused broadly on financial technology (FinTech), presenting a conceptual gap as FinTech encompasses a wider range of innovations beyond specific digital financial services such as payments, savings, withdrawals, and credit. Fernandes, et al. (2021) present a contextual gap, as their study was conducted in Mozambique, whose financial ecosystem differs from that of Kenya. Furthermore, Ocharive and Iworiso (2024) reveal a methodological gap by relying on panel data rather than primary data collected from enterprise-level respondents, thereby limiting context-specific insights.

Moreover, most recent empirical studies have not sufficiently focused on women-owned enterprises, despite their unique financial challenges and critical role in economic development (World Bank, 2023). This reveals an empirical gap in understanding how specific components of digital financial services namely digital payments, withdrawals, savings, and credit affect financial inclusion among this group. It remains unclear which specific digital financial service components are most influential in enhancing financial inclusion among women-owned enterprises, particularly within the local context of Kajiado Central Sub-County. Therefore, this study sought to bridge these gaps by investigating the influence of digital financial services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

1.3 Purpose of the Study

This study sought to investigate selected digital financial services, namely digital payment services, digital withdrawal services, digital saving services, and digital credit services, and to ascertain their effect on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

1.4 General Objective

The general objective was to assess the influence of digital financial services on financial inclusions amongst enterprises owned by women in Kajiado Central Sub-County.

1.5 Specific Objectives

The specific objectives included:

i. To determine the influence of digital payment services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.
ii. To examine the influence of access to digital withdrawal services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.
iii. To assess the influence of digital saving services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.
iv. To determine the influence of access to digital credit services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

1.6 Research Hypotheses

The null hypotheses tested included:

H_{o1}: Digital payment services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

H_{o2}: Access to digital withdrawal services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

H_{o3}: Digital saving services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

H_{o4}: Access to digital credit services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

1.7 Justification of the Study

Kajiado Central Sub-County has experienced swift growth in mobile and online financial services like mobile money and agency banking. These have become primary financial access channels for many small businesses. It also hosts a substantial number of women-owned enterprises involved in trade, agriculture and informal business activities. This makes Kajiado Central Sub-County an ideal setting to assess how such technologies are shaping financial inclusion.

The research would be significant to policy makers in financial sector of Kenya as it identifies gaps in financial inclusion initiatives in Kenya. The policy makers would use these insights to refine the financial sector policies to bridge these gaps. This would be done by identifying the most effective digital channels in enhancing the financial inclusions. The findings would also inform regulatory decisions to ensure that digital finance growth translates into financial inclusion.

The research would as well be significant to future researchers and scholars since it contributes to the existing knowledge body on digital finance and financial inclusion. This offers a theoretical foundation for future researchers to explore the emerging digital financial services in relation to its effects on financial inclusions in other counties in Kenya. In addition, academicians would use the research to conduct comparative studies, develop theories and curriculum content in financial sector in Kenya.

1.8 Scope of the Study

The study concentrated on assessing the effects of digital financial services on financial inclusion in Kajiado Central Sub-County, Kenya. It specifically explored core components of digital financial services, comprising digital payment services, digital credit services, digital withdrawal services, and digital savings services.

1.9 Limitation of the Study

The study was confined to Kajiado Central Sub-County, a largely rural area; consequently, the findings may not be transferable to other counties where degrees of digital financial literacy and access to digital financial services are greater. In addition, certain respondents were at first reluctant to supply the information needed for the study. This difficulty was eased by assuring participants that the data gathered would serve strictly academic purposes and be handled with confidentiality. Moreover, there existed a chance that some respondents might give inaccurate or biased answers in the questionnaires. To counter this limitation, the researcher tested the reliability and validity of the questionnaire.

1.10 Assumption of the Study

The research assumed that Kajiado Central Sub-County would be an adequate representation for examining digital financial services and financial inclusions. The study assumed that digital financial services are accessible to the majority of residents in Kajiado Central Sub-County. The research assumed that users and providers of digital financial services would be willing to be engaged in the research and provide honest and accurate information through questionnaires.

1.11 Operational Definition of Terms

The following terms was used throughout the study

Digital financial services: Refer to financial services like payments, savings, credit and withdrawals delivered through digital channels (Oyasor, 2026).

Women Owned Enterprises: Refer to the business entities that are owned, controlled and managed by women and exercise decision-making authority (Melubo & Musau, 2021).

Financial inclusion: is the degree that people and enterprises have inexpensive, appropriate and sustainable accessibility to a broad different formal financial products and services (Adam & Kulmie, 2024).

Digital payment Service: are electronic transactions in which money is transferred from a payer to a recipient through digital platforms like mobile money and e-banking without the use of physical cash (Minarni, 2025).

Digital credit service: This refers to loans that are applied, approved, disbursed and repaid electronically through mobile phones using automated systems to assess borrowers' creditworthiness (Josephat, 2021).

Digital saving service: These are financial savings held and managed via digital platforms like mobile money accounts and online banking systems (Bharadwaj & Suri, 2022).

Digital withdrawal service: This refers to accessing funds electronically and converting them into cash and transfer them digitally through ATM withdrawals, mobile money cash-outs and agent-based withdrawals (Raghunath et al., 2024).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter presented the review of literature concerning how digital financial services such as digital payment, digital withdrawal, digital saving, and digital credit influence financial inclusion. It encompassed the theoretical literature, empirical literature, conceptual framework, operational framework, critique of the literature, summary, and research gaps.

2.2 Theoretical Literature

Theoretical literature explains, analyzes, and critiques theories that are relevant to the research. It puts emphasis on established ideas developed by researchers to explain links between concepts and variables. The anchor theory will be technology acceptance model (TAM) supported by rational choice theory and financial intermediation theory.

2.2.1 Technology Acceptance Model (TAM)

The technology acceptance model (TAM) was developed by Davis (1989). The model describes how individuals come to agree to take and utilize new technologies. TAM proposes that users' acceptance of a technology is majorly established by the behavioral intentions of utilizing it (Natasia, et al., 2022). This affected by key beliefs including perceived-usefulness (PU) and perceived-ease of uses (PEOU). Perceived usefulness refers to how people believe that utilizing a specific technology will improve effectiveness. Digital financial services, usefulness is often linked to

faster processes, reduced costs, improved transparency and better accessibility of services (Malatji, et al., 2020).

According to Luo et al. (2024), perceived ease of use refers to the degree to which a person thinks that using a specific technology will be simple and need little effort. Technologies that are simple, user-friendly, and need little technical skills are more readily accepted by users. Ease of use also indirectly impacts perceived usefulness, as systems which are easier to operate are often seen as more effective (Musa & Suyanto, 2024). TAM highlights that attitude toward use intercedes the association amongst the users' beliefs (PU and PEOU) and the behavioral intentions to use a technology. A positive attitude increases the likelihood of intention that leads to actual use of systems (Schorr, 2023).

Perceived usefulness and perceived ease of use shapes individuals' willingness to adopt and consistently use digital financial services (DFS) which eventually lead to financial inclusion. When users perceive DFS as useful, they are more likely to recognize that services such as mobile money, digital payments, online banking, digital savings, and digital credit can provide tangible benefits including faster transactions, convenient access to financial services and reduced transaction costs (Luo et al., 2024). In addition, Natasia, et al. (2022) noted that when DFS are perceived as easy to use, users are more likely to feel confident that they can learn and operate the platforms without considerable effort and technical skills. These perceptions increase users' intention to adopt DFS, which subsequently translates into actual and continued use. Perceived usefulness and ease of use act as important drivers of DFS adoption, while sustained DFS use serves as the pathway through

which these perceptions ultimately contribute to greater financial inclusion (Mogaji & Nguyen, 2022).

The TAM model describes the process through which individuals adopt and utilize new technologies. It indicates that users' decisions to adopt a technology are directly influenced by two main factors including PU and PEOU. TAM helps explain why services including mobile money, digital credit, and e-banking are adopted and how this adoption enhances financial inclusion via increased accessibility of savings, loans, payments and insurance. TAM helps explain variations in levels of financial inclusions like accessibility of formal financial services, frequency of usage and diversity of financial products used. Technology Acceptance Model supports how users accept, adopt, and continuously use digital payment, credit, withdrawal, and savings services, based on their perceived usefulness and ease of use. Hence, TAM provides a strong theoretical foundation for examining how DFS influences financial inclusion among enterprises owned by women in Kajiado Central Sub-County.

2.2.2 Rational Choice Theory

Rational choice theory was developed by Cornish and Clarke in 1986. The theory posits that economic decisions are closely linked to social behaviors. Rational choice theory is built on three key concepts: the rational actors, self-interests and the invisible hands (Herfeld, 2022). It suggests that individuals evaluate costs and benefits before making economic decisions, aiming to choose the most advantageous option even in the presence of factors beyond their control (Kebede, 2022). Under this theory, users choose financial products and services that maximize

their personal utility. RCT assumes that individuals behave rationally, even under uncertainty, by comparing the benefits of one option to the costs of alternative choices (Thomas et al., 2022).

Rational choice theory helps explain the behaviour of individuals using digital credit, digital payments, and digital savings platforms. Individuals opt for digital credit when the immediate benefits such as quick access, lack of collateral, and convenience are perceived to outweigh potential high interest costs. Moreover, digital payments minimise the costs of transactions, improve speed, and enhance security, making them a rational choice compared to cash-based transactions. Digital savings products like M-Shwari and KCB M-Pesa appeal to individuals who value safety, accessibility, and interest earnings at low. The theory is relevant as it highlights how digital payment withdrawals and saving could influence financial inclusions amongst enterprises owned by women in Kajiado Central Sub-County.

2.2.3 Financial Intermediation Theory

Financial intermediation theory was postulated by John G. Gurley and Edward S. Shaw in 1960s. The theory posits that financial intermediaries, including banks and microfinance institutions, are crucial in connecting surplus units (savers) with deficit units (borrowers) within an economy. The theory is rooted in the idea that direct interaction between savers and borrowers is often inefficient due to information asymmetry, transaction costs, and risk (Gbadebo, 2024). Financial intermediaries emerge to reduce these inefficiencies through mobilization of savings, allocation of credit and facilitation of smooth financial flows within the economy (Bayoud, 2024).

Moreover, reduction of information asymmetry is a key aspect of financial intermediation theory. Borrowers have more information about the investment projects and repayment capacity than lenders, that leads to adversative selections and moral hazards. The theory also emphasizes the role of intermediaries in reducing transaction and operational costs (Alagba et al., 2023).

The theory explains how mobile money platforms, fintech lenders and digital banks act as efficient intermediaries. Financial intermediation theory explains how financial institutions and digital platforms facilitate the flow of funds between savers and borrowers by reducing information, search and transaction costs. The theory supports the idea that digital savings enable individuals to mobilize and securely store funds while digital credit improves access to borrowing by connecting users to formal financial services through mobile and online platforms. Digital financial intermediation promotes fund mobilization, reduces transaction costs and expands access to formal financial services for individuals who may have been underserved by conventional banking institutions. The theory was pertinent to the research since it highlights how digital savings, digital credit, mobilization of funds and transaction costs influence the financial inclusion amongst enterprises owned by women in Kajiado Central Sub-County.

2.3 Empirical Literature

Empirical literature is the scholarly works that are based on observed and measured evidence (Nakano & Muniz, 2018). It highlights the literature and past studies conducted in relation to effect of digital financial services such as digital payment, digital withdrawals, digital saving and digital credit on financial inclusions.

2.3.1 Digital Payments and Financial Inclusion

Digital payment is a key pillar of digital financial services as it drives financial inclusions (Mula, 2025). As argued by Minarni (2025), digital payments promote financial inclusion through reduction in cash dependence, lowered transaction costs and enhanced efficiency of financial systems. Accessing financial services digitally by people remote areas have been made possible by the expansion of mobile money. Digital payment systems offer a gateway through which users can begin to adopt other financial products like credit and savings (Putrevu & Mertzanis, 2024). Businesses that have adopted digital payments experiences reduced costs of operations, improve efficiency and great retention of customers because of seamless options of payment (Hussain et al., 2025).

Empirical evidence generally indicates that digital payments contribute positively to financial inclusion through reduction of transaction barriers, lowering the cost and time associated with financial transactions, and improving access to formal financial services. Shair et al. (2024), using data from the 2021 Global Findex database and logistic regression, found that access to mobile phones and the internet significantly enhanced financial inclusion in Pakistan. Similarly, Fernandes et al. (2021), who employed an autoregressive distributed lag (ARDL) model in Mozambique, established that increased use of automated teller machines (ATMs), point-of-sale (POS) systems, electronic interbank and intrabank transfers, and remittance services was associated with greater financial inclusion. Njoroge (2025), using a cross-sectional design, questionnaires, descriptive statistics and regression analysis in Kenya, also found that digital payment systems increased the likelihood

of accessing savings, credit and insurance services and reduced the time and effort required to undertake routine financial transactions. Collectively, these findings suggest a broadly consistent relationship between digital payment usage and financial inclusion across different developing-country settings.

However, the studies differ in the aspects of digital payments and financial inclusion that they emphasize. Shair et al. (2024) primarily associated financial inclusion with access to digital infrastructure including mobile phones and internet connectivity while Fernandes et al. (2021) focused more broadly on the volume and availability of electronic financial transactions. In contrast, Njoroge (2025) examined the practical benefits of digital payments in facilitating access to savings, credit and insurance. Further, Chandel and Chandel (2025) demonstrated that attitudes towards digital payment systems significantly influenced intentions to use them while digital payments helped reduce geographical and transaction-cost barriers to financial services. These differences partly explain variations in the findings because the studies measured both the independent and dependent constructs differently. Studies focusing on infrastructure and access captures the enabling conditions for digital financial inclusion. On the other hand, studies emphasizing usage, attitudes and transaction characteristics capture different dimensions of the digital-payment–financial-inclusion relationship.

Nevertheless, there is considerable agreement across the literature that digital payments improved access to financial services, although the strength and nature of the relationship rely on the population, institutional environment and measures employed. Shair et al. (2024), Fernandes et al. (2021), Chandel and Chandel (2025)

and Njoroge (2025) agrees on the view that digital payments reduce barriers to accessing financial services. Similarly, Minarni (2025) who used qualitative approaches established that digital payment technologies enhanced financial inclusion by addressing barriers to financial-service access among populations in developing economies.

Methodologically, the existing evidence is also fragmented. Shair et al. (2024) relied on secondary Global Findex data and logistic regression while Fernandes et al. (2021) used macro-level time-series analysis through the ARDL approach. Although these methods provide useful evidence of broad associations between digital payments and financial inclusion, they are insufficient for answering the question addressed by the present study as they do not capture the experiences and financial-service access conditions of individual women-owned enterprises within a specific local business environment. Similarly, Minarni's (2025) qualitative design provided detailed explanations of how users experience digital payments but did not quantify the magnitude or statistical significance of their relationship with financial inclusion. Hence, the methodological limitation leaves insufficient evidence concerning the measurable effect of actual digital-payment practices on the financial inclusion of women-owned enterprises.

The population and geographical context also constitute an important limitation in the existing literature. Evidence from Pakistan Shair et al. (2024), India (Chandel and Chandel, 2025), and Mozambique Fernandes et al. (2021) demonstrates the relevance of digital payments to financial inclusion in developing economies. However, differences in digital infrastructure, regulatory environments, financial

institutions, entrepreneurial ecosystems and patterns of technology adoption limit the direct applicability of these findings to Kenya.

The empirical literature therefore leaves several specific gaps. There is a contextual gap as the limited evidence specifically explains the influence of digital payments on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. In addition, population gap also exists because of the existing research has examined general users, consumers rather than women-owned enterprises as a distinct entrepreneurial group. The study was therefore anchored on the need to establish whether and to what extent digital payments influence financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

2.3.2 Digital Withdrawals and Financial Inclusion

Digital withdrawals form a key bridge between the digital and cash economies in sectors where cash transactions remain dominant. It allows the users to conveniently access funds and enhance operations of small businesses (Jameaba, 2020). As argued by Raghunath et al. (2024), digital withdrawals are facilitated through extensive agent networks linked to mobile money platforms. These agents provide last-mile financial access in underserved and rural areas where formal banking infrastructure is limited (Mogaji & Nguyen, 2022). Digital withdrawals enhance financial inclusion by allowing businesses to convert digital value into usable cash in a convenient, timely and affordable manner. Reliable withdrawal services enhance perceived control over finances and reduce fears related to liquidity constraints and system failures (Mazambani et al.,2018).

The existing empirical studies highlight that digital withdrawals contribute positively to financial inclusion. Literature established that digital withdrawals reduce transaction costs, improves accessibility to financial services and enabling users to access funds without relying on conventional banking infrastructure. For instance, Bayar et al. (2021), Iwedi (2023), Melubo and Musau (2021), and Isabwa (2021) all established a positive association between digital banking or mobile-based withdrawal services and financial inclusion, although they examined different populations and geographical settings. Bayar et al. (2021) used secondary data from 11 European countries and applied an autoregressive distributed lag (ARDL) model, finding that digital payment activities significantly influenced access to financial services in several countries.

Similarly, Iwedi (2023), using Nigerian Central Bank time-series data and regression analysis, established that digital banking activities, including transactions through mobile and electronic banking platforms, influenced financial inclusion. These findings broadly concur with those of Melubo and Musau (2021), who, using survey data from 181 women-owned enterprises in Narok County and descriptive analysis, reported a positive relationship between digital banking withdrawals and financial inclusion. Despite differences in geographical settings, populations and analytical techniques, the studies are consensus that digital withdrawal mechanisms can improve access to and use of financial services.

However, the apparent consistency in these findings should be interpreted with caution because the studies differ considerably in unit of analysis, measurement of digital withdrawals, population, and methodological approach. Bayar et al. (2021)

examined country-level secondary data across European economies, meaning that their findings reflect aggregate national relationships rather than the experiences of individual enterprises. The methodology was insufficient for determining whether digital withdrawals improve financial inclusion among women-owned enterprises because country-level indicators cannot capture enterprise-specific differences in access, frequency of withdrawal, convenience, transaction costs, or use of formal financial services. Similarly, Iwedi (2023) relied on national time-series data from Nigeria, which is useful for examining macro-level changes in digital banking and financial inclusion but cannot adequately explain how individual enterprises experience or utilize digital withdrawal services.

Moreover, the studies agree more strongly on the direction of the relationship than on its magnitude or the mechanisms through which digital withdrawals influence financial inclusion. The positive findings reported by Bayar et al. (2021), Iwedi (2023), Melubo and Musau (2021), and Isabwa (2021) suggest a common theoretical proposition that digital financial technologies reduce barriers to financial service access. However, differences in methodology and measurement explain variations in the strength and interpretation of the reported relationships. Similarly, differences in the populations studied such as European economies, Nigerian financial users, Kenyan commercial banks and women-owned enterprises in Narok, mean that institutional environments, technological infrastructure, digital literacy, regulatory conditions, and patterns of financial-service use may influence the observed relationship. The findings cannot therefore not be automatically generalized for women-owned enterprises operating within a specific sub-county in Kenya.

The empirical literature leaves a specific methodological, conceptual and contextual gaps. Methodologically, previous studies have either relied on aggregate time-series data while the commercial-bank study relied on responses from bank managers rather than enterprise owners. These approaches are insufficient for establishing an enterprise-level relationship between digital withdrawals and financial inclusion among women-owned businesses. Contextually, none of the reviewed studies specifically addresses women-owned enterprises in Kajiado Central Sub-County. The current study therefore addressed this gap by examining the extent to which digital withdrawals influence financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

2.3.3 Digital Savings and Financial Inclusion

Digital savings platforms enable users to store money electronically through mobile banking applications, mobile money wallets and agency banking channels (Pazarbasioglu, et al., 202l). The platforms reduce the need for physical bank visits, minimize transaction costs, and increase accessibility for low-income and rural populations. Digital savings are recognized as key drivers of long-term financial stability, risk management and economic resilience (Boison & Tsao, 2019). According to Arora (2021), digital savings products enhance security, convenience, and confidentiality which increases the likelihood of adoption among women and low-income earners who face social and mobility constraints.

The existing literature have shown that digital savings significantly influences financial inclusion in different contexts. digital savings were established to enhance access to convenient, affordable and secure financial services. For instance,

Bharadwaj and Suri (2022) examined digital savings and financial inclusion in California using a cross-sectional survey design and found that digital platforms enabled small businesses to save conveniently online and that access to digital platforms increased savings, particularly during promotional periods. Similarly, Akinrinola et al. (2023) used secondary data and found that digital savings were associated with increased access to financial services, particularly through ATMs and web-based payment systems. Though both studies suggest that digital financial technologies promote financial inclusion, they differ in their methodological approaches and units of analysis. Bharadwaj and Suri relied on cross-sectional survey data and descriptive statistics and Akinrinola et al. (2023) used longitudinal secondary data which limited the ability of establishing the strength and significance of relationships between digital savings and financial inclusion.

Moreover, the evidence from Kenya provides findings that are more closely related to the current study. Wamuyu (2022) examined digital saving services and financial inclusion among young people in selected universities in Kenya, applying the Technology Acceptance Model (TAM) and Rational Choice Theory. The study established that digital savings provided young people with relatively low-cost, accessible and secure means of managing their funds through mobile devices. The findings further suggested that digital savings contributed to economic resilience. These findings broadly agree with those of Bharadwaj and Suri (2022) and Akinrinola et al. (2023) in demonstrating that digital savings improves access to and use of formal or technology-enabled financial services. However, the studies differ

in population and context. Despite the consensus, none of the studies specifically examined women-owned enterprises.

More recent evidence by Kitavi et al. (2025) provides a closer basis for understanding the relationship between digital savings and financial inclusion among women-owned enterprises. The study examined women-owned enterprises in Narok County, Kenya. The findings indicated that digital savings had a substantial positive influence on financial inclusion among women-owned enterprises. The finding is consistent with Wamuyu (2022), Bharadwaj and Suri (2022), and Akinrinola et al. (2023) all of which point to the capacity of digital financial services to improve access to and use of financial resources. However, Kitavi et al. (2025) also differs from the earlier studies in terms of population and analytical focus because it directly considered women-owned enterprises. Nevertheless, its findings remain geographically constrained to Narok County. Differences in geographical context are important because the availability of digital financial infrastructure, proximity to financial institutions, mobile network coverage, entrepreneurial practices and socioeconomic characteristics may vary across counties and sub-counties in Kenya.

The reviewed empirical literature exhibited various research gaps including contextual, conceptual and methodological. reveals three key gaps. Methodologically, studies used different indicators and levels of analysis to capture digital savings and financial inclusion, with some relying on descriptive statistics. These approaches were insufficient for establishing how the use of digital savings relates to specific dimensions of financial inclusion among women-owned

enterprises. In addition, the existing provided leaving insufficient evidence on women-owned enterprises in Kajiado Central Sub-County. Hence, the current study addressed these gaps by examining the influence of digital savings on financial inclusion among women-owned enterprises within Kajiado Central Sub-County.

2.3.4 Digital Credit and Financial Inclusion

Digital credit is the short-term loans delivered through digital platforms like mobile phones, mobile banking applications and fintech apps (Josephat, 2021). It has transformed credit markets in developing economies by removing traditional barriers such as collateral requirements, lengthy processing times and physical visits to banking halls (Ndung'u & Oguso, 2021). According to Robinson et al. (2022), digital credit expands access to finance by leveraging "Big Data" like mobile phone usage, airtime purchases and digital transaction histories to evaluate creditworthiness. This innovation has allowed millions of people without formal credit history to borrow for consumption, emergencies, and small business activities (Abolade, 2024).

The reviewed studies established that digital credit significantly influenced financial inclusion. Wathome (2021), Otieno and Thuo (2024), Wang'ombe (2022) and Nkatha (2022) provide evidence from different populations and settings, with their findings pointing to both beneficial and adverse implications of digital credit. Similarly, Wathome (2021) found that digital credit enhanced ease of loan access through user-friendly credit assessment processes, although it also reported adverse implications for financial inclusion among young people. In agreement, Otieno and Thuo (2024) established that digital credit increased the availability of funds and

was associated with improved economic opportunities and financial independence. In contrast, Wang'ombe (2022) found no substantial effect of digital credit on the financial health of young people in Nairobi, while Nkatha (2022) reported that mobile money credit negatively influenced the financial inclusion of small-sized enterprises in Meru County.

Moreover, Wathome (2021) and Otieno and Thuo (2024) both indicate that digital credit improves access to financial resources by making borrowing more convenient and increasing the availability of funds. This suggests that digital credit can reduce some conventional barriers to formal financial services, particularly those associated with accessibility and ease of obtaining credit. However, the studies also contradict one another regarding the broader financial outcomes associated with digital credit. While Otieno and Thuo (2024) found positive effects on financial independence and economic opportunities, Nkatha (2022) reported a negative relationship between mobile money credit and financial inclusion. These differences are explained by variations in the populations studied, the operationalization of financial outcomes, and the types of digital credit examined. In addition, differences in study locations also matter because the availability of mobile networks, financial institutions, digital financial services, and business opportunities varies across urban and rural or peri-urban settings.

Further, the reviewed studies also had limitations that constrained their ability of answering the question addressed in the present study. Wathome (2021) and Nkatha (2022) relied primarily on descriptive research designs and questionnaire data, with analysis emphasizing descriptive statistics. Although such approaches are useful for

establishing patterns of digital credit use, they provide limited evidence about the strength and significance of the relationship between digital credit and financial inclusion. Similarly, Otieno and Thuo (2024) relied on descriptive statistics, which limits the extent to which the observed relationship can be critically assessed beyond respondents' reported perceptions. In addition, Wang'ombe (2022) used a cross-sectional survey and regression analysis, providing comparatively stronger evidence regarding relationships between variables; however, its focus was financial health rather than financial inclusion. Hence, the methodological approaches adopted in these studies leave an important analytical gap because they do not adequately establish how digital credit, as the explanatory variable, is associated with the specific dimensions of financial inclusion among women-owned enterprises.

There was also a contextual gap in the existing literature. The reviewed studies were conducted in Kangemi, Nairobi, and Meru County, but they do not specifically examine women-owned enterprises in Kajiado Central Sub-County. This is important because the relationship between digital credit and financial inclusion may be influenced by local socioeconomic conditions, access to digital infrastructure, the availability of financial institutions, and the characteristics of the enterprise population. Evidence generated from Nairobi did not adequately reflect the circumstances of enterprises operating in Kajiado Central Sub-County. The current study therefore addressed both contextual, conceptual and methodological by examining digital credit in relation to financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

2.3.5 Financial Inclusion

Financial inclusion is the extent to which women entrepreneurs can obtain and make efficient usage of formal financial services such as bank accounts, loans and digital payment platforms (Sherwani, et al., 2024). As argued by Peter, et al. (2025), financial inclusions are the procedure of making sure that enterprises can access financial services that are affordable, suitable, and available when needed. Tubastuvi, et al. (2023) noted that financial inclusion plays key roles in reduction of poverty, promotion economic growth and enhancing social equity. Rani and Sundaram (2023) argued that financial inclusion has been significantly enhanced through technological innovations like m-banking and online finance channels.

Accessing finance enables women entrepreneurs to invest in productive assets, expand operations, management of risks and improved cash flow management (Nguse, et al., 2022). Research by Sherwani, et al. (2024) investigated the financial inclusions amongst enterprises owned by women in Iraq. The study used surveys for collecting data from 321 owners of enterprises in Iraq. The analysis was done through a chi-square for testing the associations amongst the variables. The research found that financial inclusion was determined by business duration, experiences in entrepreneurship and ICT usage. The research was however done in Iraq which may have different levels of financial inclusion compared to Kenya.

A study by Macharia (2022) investigated the financial inclusions amongst business women in Nairobi County. The target population was 5339 registered women entrepreneurs. Questionnaires and interviews were used for collection of data. The analysis of data was through content and descriptive analysis. It was established that

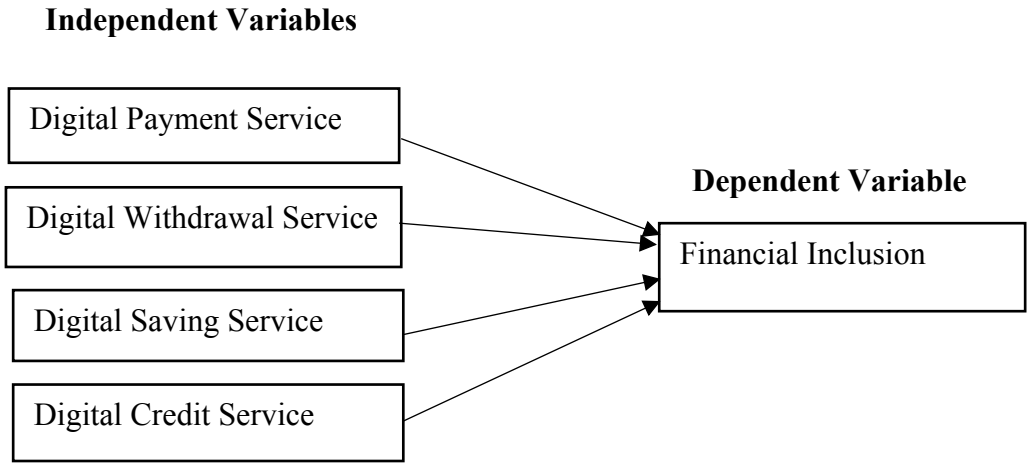
financial inclusion was determined by availability of mobile loans, access to savings and mobile transfers. The study also found that using mobile platforms to send or receive money promotes greater financial inclusion, as it provides a variety of market tools that facilitate efficient financial transactions. The research however omitted various aspects of financial inclusion such as usage and affordability.

2.4 Conceptual Framework

Conceptual framework is a structured explanation of how a study's key variables are related to each other (Koo et al.,2023). The independent variables will be digital payment, digital withdrawal, digital saving and digital credit whereas the dependent variable will be financial inclusion as illustrated in Figure 2.1.

Figure 2.1

Conceptual Framework.



The conceptual framework shows the association amongst digital financial service components and financial inclusion. It identifies digital payments, digital

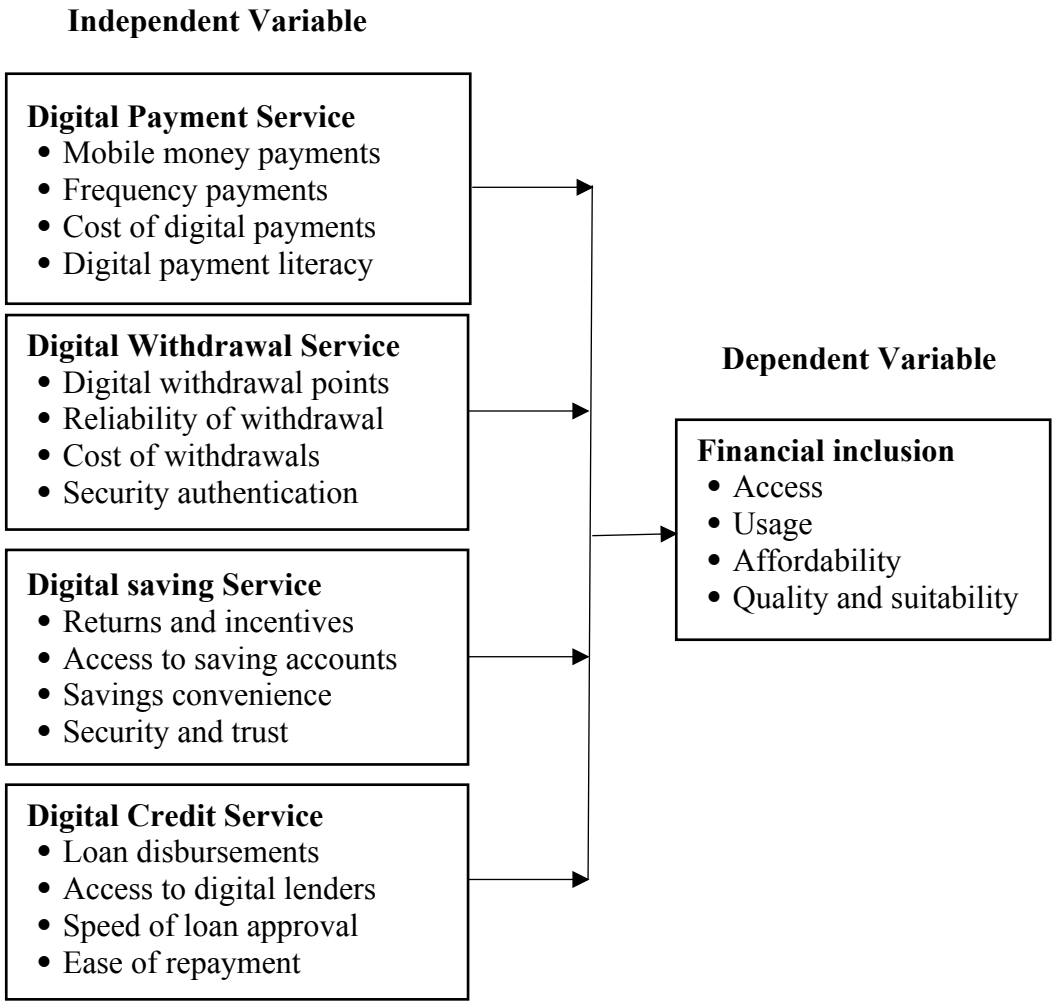
withdrawals, digital savings, and digital credit as independent variables that collectively influence financial inclusion. The framework indicates that increased access to and usage of these digital financial services improves people's capability to take part in the formal systems of finance. Digital payments facilitate convenient and secure transactions, digital withdrawals improve access to cash, digital savings promote financial security and discipline while digital credit expands access to financing. The combined digital financial services are expected to reduce financial barriers for underserved populations and enhance level of financial inclusion.

2.5 Operational Framework

The operational framework outlines how the research variables are defined, measured, and analyzed. It transforms abstract concepts into measurable indicators that can be empirically examined using quantitative techniques. The operational framework is illustrated in Figure 2.2.

Figure 2.2

Operational Framework



2.6 Summary of Literature

The study was anchored on technology acceptance model which is supported by rational choice theory and financial intermediation theory. The TAM model describes the process through which individuals adopt and utilize new technologies, suggesting that both the perceived usefulness and the perceived ease of use play a direct role in determining whether they will be adopted. TAM helps explain why

services like mobile money, digital credit, and online banking are adopted and how this adoption enhances financial inclusion through increased accessibility to savings, credit, payments, and insurance. Further, rational choice theory helps explain the behaviour of individuals using digital credit, digital payments, and digital savings platforms. Individuals opt for digital credit when the immediate benefits such as quick access, lack of collateral, and convenience are perceived to outweigh potential high interest costs.

On the other hand, financial intermediation theory explains how mobile money platforms, fintech lenders and digital banks act as efficient intermediaries. They lower costs and barriers that financially excluded women entrepreneurs. Moreover, empirical literature reviewed focuses on various digital financial services that influence financial inclusion. These include digital payment, digital withdrawal, digital saving and digital credit. The summary of literature review is illustrated in Table 2.1.

Table 2. 1

Summary of Literature Review

Author(s)	Title	Major Findings	Gaps	Focus of the current study
Shair, et al. (2024)	Digital payments and financial inclusion in Pakistan	Accessing mobile phones and internet have significantly enhanced the financial inclusion	Done in Pakistan and not in Kenya	Digital payment and financial inclusions in Kajiado Central Sub- County, Kenya.
Chandel and Chandel (2025)	Digital payment systems and Indian financial inclusion	Digital payments bridge financial geographical gaps, reduces transactional costs and allows small business to access financial services	Adopted structural equation modeling which is not applicable in the current research.	Adopts explanatory research design to explore digital payment and financial inclusions in Kajiado Central Sub- County, Kenya.
Minarni (2025)	Systems of digital payment and financial inclusion in developing economies	Systems of digital payment significantly impacted the financial inclusion	Adopted qualitative approach that is not applicable in the current research.	Adopts explanatory research design to explore digital payment and financial inclusions in Kajiado Central Sub- County, Kenya
Njoroge (2025)	How digital payments impacts financial inclusions in Kenya	Digital payments augment the likelihoods of customers to access savings, credit and insurance services	Did not focus on women owned enterprises in Kajiado Central Sub-County.	Focuses on women owned enterprises to explore digital payment and financial inclusions in Kajiado Central Sub- County, Kenya

Bayar, et al. (2021)	Impacts of withdrawals through mobile phones on financial inclusions in European nations	Accessing monetary services in Hungary, Latvia, Lithuania, Poland, and Slovenia were significantly determined by value of digital withdrawals made by business enterprises.	Did not focus on women owned enterprises.	Focuses on women owned enterprises to explore digital withdrawals and financial inclusions in Kajiado Central Sub- County, Kenya
Melubo and Musau (2021)	M-banking withdrawals and financial inclusions of enterprises owned by women in Narok County	M-banking withdrawals and financial inclusions had a significant and positive relationship	Focused on enterprises in Narok County and not those in Kajiado Central Sub-County.	Focuses on women owned enterprises to explore digital withdrawals and financial inclusions in Kajiado Central Sub- County, Kenya.
Isabwa (2021)	Effects of m-banking withdrawals on financial inclusions among Kenyan commercial banks.	Cash withdrawals through mobile platforms had significantly influenced financial inclusions.	focused on commercial banks and not enterprises owned by women	Focuses on women owned enterprises to explore digital withdrawals and financial inclusions in Kajiado Central Sub- County, Kenya.
Bharadwaj and Suri (2022)	Enhancing financial inclusion through digital savings in California.	Digital savings significantly enhanced the financial inclusion in California	Done in USA and not in Kenya	Digital savings and financial inclusions in Kajiado Central Sub- County, Kenya.
Wamuyu (2022)	Digital saving services and financial inclusions amongst young people in chosen universities in Kajiado.	Digital savings services allow youths to manage funds which strengthens economic resilience	Did not focus on women owned enterprises	Focuses on women owned enterprises to explore digital savings and financial inclusions in Kajiado Central Sub- County, Kenya.

Kitavi, et al. (2025)	Digital saving and financial inclusions of enterprises owned by women in Narok	Digital savings affected the financial inclusions amongst enterprises by women owned in Narok	Study was limited to Narok	Digital savings and financial inclusions in Kajiando Central Sub- County, Kenya.
Wathome (2021)	How digital credits affects the financial inclusions of the young people in Kangemi	Digital credits had negatively affected the financial inclusions of the Kenyan young people.	Was not done in Kajiando	Digital credit and financial inclusions in Kajiando Central Sub- County, Kenya
Wang'ombe (2022)	Digital credits and financial health of young people in Nairobi	Digital credits had no substantial effect on youths' financial health in Nairobi	Focused on financial health and not financial inclusions	Digital credit and financial inclusion in Kajiando Central Sub- County, Kenya
Nkatha (2022)	Digital credits and financial inclusions of SMEs in Meru County.	Mobile money credit negatively influenced the financial inclusion of SMEs	Did not focus on women owned enterprises	Focuses on women owned enterprises to explore digital credit and financial inclusions in Kajiando Central Sub-County, Kenya.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology highlights the steps and procedures followed while conducting the research. The chapter covered study design, targeted populations, sampling designs, sampling procedures, sampling size, data collections, data analysis, data presentations and piloting for testing reliability and validity.

3.2 Study Design

Research design is the strategy employed to integrate different parts of a study to ensure effective data collection and analysis (William, 2024). This study employed a quantitative cross-sectional explanatory survey research design. As per Em (2024), quantitative cross-sectional explanatory survey design helps in determining the causal effect association amongst the variables based on quantitative data. This design is pertinent to this research since it allows collection of quantitative data to test the research hypothesis meant to establish how digital financial services influences financial inclusion.

3.3 Target Population

Target population is the entire group of people sharing similar traits and from which a sample can be selected from (Willie, 2024). The study population will be 3,187 owners of registered women owned enterprises in Kajiado Central Sub-County. Women owned enterprises will be identified through registration records obtained from Kajiado county business permit records. The study targeted enterprise owners because they are actively

engaged in adopting various digital financial services to enhance financial inclusions in Kajiado Central Sub-County. The enterprise owners will serve as the representatives of the women businesses in the sector because they are the primary decision-makers regarding business operations and financial management. They are directly responsible for choosing, adopting and utilizing digital financial services such as mobile money, internet banking, digital lending and electronic payment platforms. The targeted population's distribution is illustrated in Table 3.1.

Table 3. 1

Target Population Distribution.

Category of SME owners	Population	Percentage
Hospitality	784	24.6
Retail	432	13.6
Agriculture	807	25.3
Manufacturing	83	2.6
Groceries	1081	33.9
Total	**3187**	**100**

Source: Kajiado County Business Permit Records (2026)

3.4 Sampling Design

Sampling design is the efficient approach utilized for choosing a sample in a manner that ensures the sample is representative and suitable to achieve the study goals (Lohr, 2021). The study adopted mixed sampling design. This entailed using both random and stratified sampling techniques. This approach allows researchers to draw statistically reliable samples for population generalization.

3.5 Sampling Procedure

The research adopted both random and proportional stratified sampling methods. First, the researcher grouped the owners of women owned enterprises based on the sector they belong to. The strata included manufacturing, wholesale and retail trade, hospitality, financial and insurance, consultancy and grocery. The study targeted the hospitality, retail, agriculture, manufacturing, and grocery sectors because these sectors constitute a significant proportion of women-owned enterprises in Kajiado Central Sub-County. Secondly, the owners from every group were chosen through random sampling technique. Both random and stratified sampling was used because it ensures every owner of the women owned enterprises had same probabilities of being part of the sample.

3.6 Sampling Size

Sampling size is the number of respondents chosen from the targeted population to participate in research (Lakens, 2022). The size of the sample will be calculated using Nassiuma formula below:

$n= Nc^2 / (c^2+ (N-1) e^2)$;

Where: **n** = sample sizes;

N = populations;

c = variance (0.6); **e** = standard error (0.05)

$n = (3187*0.6^2) / (0.6^2+(3187-1) *0.05^2)$

n = 138.

The ratio for sampling was 138/3187=0.043. Hence, the sample size distributions are shown in Table 3.2.

Table 3. 2

Sample Size Distribution

Category of SME Owners	Population	Sample
Hospitality	784	34
Retail	432	19
Agriculture	807	34
Manufacturing	83	4
Groceries	1081	47
Total	**3187**	**138**

3.7 Data Collection

The primary data for both dependent and independent variables was collected using questionnaires. As argued by Srivastava (2024), the questionnaire is a tool utilized in study, consisting of a set of questions aimed at collecting information from participants. The questionnaires were utilized for collecting data from the sampled owners of women owned enterprises in Kajiado Central Sub-County. The questionnaire had closed and open-ended questions. The data collection process began with obtaining a research permit from NACOSTI and a letter of introduction from KEMU to ensure compliance with ethical and regulatory requirements. The questionnaires were distributed through drop and pick later approach which gave the participants ample time to provide accurate and thoughtful responses at their convenience.

3.8 Data Analysis

Data analysis was conducted with the aid of SPSS. Quantitative data gathered using questionnaires were analyzed using descriptive and inferential statistics. The bivariate regression models include:

$$Y = \beta_0 + \beta_1 X_1 + \mathcal{E}$$

$$Y = \beta_0 + \beta_2 X_2 + \mathcal{E}$$

$Y = \beta_0 + \beta_3 X_3 + \mathcal{E}$

$Y = \beta_0 + \beta_4 X_4 + \mathcal{E}$

$FI = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mathcal{E}$

Where:

β_0 = Constant, β_1 to β_4 = Regression Coefficients; $\mathcal{E}$ = Error Term

Y = Financial inclusion

X_1 = Digital payment service

X_2 = Digital withdrawal service

X_3 = Digital saving service

X_4 = Digital credit service

3.8.1 Hypothesis Testing

The hypothesis testing was conducted at 5% significance level where null hypothesis would not be accepted when p-value do not exceed 0.05 as illustrated in Table 3.3.

Table 3. 3

Summary of Hypothesis Testing

Hypothesis	**Model**	**Decision**
H_{o1}: Digital payment services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.	$Y = \beta_0 + \beta_1 X_1 + \mathcal{E}$	Reject if the $p<0.05$
H_{o2}: Access to digital withdrawal services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.	$Y = \beta_0 + \beta_2 X_2 + \mathcal{E}$	Reject if the $p<0.05$

H_{03}: Digital saving services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.	$Y = \beta_0 + \beta_3 X_3 + \mathcal{E}$	Reject if the $p<0.05$
H_{04}: Access to digital credit services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.	$Y = \beta_0 + \beta_4 X_4 + \mathcal{E}$	Reject if the $p<0.05$

3.9 Diagnostic Tests

Diagnostic tests were used after fitting a model to check if the assumptions of the model were met and identify issues with the data. The study tested for multicollinearity, normality and autocorrelation.

3.9.1 Multicollinearity

Multicollinearity arises when the independent variables in a model are strongly correlated. This makes it difficult to isolate and assess the unique impact of each predictor on the dependent variable (Shrestha, 2020). Multicollinearity was tested through Variance Inflation Factor (VIF) where a VIF above 10 shows significant multicollinearity.

3.9.2 Normality

Normality is the assumption that the residuals in the regression model have a normal distribution (Midway & White, 2025). The normality was tested through Shapiro-Wilk and Kolmogorov-Smirnov test. In this test, if the p-value exceeds 0.05, then the data is normally distributed.

3.9.3 Autocorrelation

Autocorrelation happens when the residuals of a model are not independent and show a pattern of correlation across different observations. This violates the assumption of independence (Kumar, 2023). The autocorrelation was tested using the Durbin-Watson statistic, in which values near 2 show no autocorrelations. In addition, the values below 1 or above 3 suggest significant autocorrelation.

3.10 Data Presentation

Data analysis results were presented using tables and figures. All tables employed simple formatting, adhering to the standard practice of eschewing vertical lines, and titles were positioned at the top of the tables. Figures were utilized appropriate shadings for clarity, with titles positioned at the bottom of the figures. The presentation structure was guided by the objectives and questions of the research. The results from content analysis were presented in prose.

3.11 Piloting of Research Instruments

The pilot study was conducted among the women owned enterprises in Kitengela Town. The researcher administered 27 questionnaires to the women owners of enterprises in Kitengela Town which represents a 20% of the sample size. This is justified by Bujang, et al. (2024) who noted that 20% of a study's sample size is adequate for conducting a pilot study. Kitengela Town was selected because enterprises operate in the same conditions as those targeted in this study. This made it ideal site for collecting data to test the research instrument's reliability and validity.

3.11.1 Reliability

Reliability is the consistency and steadiness of the tool in measuring what it is envisioned to assess across different instances (Kennedy, 2022). A reliable questionnaire yields similar results when administered multiple times under similar conditions. The study used test-retest method to check for reliability. From the test-retest method, a high correlation coefficient above 0.8 suggests that the measurement is trustworthy and not meaningfully affected by external factors or random errors.

3.11.2 Validity

Validity is the extent that the tool precisely assesses what it is intended to assess (Zhang & Aryadoust, 2022). The study tested for content validity, face validity and construct validity. Content and face validity was tested by seeking expert judgment. On the other hand, construct validity which explores if the instrument truly assesses the theoretical concepts it intends to was tested through factor analysis. For questionnaire to be construct valid, each item should have a factor loading exceeding the prescribed threshold of 0.40.

CHAPTER FOUR

DATA ANALYSIS AND FINDINGS

4.1 Introduction

The study aimed to assess the influence of digital financial services on financial inclusions amongst enterprises owned by women in Kajiado Central Sub-County. To achieve this objective, four specific objectives and corresponding hypotheses were formulated. These objectives were: to determine the influence of digital payment services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County, to examine the influence of access to digital withdrawal services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County, to assess the influence of digital saving services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County and to determine the influence of access to digital credit services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

This chapter presents the preliminary findings of the study. Descriptive analysis was conducted by summarizing data using frequency distributions, percentages, and tables, as well as measures of central tendency (mean) and dispersion (standard deviation). In addition, inferential analysis was carried out to test the study hypotheses. The respondents' demographic characteristics, including response rate and organizational profile, were analyzed using frequencies and percentages.

4.2 Demographic Information

The demographic information presented for the respondents included response rate, level of education, position within the organization, and work experience. These variables were analyzed using frequencies and percentages and are presented in the tables below.

4.2.1 Response Rate

Out of the 138 questionnaires distributed to respondents in selected women-owned enterprises in Kajiado Central Sub-County, 116 were duly completed and returned, representing a response rate of 84.1%. According to Saunders et al. (2009), acceptable response rates for questionnaires that are both administered and collected by the researcher typically range between 30% and 50%. Based on this benchmark, the achieved response rate of 84.1% was considered highly adequate for the study.

Table 4. 1

Response Rate

	Frequency	**Percentage (%)**
Distributed Questionnaires	138	100.0
Questionnaires Returned	116	84.1

4.2.2 Age Bracket

The participants were asked to point to the age brackets. The findings are presented in Table 4.2.

Table 4. 2

Age Distribution

Age Bracket	Frequency	Percent
18 - 25 Years	15	12.9
26 - 35 Years	21	18.1
36 - 45 Years	32	27.6
46 - 55 Years	25	21.6
Above 55 Years	23	19.8
Total	116	100

The findings indicate that respondents were drawn from a relatively diverse range of age groups, suggesting a mixed level of experience and exposure within the study population. The largest proportion of respondents (27.6%) were aged between 36 and 45 years, indicating that a significant number of participants were in their mid-career stage, a period often associated with higher levels of professional stability and active engagement in organizational activities. This was followed by respondents aged 46–55 years, who accounted for 21.6%, and those above 55 years at 19.8%. The presence of a substantial proportion of older respondents suggests that a notable segment of the study population comprised individuals with extensive work experience and institutional knowledge, which may have contributed to informed responses.

Additionally, 18.1% of the respondents were aged 26–35 years, representing early-career professionals who are typically more exposed to emerging technologies and modern work practices. The smallest proportion (12.9%) fell within the 18–25 years

age bracket, indicating limited representation of younger respondents, who are often newly entering the workforce. The distribution demonstrates that the study captured views across different generational groups, thereby enhancing the reliability of the findings through a balance of experience levels and perspectives.

4.2.3 Highest Level of Education

Respondents were requested to indicate their highest level of academic qualification. The results of the analysis are presented in Table 4.3 below.

Table 4.3

Education Qualifications

Level of Education	Frequency	Percent
Secondary Education	9	7.8
Certificate/Diploma	31	26.7
Bachelor's Degree	49	42.2
Postgraduate Degree	27	23.3
Total	116	100

As presented in Table 4.3, the respondents' academic qualifications varied from secondary education to postgraduate level, indicating a relatively well-educated sample. The findings show that the largest proportion of respondents (42.2%) had attained a bachelor's degree as their highest academic qualification, suggesting that most participants possessed a strong foundation of tertiary education, which may enhance their ability to understand and engage with issues related to digital financial services and financial inclusion. Further, 26.7% of the respondents had attained certificate or

diploma qualifications, reflecting a significant group with intermediate post-secondary training and practical vocational skills relevant to enterprise and financial activities. In addition, 23.3% of the respondents held postgraduate qualifications, indicating a considerable proportion of highly educated individuals with advanced academic training, which could contribute to deeper insights and more informed responses in the study.

The remaining 7.8% of respondents had secondary school education as their highest qualification, representing the smallest proportion of the sample. This suggests that while a minority of respondents had lower formal education levels, they were still actively engaged in enterprise activities and digital financial service usage. The distribution of academic qualifications demonstrates that the study captured respondents with varied educational backgrounds, thereby enriching the quality of responses and providing a balanced perspective on the influence of digital financial services on financial inclusion.

4.2.4 Distribution by Period Operating Business

Respondents were asked to state their period operating business. The findings are presented in Table 4.4 below.

Table 4. 4

Period of Operating Business

Duration	Frequency	Percentage
4 – 6 Years	29	25.0
7 – 10 Years	38	32.8
Above 10 Years	49	42.2
Total	116	100

As shown in Table 4.4, the majority of respondent firms (42.2%) had been in operation for a period of 11–15 years. This indicates that a substantial proportion of the enterprises had relatively long operational histories, suggesting a level of stability, accumulated business experience, and established customer bases, which may positively influence their engagement with digital financial services. This was followed by 32.8% of firms that had been in operation for 7–10 years. These enterprises can be categorized as moderately established businesses, likely in a growth phase where adoption of digital financial services may be driven by the need for efficiency, expansion, and improved financial management systems.

In addition, 25% of the firms had operated for a period of 4–6 years, representing relatively younger enterprises. These businesses are typically in the early stages of development and may be more flexible and open to adopting innovative financial solutions such as mobile money platforms, digital credit, and online savings services. Distribution suggests that most of the enterprises had been in operation for more than seven years, implying a sample largely composed of experienced firms. This diversity in business age provides a useful basis for examining how the duration of business

operations may influence the adoption and use of digital financial services and, consequently, financial inclusion outcomes.

4.2.5 Distribution by Period Operating Business

Respondents were asked to state business sector in which their firms operate. The findings are presented in Table 4.5 below.

Table 4. 5

Business Sector

Sector	**Frequency**	**Percentage**
Manufacturing	8	6.9
Retail	22	19.0
Hospitality	16	13.8
Agriculture	34	29.3
Grocery	36	31.0
Total	116	100.0

Respondents were required to indicate the sector in which their enterprises operate. The findings revealed that the largest proportion of respondents (31%) operated within the grocery sector, suggesting that a significant number of the women-owned enterprises were engaged in fast-moving consumer goods and daily retail activities. This sector is often characterized by high transaction frequency, making it highly relevant for the use of digital financial services such as mobile payments and digital transfers. This was followed by 29.3% in agriculture as well as 19% of respondents who operated in the

retail sector, indicating a notable presence of businesses involved in the distribution and sale of goods at both small and large scales.

Further, 13% of the enterprises operated within the hospitality sector, which typically includes businesses such as food services and accommodation, where cashless transactions and digital payments are increasingly common. The smallest proportion (6.9%) operated in the manufacturing sector, indicating limited representation of production-based enterprises within the study sample. The distribution shows that the majority of the enterprises were concentrated in the trade and service-oriented sectors, which are highly compatible with the use of digital financial services. This sectoral variation provides a useful context for understanding differences in the adoption and utilization of digital financial services across different types of women-owned enterprises.

4.2.6 Distribution by Business Legal Status

Respondents were asked to state their legal status business. The findings are presented in Table 4.6 below.

Table 4. 6

Business Legal Status

Legal Status	**Frequency**	**Percentage**
Sole Proprietorship	74	63.8
Partnership	26	22.4
Limited Company	16	13.8
Total	116	100

As shown in Table 4.6, the majority of respondents (63.8%) operated under sole proprietorship. This indicates that most of the women-owned enterprises were individually owned and managed, suggesting a high level of direct control by the owners over business operations and financial decisions. Such a structure often allows for quick decision-making, particularly in the adoption and use of digital financial services. Further, 22.4% of the respondents operated under partnerships, implying that these enterprises were jointly owned and managed by two or more individuals. This form of ownership may involve shared financial responsibilities and collective decision-making, which can influence the adoption and utilization of digital financial tools depending on partners' agreement and financial literacy levels.

The remaining 13.8% of the respondents operated as limited companies, representing a smaller proportion of more formally structured businesses. These enterprises are typically characterized by more defined governance structures, formal financial reporting systems, and greater compliance requirements, which may encourage more systematic adoption of digital financial services for efficiency and accountability. The findings suggest that most of the enterprises studied were informal to semi-formal in nature, with sole proprietorships dominating the sample. This ownership structure is important in understanding how decision-making processes influence the uptake of digital financial services among women-owned enterprises.

4.3 Reliability and Validity Tests

Internal consistency was used in examining the reliability of the questionnaire. The study used Cronbach's alpha to measure internal consistency. All the five

variables had Cronbach alpha > 0.7, therefore the study's research instrument was reliable and was thus suitable for administration (Table 4.7 below).

Table 4. 7

Reliability Test Statistics

Variables	Cronbach's Alpha	Decision
Digital Payment Services	0.831>0.7	Reliable
Digital Withdrawal Services	0.862>0.7	Reliable
Digital Saving Services	0.793>0.7	Reliable
Digital Credit Services	0.867>0.7	Reliable
Financial Inclusion	0.745>0.7	Reliable

Content, face, and construct validity of the instrument were assessed. Face validity was examined by sharing it with supervisors as well as experts well-acquainted with the subject under investigation. Their feedback and viewpoints were taken into account in determining whether the items were suitable for gathering the necessary data to accomplish the set objectives. Furthermore, construct validity was evaluated using factor analysis, where the Kaiser-Meyer-Olkin (KMO) test, with a threshold of 0.5 (Kaiser, 1974), was performed. KMO values of 0.5 and above indicated that the data collected were sufficient for further analysis.

Table 4. 8

Data Adequacy Test

Variables	**KMO**

Digital Payment Services	0.8429
Digital Withdrawal Services	0.6475
Digital Saving Services	0.7149
Digital Credit Services	0.5347
Financial Inclusion	0.6589

All study constructs had a KMO value of above 0.5, as suggested by Kaiser (1974), an indication that the data collected were adequate for further analysis.

4.4 Descriptive Analysis of Study Variables

Study analysed questionnaire per construct so as to give context to characteristics of the variables. The descriptive analyses included means and standard deviation. A Likert scale was used to measure responses in the questionnaire. Respondents were expected to rate each statement on a five- point scale.

4.4.1 Digital Payment Services

To measure effectiveness of digital payment services on financial inclusion, five statements were formulated and analysed and the findings are as shown in Table 4.9. below.

Table 4. 9

Digital Payments Services

Statements	**Mean**	**Std Dev**

Mobile money payment platforms are my primary mode of receiving payments from customers.	3.93	0.18
Mobile money payments have increased my accessibility to formal monetary services.	4.28	0.17
Frequent use of digital payments has improved my business cash flow management.	4.17	0.27
Low digital payment costs encourage me to use cashless payment methods.	3.78	0.13
I am confident in using digital payment platforms for my business transactions	3.65	0.09
Overall	**3.96**	**0.17**

The overall mean score for digital payment services was 3.96, with a relatively low standard deviation of 0.17, indicating a high level of agreement among respondents and minimal variation in their views. This suggests that digital payment systems are widely accepted and consistently perceived as beneficial across the sample. Among the specific statements assessed, the highest-mean was that mobile money payments have increased accessibility to formal financial services (Mean=4.28). This highlights the significant role of mobile money platforms as one of the aspects of digital payment in promoting financial inclusion, particularly by enabling users to access services that may have previously been out of reach. This agree with Njoroge (2025) who established that digital systems reduce time and effort needed for everyday financial activities like bill payments and purchasing goods.

4.4.2 Digital Withdrawal Services

To assess the effectiveness of digital withdrawal services on financial inclusion, five statements were developed and analyzed. The findings are presented in Table 4.10 below.

Table 4. 10

Digital Withdrawals Services

Statements	Mean	Std Dev
Availability of nearby withdrawal points supports my business operations.	4.07	0.72
Digital withdrawal services are reliable whenever I need cash.	3.23	0.13
System downtimes rarely affect my ability to withdraw money.	3.83	0.75
Charges for digital withdrawals are reasonable for my business.	3.16	0.19
Authentication security procedures during withdrawals make me feel secure	3.28	0.98
Overall	**3.51**	**0.55**

The findings indicate that digital withdrawal services recorded a mean score of 3.51 with a standard deviation of 0.55, suggesting a moderate level of agreement among respondents, alongside greater variability in their experiences compared to other digital payment aspects. Among the specific items, the statement that the availability of nearby withdrawal points supports business operations received the highest rating, with a mean of 4.07. This underscores the importance of physical access points such as agents or ATMs for digital withdrawals to ensure businesses can conveniently convert digital funds into cash when needed. This implies that digital withdrawals play a significant role in enhancing financial inclusion among women owned SMEs. This concurs with Iwedi (2023) who established that digital banking model facilitating withdrawals had a substantial influence on financial inclusions in Nigeria.

4.4.3 Digital Saving Services

Five statements were developed to evaluate the effectiveness of digital saving services on financial inclusion, and the results of the analysis are presented in Table 4.11 below.

Table 4. 11

Digital Saving Services

Statements	Mean	Std Dev

Digital savings platforms offer attractive returns.	4.03	0.89
Incentives provided by digital savings accounts motivate me to save regularly.	4.27	1.08
Digital savings accounts have increased my accessibility to formal monetary services.	4.10	0.78
Digital savings platforms make it easy to save small amounts regularly.	4.14	0.87
Security features in digital savings systems increase my confidence in saving digitally.	4.04	0.85
Overall	**4.12**	**0.89**

Digital savings services recorded a relatively high mean score of 4.12, with a standard deviation of 0.89, indicating generally strong agreement among respondents, albeit with some variation in individual experiences and perceptions. The statement with the highest mean of 4.27 was incentives provided by digital savings accounts motivate users to save regularly. This suggests that features such as interest earnings, bonuses, or rewards play a significant role in encouraging consistent saving behavior. This implies that having a digital saving accounts enhances financial inclusion among the women owned SMEs. This concurs with Kitavi et al. (2025) who established digital savings substantially contributed to the financial inclusions amongst women in Narok

4.4.4 Digital Credit Services

Five statements were developed to evaluate the effectiveness of digital credit services on financial inclusion, and the results of the analysis are presented in Table 4.12 below.

Table 4. 12

Digital Credit Services

Statements	**Mean**	**Std Dev**

Digital loans are disbursed directly and conveniently to my account.	3.77	0.99
I can easily access digital lenders when I need business credit.	3.84	0.92
Digital credit platforms have expanded my accessibility to monetary services.	3.57	0.22
Digital loans are approved quickly compared to traditional loans.	3.93	0.32
Digital loan repayment processes are simple and convenient	3.43	0.27
Overall	3.71	0.54

Digital credit services registered a mean score of 3.71 with a standard deviation of 0.54, indicating a moderately positive perception among respondents, with fairly consistent views across the sample. The highest mean among the statements was 3.93 for digital loans are approved more quickly than traditional loans. This emphasizes the key advantage of speed in digital lending, making it an attractive option for users who require timely access to funds. This implies that digital credit service plays a significant role in enhancing financial inclusion among the women owned SMEs. This is supported by Wathome (2021) who noted that digital credit has enabled young people to access loans easily and benefit from user-friendly credit assessment processes.

4.4.5 Financial Inclusion

Six statements were developed to assess the level of financial inclusion among the respondents, and these were subjected to detailed analysis. The statements captured key dimensions of financial inclusion. The responses were analyzed using descriptive statistics, particularly mean scores and standard deviations, to determine the extent to which respondents agreed with each statement. The findings of this analysis are presented in Table 4.13.

Table 4. 13

Financial Inclusion

Statements	Mean	Std Dev
I can easily access formal financial services (such as banks, mobile money platforms) whenever I need them.	3.71	0.56
I am able to open and operate a business bank account without difficulty.	3.62	0.47
I regularly use formal financial services for saving, borrowing, payments and business transactions.	3.74	0.24
I am aware of the various financial services available for SMEs.	3.17	0.11
The costs and charges associated with financial services are affordable for my income or business level.	3.84	0.18
The financial products and services I use are well suited to my financial needs.	3.49	0.98
Overall	3.59	0.42

The findings indicated that financial inclusion recorded a mean score of 3.59 with a standard deviation of 0.42, indicating a moderately positive perception among respondents and relatively low variation in their responses. This suggests that while access to and use of formal financial services is generally favorable, there is still room for improvement. The highest-rated statement was that the costs and charges associated

with financial services are affordable relative to respondents' income or business level, with a mean of 3.83. This implies that affordability is a key strength in promoting financial inclusion, as users feel that financial services are reasonably priced and within their reach.

4.5 Statistical Assumptions

In order to run a regression analysis, a number of assumptions must be fulfilled. This ensures use of appropriate analytical models. Analytical tests were used to evaluate these assumptions. The study conducted four diagnostic tests, that is; multicollinearity, normality and homoscedasticity. Violation of these assumptions would mean that the forecasts and scientific insights would be inefficient and misleading.

4.5.1 Multicollinearity

Multicollinearity is defined as a high association between predictor variables. Existence of multicollinearity causes over/under estimation of regression coefficients. The research utilized tolerance and Variance Inflation Factor (VIF) to test for multicollinearity. VIF <10 and tolerance >0.1 confirm low correlation. The findings are shown in Table 4.14. below.

Table 4. 14

Variance Inflation Factor

Variables	VIF	Tolerance
Digital Payment Services	2.104	.475
Digital Withdrawal Services	2.077	.482
Digital Saving Services	1.153	.868
Digital Credit Services	1.778	.562

The Findings indicated that all variables had a VIF less than 10 with corresponding tolerance greater than 0.1. This confirmed that variables were not highly correlated, thus digital payment services, digital withdrawal services, digital savings services and digital credit services could all be used in the model to predict financial inclusion.

4.5.2 Normality Test

Normality is important because of its relevance in the selection of an appropriate model.

The normality test was assessed using statistically affirmed through the Shapiro-Wilk test. For the Shapiro-Wilk test, the Null hypothesis was that a variable was normally distributed. The distribution is said to be normal when p-value>.05 otherwise asymmetrical. The results are shown in Table 4.15.

Table 4. 15

Normality Test

	Shapiro-Wilk	
Variables	**Statistics**	**Sig**
Digital Payment Services	0.993	.113
Digital Withdrawal Services	0.983	.097
Digital Saving Services	0.972	.075
Digital Credit Services	0.933	.084

As presented in Table 4.15, the results of the normality tests indicate that all study variables satisfied the normality assumption. Specifically, digital payment services recorded a p-value of 0.113, digital withdrawal services 0.097, digital savings services 0.075, and digital credit services 0.084. In all cases, the p-values are greater than the threshold of 0.05. This implies that there is no statistically significant deviation from a normal distribution for any of the variables. Consequently, the data for each construct can be considered to be approximately normally distributed. Therefore, the assumption of normality was met, supporting the suitability of the data for subsequent regression analysis.

4.5.3 Bivariate Analysis

Linearity posits that association between predictor and response variables would be best described by a straight line. It means that in every unit increase in the independent variable, there is a constant and proportional change in the dependent variable. Linearity was assessed through a pairwise correlation matrix. The results are shown in Table 4.16. below.

Table 4. 16

Pairwise Correlations

		Digital Payment Services	Digital Withdrawal Services	Digital Saving Services	Digital Credit Services	
Digital Payment Services	Pearson r	1.000				
	p-value	0.002				
Digital Withdrawal Services	Pearson r	0.542**	1.000			
	p-value	0.000	0.001			
Digital Saving Services	Pearson r	0.345**	0.567**	1.000		
	p-value	0.003	0.000	0.000		
Digital Credit Services	Pearson r	0.678**	0.455**	0.652**	1.000	
	p-value	0.000	0.001	0.002		
Financial Inclusion	Pearson r	0.654**	0.512**	0.682**	0.553**	1.000
	p-value	0.000	0.000	0.000	0.000	

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

Findings in Table 4.16. above, show the degree of association in a dataset. It indicates correlation between the study variables using the correlation coefficient (Pearson r). There is direct and significant linear association between digital payment services and financial inclusion (r = 0.654, p-value 0<0.05), digital withdrawal services and financial inclusion (r = 0.512, p-value <.05), digital saving services and financial inclusion (r = 0.682, p-value <.05) and digital credit services and financial inclusion (r = 0.553, p-value<.05). Hence assumption of linearity was satisfied.

4.6 Tests of Hypotheses

This section presents the testing of the study hypotheses and provides a detailed explanation of the corresponding results. The hypotheses were developed in line with

the specific objectives of the study. Four null hypotheses guided the analysis: **H_{o1}:** Digital payment services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County; **H_{o2}:** Access to digital withdrawal services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County; **H_{o3}:** Digital saving services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County and **H_{o4}:** Access to digital credit services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

All statistical analyses were performed at a 95% confidence level ($\alpha = 0.05$). The interpretation of the findings relied on several key statistical measures. The coefficient of determination (R^2) was used to evaluate the goodness of fit of the model, while the F-test assessed the overall significance of the regression model. In addition, the t-test was applied to examine the significance of individual predictor variables, and p-values were used as the basis for hypothesis testing decisions. For the direct relationships under investigation, a p-value less than 0.05 was considered evidence of a statistically significant effect, leading to the rejection of the null hypothesis. Conversely, a p-value greater than 0.05 indicated insufficient evidence to reject the null hypothesis, suggesting that the relationship was not statistically significant.

4.6.1 Digital Payment Services and Financial Inclusion

The first objective of the study was to examine the influence of digital payment services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. This objective was tested using the following null hypothesis: **H_{o1}:** Digital payment

services have no statistically significant effect on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The hypothesis was tested using simple linear regression and results presented in Table 4.17 below.

Table 4. 17

Digital Payment Services and Financial Inclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.550[a]	.303	.299	6.36406	.303	49.609	1	114	.000	1.867

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1400.00	1	1400.001	49.609	.000[b]
	Residual	3217.13	114	28.220		
	Total	4617.13	115			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.399	.099		4.049	.000
	Digital Payment Services	.442	.219	.432	2.021	.040

a. Dependent Variable: Financial Inclusion

The results in Table 4.17 provide both explanatory and predictive insights into the relationship between digital payment services and financial inclusion among women-owned enterprises in Kajiado Central Sub-County. An R^2 value of 0.303 indicates that digital payment services account for 30.3% of the variation in financial inclusion. This

suggests a moderately strong explanatory power, meaning that while digital payment services play a substantial role in enhancing financial inclusion, there are other factors such as financial literacy, access to credit, infrastructure, and regulatory environment that also contribute to the remaining 69.7% of variation not captured by the model.

The F-statistic ($F = 49.609$) with a p-value of 0.000 demonstrates that the regression model as a whole is statistically significant. In practical terms, this confirms that the model reliably explains the relationship between digital payment services and financial inclusion and is not a result of random chance. Therefore, the independent variable (digital payment services) meaningfully improves the prediction of financial inclusion.

At the individual variable level, the t-test results ($t = 2.021$, $p = 0.04$) indicate that digital payment services have a statistically significant effect on financial inclusion at the 5% significance level. This implies that changes in digital payment services are associated with measurable and reliable changes in financial inclusion outcomes among women-owned enterprises in Kajiado Central Sub-County.

The predictive regression equation was:

$FI = 0.399 + 0.442\ DPS$

Further quantifies this relationship. “The intercept (0.399) represents the baseline level of financial inclusion when digital payment services are absent. Although, in real-world scenarios, a complete absence of digital payment services may be unlikely, this value serves as a reference point for understanding the model. The coefficient of digital

payment services (0.442) shows a positive relationship, meaning that an increase in digital payment services leads to an increase in financial inclusion. Specifically, a one-unit improvement in digital payment services results in a 0.442-unit increase in financial inclusion, assuming all other factors remain constant. This positive coefficient underscores the importance of digital payment platforms in expanding access to financial services, improving transaction efficiency, and integrating women-owned enterprises into the formal financial system. Findings suggest that promoting and strengthening digital payment services such as mobile money, online banking, and electronic transactions can significantly enhance financial inclusion among women entrepreneurs in the region. However, since the model does not explain all the variation, complementary interventions targeting other determinants would further strengthen financial inclusion outcomes.

The findings support the existing literature which affirm that digital payment services have a significant effect on financial inclusion (Hussain, et al., 2025; Minarni, 2025). The consistency of these findings may be attributed to the increasing penetration of mobile technologies, improved digital financial infrastructure and greater adoption of mobile money and electronic payment systems among women-owned enterprises and underserved populations. These technologies reduce barriers associated with traditional banking, such as long travel distances, high transaction costs and extensive documentation requirements which promote greater participation in formal financial systems. In support, Minarni (2025) established that digital payments addressed various challenges faced while access to financial services is enhanced through the usage of technological innovations like mobile connectivity and digital platforms. The findings

also concur with Fernandes, et al. (2021) who found that limited domestic digital remittances and direct debit leads to low levels of financial penetration in Mozambique. The results also agree with Njoroge (2025) who established that digital systems reduce time and effort needed for everyday financial activities like bill payments and purchasing goods.

4.6.2 Digital Withdrawal Services and Financial Inclusion

The second objective of the study was to examine the influence of access to digital withdrawal services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. This objective was tested using the following null hypothesis:

H_{o2}: Access to digital withdrawal services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The hypothesis was tested using simple linear regression and results presented in Table 4.18 below.

Table 4. 18

Digital Withdrawal Services and Financial Inclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	435[a]	.190	.185	6.36008	.190	26.685	1	114	.000	1.880

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	875.76	1	875.765	26.685	.000[b]
	Residual	3741.37	114	32.919		
	Total	4617.13	115			

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	.540	.213		2.529	.010
	Digital Withdrawal Services	.415	.204	.411	2.035	.040

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Digital Withdrawal Services

The regression results indicate a statistically significant but relatively modest relationship between digital withdrawal services and financial inclusion among women-owned enterprises in Kajiado Central Sub-County. R^2 value of 0.190 means that digital withdrawal services explain 19% of the variation in financial inclusion. This level of explanatory power suggests that while access to digital withdrawal services contributes to financial inclusion, a much larger proportion (81%) of the variation is influenced by other factors not included in the model. These may include variables such as income levels, financial literacy, accessibility of financial institutions, mobile network coverage, cost of services, and socio-cultural factors affecting women entrepreneurs.

The F-statistic ($F = 26.685$) with a p-value of 0.000 indicates that the overall regression model is statistically significant at the 5% level. This confirms that the model provides a better fit to the data than a model with no predictors, and that digital withdrawal services, as a predictor, meaningfully improve the explanation of financial inclusion.

At the individual level, the t-test results ($t = 2.35$, $p = 0.04$) show that digital withdrawal services have a statistically significant effect on financial inclusion. Since the p-value

is less than 0.05, the null hypothesis is rejected. This leads to the conclusion that access to digital withdrawal services has a significant influence on financial inclusion among women-owned enterprises in the study area.

The regression equation:

FI = 0.540 + 0.415 DWS

The constant term (0.540) represents the baseline level of financial inclusion when digital withdrawal services are absent. The coefficient for digital withdrawal services (0.415) indicates a positive relationship between the variables. Specifically, a one-unit increase in access to digital withdrawal services leads to a 0.415-unit increase in financial inclusion, holding other factors constant. This suggests that improved availability and use of withdrawal channels such as mobile money agents, ATMs, and digital banking platforms enhance the ability of women entrepreneurs to access and utilize financial services.

The findings support the existing literature which asserts that digital withdrawal services significantly affect financial inclusion (Mogaji & Nguyen, 2022; Raghunath, et al., 2024). The consistency between the current findings and previous studies is because widespread expansion of digital financial infrastructure, increased mobile phone penetration and the growth of agent banking networks. These advancements have reduced the cost and time associated with accessing financial services while improving convenience and reliability. This is supported by Bayar, et al., (2021) who established that access to financial services in Hungary, Latvia, Lithuania, Poland, and Slovenia were significantly determined by value of digital withdrawals made by business

enterprises. The findings also concur with Melubo and Musau (2021) who noted that digital withdrawals through agents, mobile and online ensures effective access to banking services among the business owned by women in Narok County.

4.6.3 Digital Saving Services and Financial Inclusion

The third objective of the study was to assess the influence of digital saving services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. This objective was tested using the following null hypothesis: **H_{o3}:** Digital saving services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The hypothesis was tested using simple linear regression and results presented in Table 4.19.

Table 4. 19

Digital Saving Services and Financial Inclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.488[a]	.239	.236	6.36172	.239	35.798	1	114	.000	1.869

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1103.390	1	1103.390	35.798	.000[b]
	Residual	3513.748	114	30.822		
	Total	4617.138	115			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.389	.035		11.091	.000
	Digital Saving Services	.683	.304	.027	2.243	.021

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Digital Saving Services

The regression results indicate a meaningful and statistically significant relationship between digital saving services and financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The coefficient of determination (R^2) of 0.239 shows that approximately 23.9% of the variation in financial inclusion is explained by changes in digital saving services. This suggests a modest level of explanatory power. While digital saving services play an important role in improving financial inclusion, a larger proportion (76.1%) of the variation is influenced by other factors not captured in the model, such as access to credit, financial literacy, income stability, cost of financial services, and the availability of financial infrastructure.

The overall regression model is statistically significant, as evidenced by the F-statistic ($F = 35.796$) with a p-value of 0.000. Since this p-value is well below the 0.05 threshold, it indicates that the model provides a good fit and that digital saving services, as a predictor, significantly improve the explanation of financial inclusion compared to a model without predictors.

At the individual variable level, the t-statistic ($t = 2.243$) and corresponding p-value (0.02) confirm that digital saving services have a statistically significant effect on financial inclusion. Because the p-value is less than 0.05, the null hypothesis is rejected.

This leads to the conclusion that digital saving services significantly influence financial inclusion among women-owned enterprises in the study area.

The predictive model:

$$FI = 0.389 + 0.683\ DSS$$

The coefficient of digital saving services (0.683) indicates a strong positive relationship. Specifically, a one-unit increase in digital saving services leads to a 0.683-unit increase in financial inclusion, holding other factors constant. This relatively large coefficient suggests that digital saving services have a substantial impact compared to many other financial service variables. Findings highlight that strengthening digital saving services can significantly improve financial inclusion.

The findings support the existing literature which affirms that digital saving services have a significant effect on financial inclusion (Arora, 2021; Boison & Tsao, 2019; Pazarbasioglu, et al.,202l) The consistency between the present findings and previous studies is because of increasing penetration of mobile technology, expanded digital financial infrastructure, and supportive regulatory frameworks that have facilitated access to digital savings products. This is also supported by Bharadwaj and Suri (2022) who argued that access to digital platforms boosted savings during promotional periods; however, these increases were not maintained once the promotion ended. The current findings also agree with Akinrinola, et al. (2023) who noted that digital savings have substantially influenced the financial inclusion in Nigeria.

4.6.4 Digital Credit Services and Financial Inclusion

The fourth objective of the study was to determine the influence of access to digital credit services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. This objective was tested using the following null hypothesis: **H_{o4}:** Access to digital credit services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The hypothesis was tested using simple linear regression and results presented in Table 4.20.

Table 4. 20

Digital Credit Services and Financial Inclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.571[a]	.033	.031	6.28942	.326	55.273	1	114	.000	1.910

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	107.658	1	107.658	55.274	.000[b]
	Residual	4509.480	114	39.557		
	Total	4617.138	115			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	0.655	0.272		2.410	.018
	Digital Credit Services	0.897	.428	.153	2.096	.038

a. Predictors: (Constant), Digital Credit Services

b. Dependent Variable: Financial Inclusion

Coefficient of determination (R^2) value of 0.33 indicates that approximately 33% of the variation in financial inclusion is explained by changes in access to digital credit services. This reflects a moderate level of explanatory power, suggesting that digital credit is an important driver of financial inclusion. However, it also implies that 67% of the variation is influenced by other factors not included in the model, such as financial

literacy, income levels, business performance, accessibility of financial institutions, and regulatory or technological constraints.

The overall regression model is statistically significant, as demonstrated by the F-statistic (F = 55.274) with a p-value of 0.000. Since the p-value is well below the 0.05 threshold, this confirms that the model provides a good fit to the data and that digital credit services significantly contribute to explaining variations in financial inclusion. In other words, the model is reliable and not a result of random variation.

At the individual variable level, the t-statistic (t = 2.098) and p-value (0.038) indicate that digital credit services have a statistically significant effect on financial inclusion at the 5% level of significance. Because the p-value is less than 0.05, the null hypothesis is rejected. This leads to the conclusion that access to digital credit services significantly influences financial inclusion among women-owned enterprises in the study area. The positive and significant relationship suggests that increased access to digital credit such as mobile loans, app-based lending platforms, and other instant credit facilities enhances the ability of women entrepreneurs to finance business operations, manage cash flow fluctuations, and invest in growth opportunities. Digital credit services also reduce barriers associated with traditional lending, such as collateral requirements and lengthy approval processes, thereby bringing more entrepreneurs into the formal financial system.

The derived predictive model is expressed as:

$$FI = 0.655 + 0.897\ DCS$$

Where FI represents financial inclusion and DCS represents digital credit services

The current findings support the existing literature which affirms that digital credit services have a significant effect on financial inclusion (Abolade, 2024; Josephat, 2021; Ndung'u & Oguso, 2021). The agreement between the current study and previous studies is because of the increasing penetration of mobile technology, widespread adoption of digital financial platforms, and the growing availability of instant, collateral-free credit products. These innovations have lowered barriers to accessing financial services, allowing women-owned enterprises to finance working capital, meet short-term liquidity needs, build transaction histories and participate more actively in the formal financial system. This is supported by Wathome (2021) who noted that digital credit has enabled young people to access loans easily and benefit from user-friendly credit assessment processes. The current findings also agree with Otieno and Thuo (2024) who established that digital credit significantly affected the financial inclusions of youths in Nairobi. Nkatha (2022) also found digital credit substantially affected financial inclusion.

4.6.5 Digital Financial Services on Financial Inclusion

The influence of digital financial services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County was examined using a multiple linear regression model. In this analysis, financial inclusion was the dependent variable, while digital financial services were operationalized through four key dimensions: digital credit services, digital withdrawal services, digital saving services, digital payment services. The multiple regression analysis was appropriate because it allows the researcher to examine the influence of four independent variables on a single dependent variable simultaneously.

The use of multiple linear regression allowed for the simultaneous assessment of the individual and combined effects of these capabilities on organizational performance. By incorporating these indicators into a single model, the study was able to determine not only the overall explanatory power of digital financial services but also the relative contribution of each dimension. This approach provided a comprehensive understanding of how different digital financial services areas interact to drive financial inclusion outcomes within among women-owned enterprises in Kajiado Central Sub-County. The results are presented in Table 4.21.

Table 4. 21

Digital Financial Services on Financial Inclusion

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.821[a]	.674	.671	6.36760	.674	57.631	4	111	.000	1.928

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3116.495	4	29.124	57.631	.000[b]
	Residual	1500.642	111	40.546		
	Total	4617.138	115			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.746	.258		2.893	.005
	Digital Payment Services	.315	.129	.292	2.440	.016
	Digital Withdrawal Services	.415	.184	.411	2.257	.006
	Digital Saving Services	.393	.114	.387	3.439	.000
	Digital Credit Services	.649	.214	.632	3.032	.003

a. Predictors: (Constant), Digital Credit Services, Digital Withdrawal Services, Digital Saving Services, Digital Payment Services

b. Dependent Variable: Financial Inclusion

The model shows a strong relationship between the predictors and financial inclusion, as indicated by R = 0.821. The R^2 value of 0.674 means that 67.4% of the variation in financial inclusion is explained collectively by digital payment, withdrawal, saving, and credit services. The explanatory power suggests that these digital financial services are major determinants of financial inclusion in the study area. The Adjusted R^2 (0.671) is very close to R^2, indicating that the model is stable and not overly inflated by the number

of predictors. The ANOVA results show that the model is statistically significant, with F = 57.631 and p-value = 0.000 (< 0.05). This confirms that the combined effect of the independent variables significantly predicts financial inclusion. In other words, the model provides a much better fit than one with no predictors.

All four predictors are statistically significant (p-values < 0.05), meaning each has a meaningful contribution to financial inclusion: Digital Payment Services (β = 0.315, p = 0.016); This variable has a positive and significant effect. A one-unit increase in digital payment services leads to a 0.315 increase in financial inclusion, holding other factors constant. Digital Withdrawal Services (β = 0.415, p = 0.006);

This also shows a positive and significant relationship, with a stronger effect than payment services. It suggests that ease of accessing cash or funds digitally enhances participation in the financial system. Digital Saving Services (β = 0.393, p = 0.000);

This variable is highly significant and positively related to financial inclusion. It indicates that digital saving mechanisms play a critical role in improving financial stability and engagement. Digital Credit Services (β = 0.649, p = 0.003); This has the largest coefficient, implying it is the most influential predictor among the four. Access to digital credit significantly enhances financial inclusion by enabling investment, smoothing cash flow, and expanding business opportunities.

The overall predictive model can be expressed as:

FI = 0.746+0.315(DPS)+0.415(DWS)+0.393(DSS)+0.649(DCS)

The constant (0.746) represents the baseline level of financial inclusion when all digital services are held at zero. The findings demonstrate that digital financial services collectively have a strong and statistically significant impact on financial inclusion.

Among them, digital credit services emerge as the most influential factor, followed by withdrawal and saving services, while payment services, though significant, have the least relative impact. The findings agree with Perrin (2023) who noted that digital financial services aim at enhancing financial inclusion and accessing capital for women business owners. Oyasor (2026) also established that Platforms like Takhfifan, founded by a female entrepreneur, demonstrate how digital ecosystems can connect women-led enterprises to markets and financial tools and enhance access to finance.

4.7 Hypotheses Testing Results

The aim of hypothesis testing is to determine whether there has been a statistically significant change in the probability of occurrence within a population. In this study, hypotheses were evaluated at a 5% significance level. A two-tailed test was used because the null hypothesis was non-directional and encompassed multiple possibilities. The decision rule was based on the p-value: if it was less than 0.05, the null hypothesis was rejected; if it exceeded 0.05, the null hypothesis was not rejected and was regarded as valid within the study context.

H_{01}: H_{o1}: Digital payment services have no statistically significant effect on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

Table 4.17 presents the coefficient results, indicating that digital payment services had significant and positive relationship with financial inclusion at the 5% level of significance. This conclusion was based on a p-value of less than 0.05, which meets the threshold for statistical significance. Consequently, the null hypothesis was rejected with 95% confidence, leading to the inference that digital payment services plays a

meaningful role in influencing financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

The results are consistent with the findings of Minarni (2025), who posited that digital payments promote financial inclusion through reduction in cash dependence, lowered transaction costs and enhanced efficiency of financial systems. Similarly, the study aligns with Chandel and Chandel (2025) who investigated the digital payment systems that advances the Indian financial inclusions and found that attitudes towards systems of digital payments have meaningfully impacted the intentions to utilize them. It was further established that digital payments bridge financial geographical gaps, reduces transactional costs and allows small business to access financial services. The results are also supported by the findings of Fernandes, et al. (2021) who studied how digital payment services contributes to financial inclusions in Mozambique. The study adopted ARDL model approach. The research found that the financial inclusion was determined by a rise in financial activities via ATMs, POS systems, electronic interbank and intrabank transfers, as well as domestic and international remittances. The research also deduced that limited domestic digital remittances and direct debit leads to low levels of financial penetration in Mozambique.

H_{o2}: Access to digital withdrawal services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

Table 4.18 presents the coefficient results, indicating that digital withdrawal services had significant and positive relationship with financial inclusion at the 5% level of significance. This conclusion was based on a p-value of less than 0.05, which meets the threshold for statistical significance. Consequently, the null hypothesis was rejected with 95% confidence, leading to the inference that digital withdrawal services plays a

meaningful role in influencing financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

The results are consistent with the findings of Bayar et al. (2021) who investigated the effects of withdrawals through mobile phones on financial inclusions in European nations and revealed that digital payments through mobile phones had substantial effects on financial inclusion amongst the European Countries. Specifically, access to financial services in Hungary, Latvia, Lithuania, Poland, and Slovenia were significantly determined by value of digital withdrawals made by business enterprises. Similarly, the study aligns with Iwedi (2023) who established that digital withdrawals was determined by volume of transactions through online platforms like M-banking and e-banking. The study concluded that digital banking model facilitating withdrawals had a substantial influence on financial inclusions in Nigeria. The results are also supported by the findings of Melubo and Musau (2021) who found that digital banking withdrawals and financial inclusion had a significant and positive relationship and concluded that digital withdrawals through agents, mobile and online ensures effective access to banking services among the business owned by women in Narok County.

H_{o3}: Digital saving services have no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

Table 4.19 presents the coefficient results, indicating that digital withdrawal services had significant and positive relationship with financial inclusion at the 5% level of significance. This conclusion was based on a p-value of less than 0.05, which meets the threshold for statistical significance. Consequently, the null hypothesis was rejected with 95% confidence, leading to the inference that digital saving services plays a

meaningful role in influencing financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

The results are consistent with the findings of Arora (2021), who posited that digital savings products enhance security, convenience, and confidentiality which increases the likelihood of adoption among women and low-income earners who face social and mobility constraints. Similarly, the study aligns with Bharadwaj and Suri (2022) who assessed enhancing financial inclusion through digital savings in California. The study established that digital platforms have allowed small business to easily save money online and further showed that access to digital platforms boosted savings during promotional periods; however, these increases were not maintained once the promotion ended. The study concluded that digital saving significantly advanced financial inclusions in California. The results are also supported by the findings of Wamuyu (2022) who investigated the digital saving services and financial inclusion amongst young people in chosen universities in Kajiado Central Sub-County, Kenya and revealed that digital savings helped youths to have access to low-cost, accessible, and secure digital accounts via mobile devices. It was also established that digital savings services allow youths to manage funds which strengthens economic resilience.

H_{o4}: Access to digital credit services has no significant influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

Table 4.20 presents the coefficient results, indicating that access to digital credit services had significant and positive relationship with financial inclusion at the 5% level of significance. This conclusion was based on a p-value of less than 0.05, which meets the threshold for statistical significance. Consequently, the null hypothesis was rejected with 95% confidence, leading to the inference that access to digital credit services plays

a meaningful role in influencing financial inclusion among women-owned enterprises in Kajiado Central Sub-County.

The results are consistent with the findings of Robinson et al. (2022), who urged that digital credit expands access to finance by leveraging "Big Data" like mobile phone usage, airtime purchases and digital transaction histories to evaluate creditworthiness. Similarly, the study aligns with Wathome (2021) who investigated how digital credit affects the financial inclusions of young people in Kangemi and revealed that most digital users preferred bank-owned digital credit services integrated with mobile network providers, like KCB M-Pesa and M-Shwari. It was found that digital credit has enabled young people to access loans easily and benefit from user-friendly credit assessment processes. The results are also supported by the findings of Otieno and Thuo (2024) who revealed that most youths in Nairobi county acknowledged positive impacts of digital credit which included enhanced availability of funding, greater job prospects, and strengthened financial independence.

The findings contradicted those of Wang'ombe (2022), who examined the effects of digital credit on the financial health of young people in Nairobi County and revealed that digital credit has no substantial effect on youths' financial health in Nairobi. The study findings did not support those of Nkatha (2022) who studied the supremacy of digital credit on financial inclusion of small-sized enterprises in Meru County and established that mobile money credit negatively influenced the financial inclusion of SMEs.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to examine the influence of digital financial services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The research was guided by four specific objectives. The findings, their interpretation, and the resulting recommendations were presented in a manner that aligns with and addresses each of these objectives.

5.2 Summary of the Study Findings

The study employed both descriptive and inferential statistical techniques to analyze the data. The results were then summarized and presented in line with the specific objectives of the study.

5.2.1 Digital Payment Services and Financial Inclusion

The study found that digital payment systems are widely accepted and consistently perceived as beneficial across the sample. Specifically, mobile money payments have increased accessibility to formal financial services by enabling users to access services that may have previously been out of reach, frequent use of digital payments has improved business cash flow management and mobile money platforms serve as the primary method of receiving payments from customers.

Positive coefficient of digital payment services in relation to financial inclusion underscores the importance of digital payment platforms in expanding access to financial services, improving transaction efficiency, and integrating women-owned

enterprises into the formal financial system. Findings suggest that promoting and strengthening digital payment services such as mobile money, online banking, and electronic transactions can significantly enhance financial inclusion among women entrepreneurs in the region.

5.2.2 Digital Withdrawal services and Financial Inclusion

The study established that availability of nearby withdrawal points supports business operations. This underscores the importance of physical access points, such as agents or ATMs, in ensuring that businesses can conveniently convert digital funds into cash when needed. It was also revealed that system downtimes rarely affect the ability to withdraw money, suggesting that, withdrawal systems as relatively reliable, though some inconsistencies may still exist. Further authentication security procedures during withdrawals enhance users' sense of security indicated concerns or mixed perceptions regarding the effectiveness or convenience of security measures during withdrawal transactions.

The inferential analysis further supports these observations. The coefficient for digital withdrawal services indicates a positive relationship between the variables. This suggests that improved availability and use of withdrawal channels such as mobile money agents, ATMs, and digital banking platforms enhance the ability of women entrepreneurs to access and utilize financial services.

5.2.3 Digital Saving Services and Financial Inclusion

The study found that digital savings accounts motivate users to save regularly. This suggests that features such as interest earnings, bonuses, or rewards play a significant role in encouraging consistent saving behavior. It was also revealed that digital savings platforms make it easy to save small amounts regularly. This highlights the flexibility and convenience offered by these platforms, particularly for individuals or businesses that prefer incremental saving. Respondents also agreed that digital savings accounts have increased their accessibility to formal financial services, reinforcing the role of digital financial tools in advancing financial inclusion. In addition, security features in digital savings systems enhance confidence in saving digitally, indicating that trust in system security is an important, though slightly less pronounced factor in adoption.

Regression results indicated a strong positive relationship between digital saving services and financial inclusion. This large coefficient suggests that digital saving services have a substantial impact compared to many other financial service variables. Findings highlight that strengthening digital saving services can significantly improve financial inclusion

5.2.4 Digital Credit Service and Financial Inclusion

The study established that digital loans are approved more quickly than traditional loans. This emphasizes the key advantage of speed in digital lending, making it an attractive option for users who require timely access to funds.it was also revealed that digital lenders are easily accessible when business credit is needed hence, respondents appreciate the convenience and availability of digital lending platforms, which reduce the barriers typically associated with conventional credit sources. Respondents agreed

that digital loans are disbursed directly and conveniently into their accounts. This highlights the efficiency of digital credit systems in ensuring seamless fund transfer without unnecessary delays or procedural complexities.

The inferential analysis supports these descriptive findings. The regression results indicated digital credit services have a statistically significant effect on financial inclusion. This leads to the conclusion that access to digital credit services significantly influences financial inclusion among women-owned enterprises in the study area. The positive and significant relationship suggests that increased access to digital credit such as mobile loans, app-based lending platforms, and other instant credit facilities enhances the ability of women entrepreneurs to finance business operations, manage cash flow fluctuations, and invest in growth opportunities. Digital credit services also reduce barriers associated with traditional lending, such as collateral requirements and lengthy approval processes, thereby bringing more entrepreneurs into the formal financial system

5.3 Conclusions of the Study

This section presents the conclusions drawn from the study on the of digital financial services on financial inclusion among women-owned enterprises in Kajiado Central Sub-County. The conclusions are based on the study findings and statistical analyses, highlighting the influence of digital payment services, digital withdrawal services, digital saving services and digital credit services on financial inclusion.

5.3.1 Digital Payment Service and Financial Inclusion.

The results highlight the critical role of digital financial ecosystems in reducing gender gaps in financial access and empowering women economically, thereby contributing to inclusive local economic development. Digital payment services are not just convenient transaction tools, but transformative enablers of economic participation for women-owned enterprises in Kajiado Central Sub-County. The positive and statistically significant relationship observed in both regression and correlation analyses suggests that increased adoption of digital payment platforms directly contributes to improved financial inclusion outcomes.

In practical terms, this means that women entrepreneurs who utilize mobile money, digital wallets, and cashless payment systems are more likely to access formal financial services such as savings accounts, credit facilities, and insurance products. Digital transaction histories can serve as alternative credit profiles, reducing reliance on traditional collateral requirements that often disadvantage women.

Further, digital payment systems lower transaction costs, enhance security, and improve business efficiency. This enables women-owned enterprises to expand their customer base, including serving clients who prefer or require cashless transactions. It also facilitates participation in broader digital marketplaces, increasing revenue potential. The findings further imply that policy interventions aimed at strengthening digital infrastructure, promoting digital literacy, and ensuring affordability of digital financial services could have a disproportionately positive impact on women entrepreneurs. Financial institutions and fintech providers may also leverage this insight to design gender-responsive products tailored to the needs of women-owned businesses.

5.3.2 Digital Withdrawal Services and Financial Inclusion

The findings implied that strengthening the availability, reliability, and affordability of digital withdrawal infrastructure especially in semi-urban and rural areas like Kajiado County can significantly enhance financial inclusion. Digital withdrawal services such as agent banking outlets, ATMs, and mobile money cash-out points play a critical enabling role in translating digital financial access into practical, everyday usability for women-owned enterprises in Kajiado Central Sub-County. They bridge the gap between digital and cash-based economies. Many small businesses still operate in environments where suppliers, customers, or workers require cash. Reliable and nearby withdrawal points ensure that women entrepreneurs can seamlessly convert digital funds into cash when needed, without long travel distances or high transaction costs. This accessibility strengthens their ability to participate fully in local markets. Digital withdrawal services enhance liquidity management. Women-owned enterprises often operate with tight cash flows, so the ability to withdraw funds instantly supports day-to-day operations such as restocking inventory, paying employees, or meeting urgent expenses. This immediacy reduces business disruptions and improves operational efficiency.

The presence of widespread and trusted withdrawal agents' builds confidence in digital financial systems. When women entrepreneurs know they can easily access their money at any time, they are more likely to adopt and consistently use mobile money and other digital financial services. This increased usage, in turn, deepens their engagement with formal financial systems. Additionally, digital withdrawal services can serve as entry points into broader financial inclusion. Many agent banking locations offer additional services such as account registration, deposits, bill payments, and even micro-loans.

This creates opportunities for women entrepreneurs to expand their financial portfolios beyond basic transactions.

5.3.3 Digital Saving Service and Financial Inclusion

Digital saving services have a strong and meaningful influence on financial inclusion among women-owned enterprises in Kajiado Central Sub-County because they address some of the most persistent barriers to formal financial participation namely access, affordability, security, and flexibility. Digital saving services do more than facilitate saving they empower women entrepreneurs with financial control, build their economic resilience, and open pathways to broader financial opportunities, thereby playing a central role in advancing inclusive economic development in Kajiado Central Sub-County.

Digital savings platforms such as mobile money savings wallets and app-based accounts make it easier for women entrepreneurs to save small, frequent amounts without needing to visit a physical bank. This is particularly important in semi-rural settings where distance, time constraints, and mobility challenges can limit access to traditional banking services. By lowering these barriers, digital savings tools encourage consistent saving behavior and help integrate women into formal financial systems.

Saving services enhance financial security, that is keeping money in digital form reduces the risks associated with cash handling, such as theft, loss, or unplanned spending. This sense of security is crucial for women entrepreneurs managing both business and household finances. Regular saving through digital platforms generates transaction records that can be used by financial institutions to assess creditworthiness. For women

who may lack traditional collateral or formal credit histories, this digital footprint becomes a valuable asset, improving their chances of accessing loans and other financial products.

5.3.4 Digital Credit Services and Financial Inclusion

The significant influence of digital credit services implies that they are powerful tools for deepening financial inclusion. When well-regulated and responsibly used, they enable women entrepreneurs to overcome financing constraints, strengthen their businesses, and integrate more fully into the formal financial system. Digital credit reduces traditional entry barriers to borrowing. Conventional lending often requires collateral, extensive paperwork, and formal credit histories requirements that many small-scale entrepreneurs cannot meet. Digital credit platforms, by contrast, use alternative data such as mobile transaction histories, savings patterns, and payment behavior to assess creditworthiness. This allows women entrepreneurs, who are frequently excluded from formal lending systems, to access loans more easily.

Digital credit services enable near-instant loan applications, approvals, and disbursements via mobile devices. This immediacy is critical for small businesses that need quick capital to restock inventory, respond to demand fluctuations, or manage emergencies. As a result, business continuity and responsiveness improve significantly. Digital credit also supports enterprise growth. Access to short-term working capital allows women-owned businesses to expand operations, increase stock levels, and take advantage of new market opportunities. Over time, this can lead to higher revenues and improved financial stability, reinforcing their participation in the formal economy.

5.4 Recommendations of the Study

Based on the study findings, several key recommendations are proposed to enhance financial inclusion among women-owned enterprises in Kajiado Central Sub-County. First, Policymakers and service providers should prioritize expanding agent networks, reducing withdrawal fees, and improving service reliability to maximize the benefits for women-owned enterprises. This includes strengthening mobile network coverage, increasing the density of agent banking and cash-out points, and ensuring reliable electricity access. Policies should also promote affordability by encouraging competitive pricing and reducing transaction costs associated with digital payments, withdrawals, savings, and credit services.

Regulators should strengthen consumer protection frameworks to ensure transparency in digital financial services, particularly in digital credit where hidden fees and high interest rates can pose risks. Clear disclosure requirements, fair lending practices, and grievance redress mechanisms should be enforced to protect women entrepreneurs from exploitation. They should also encourage innovation while maintaining oversight. Regulatory sandboxes can be used to test new fintech solutions tailored to women-owned enterprises. Furthermore, regulators should promote interoperability between different digital financial platforms to enhance convenience and reduce fragmentation in service delivery. Data protection and privacy regulations must also be reinforced to build trust in digital systems.

Governments should play an active role in facilitating partnerships between financial institutions, fintech companies, and mobile network operators to expand access to digital financial services. Public-private partnerships can accelerate the rollout of

inclusive financial solutions in underserved areas. In addition, governments can support women entrepreneurs through targeted programs such as subsidized digital credit schemes, grants for adopting digital technologies, and incentives for businesses that transition to cashless systems. Integrating digital financial services into broader economic empowerment programs (e.g., women enterprise funds) can further enhance impact. Efforts should also be made to formalize women-owned enterprises by simplifying business registration processes and linking them to digital financial platforms, thereby increasing their visibility and access to formal financial systems.

5.5 Suggestions for Further Study

Future research should move beyond establishing statistical relationships and focus on understanding the long-term effects of digital financial services on women-owned enterprises. Future research should explore the long-term impacts of digital financial services on business growth, profitability, and sustainability among women-owned enterprises. Longitudinal studies would provide deeper insights into how sustained use of digital payments, savings, withdrawals, and credit influences economic empowerment over time. Further studies should also examine the role of digital literacy and socio-cultural factors in shaping adoption and usage of digital financial services. Comparative studies across different regions or counties would help identify contextual differences and best practices. Further research should investigate contextual and socio-cultural factors that may affect financial inclusion. Variables such as education levels, household dynamics, cultural norms, and access to mobile devices can significantly influence how women engage with digital financial services. Understanding these factors would help in designing more inclusive and targeted interventions. Research

should investigate potential risks such as over-indebtedness from digital credit and cybersecurity concerns, as well as the effectiveness of policy interventions aimed at enhancing financial inclusion.

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APPENDICES

Appendix I: Questionnaire

This questionnaire is meant to collect data on digital financial services and financial inclusions amongst enterprises owned by women in Kajiado Central Sub-County. The information collected through this questionnaire is for academics only. Data you give will remain confidential and your participation is anonymous.

Kindly tick (✓) appropriately.

Section A: Demographic Data

1. Age brackets

   18–25 yrs [ ]

   26–35 yrs [ ]

   36–45 yrs [ ]

   46–55 yrs [ ]

   Above 55 yrs [ ]

2. Highest Education Levels

   No formal education [ ]

   Primary education [ ]

   Secondary education [ ]

   Certificate/Diploma [ ]

   Bachelor's degree [ ]

   Postgraduate degree [ ]

3. Period operating Business

   Less than 1 yr [ ]

   1–3 yrs [ ]

   4–6 yrs [ ]

   7–10 yrs [ ]

   Above 10 yrs [ ]

4. Business Sector

   Manufacturing [ ]

   Retail [ ]

   Hospitality [ ]

   Agriculture [ ]

   Grocery [ ]

5. Business Legal Status

   Sole proprietorship [ ]

   Partnership [ ]

   Limited company [ ]

   Cooperative [ ]

Section B: Digital Financial Services

6. Please specify how you agree with different statements on digital financial services based on 1-5 Likert scale in which 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

	1	2	3	4	5
Digital payments					
Mobile money payment platforms are my primary mode of receiving payments from customers.	[1]	[2]	[3]	[4]	[5]
Mobile money payments have increased my accessibility to formal monetary services.	[1]	[2]	[3]	[4]	[5]
Frequent use of digital payments has improved my business cash flow management.	[1]	[2]	[3]	[4]	[5]
Low digital payment costs encourage me to use cashless payment methods.	[1]	[2]	[3]	[4]	[5]
I am confident in using digital payment platforms for my business transactions	[1]	[2]	[3]	[4]	[5]
Digital withdrawals					
Availability of nearby withdrawal points supports my business operations.	[1]	[2]	[3]	[4]	[5]
Digital withdrawal services are reliable whenever I need cash.	[1]	[2]	[3]	[4]	[5]
System downtimes rarely affect my ability to withdraw money.	[1]	[2]	[3]	[4]	[5]
Charges for digital withdrawals are reasonable for my business.	[1]	[2]	[3]	[4]	[5]
Authentication security procedures during withdrawals make me feel secure	[1]	[2]	[3]	[4]	[5]
Digital savings					
Digital savings platforms offer attractive returns.	[1]	[2]	[3]	[4]	[5]
Incentives provided by digital savings accounts motivate me to save regularly.	[1]	[2]	[3]	[4]	[5]
Digital savings accounts have increased my accessibility to formal monetary services.	[1]	[2]	[3]	[4]	[5]
Digital savings platforms make it easy to save small amounts regularly.	[1]	[2]	[3]	[4]	[5]
Security features in digital savings systems increase my confidence in saving digitally.	[1]	[2]	[3]	[4]	[5]

Digital credit					
Digital loans are disbursed directly and conveniently to my account.	[1]	[2]	[3]	[4]	[5]
I can easily access digital lenders when I need business credit.	[1]	[2]	[3]	[4]	[5]
Digital credit platforms have expanded my accessibility to monetary services.	[1]	[2]	[3]	[4]	[5]
Digital loans are approved quickly compared to traditional loans.	[1]	[2]	[3]	[4]	[5]
Digital loan repayment processes are simple and convenient	[1]	[2]	[3]	[4]	[5]

7. What challenges do you face in adopting digital financial services in your business?

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Section C: Financial Inclusion

8. Please specify how you agree with different statements on financial inclusion based on 1-5 Likert scale in which 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

	1	2	3	4	5
I can easily access formal financial services (such as banks, mobile money platforms) whenever I need them.	[1]	[2]	[3]	[4]	[5]
I am able to open and operate a business bank account without difficulty.	[1]	[2]	[3]	[4]	[5]
I regularly use formal financial services for saving, borrowing, payments and business transactions.	[1]	[2]	[3]	[4]	[5]
I am aware of the various financial services available	[1]	[2]	[3]	[4]	[5]

for SMEs.

The costs and charges associated with financial services are affordable for my income or business level.	[1]	[2]	[3]	[4]	[5]
The financial products and services I use are well suited to my financial needs.	[1]	[2]	[3]	[4]	[5]

9. What should be done to improve financial inclusion amongst enterprises owned by women in Kajiado Central Sub-County?

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Thank you for your Participation

Appendix II:

List of Women Owned Businesses

3M Capital	**Nashipa Salon**	**Murundu Shop**
Afrikanah Suppliers Limited	**Hope Enterprise**	**Nyoxville Enterprises**
Agness Beuties	**Huriet Shop**	**Oltili Lewangan Dairy Women Group**
Asaph Bodaboda	**Ilkipirash Women Group**	**Ombokis Shop**
Baraka Shop	**Ireri Eggs Wholesales**	**Ororo Daughter Enterprise**
Benapharm	**Jesika Beuties**	**Pejole Enterprises Limited**
Beth Enterprise	**Job General Shop**	**Philemena Collections**
Big Elsi Beauty Shop	**Joius Electronics**	**Professors Cyber**
Celinas Beuties	**Jopang Eatery**	**Rexus Collection**
Cherir Enterprise	**Joy Enterprise**	**Shabine Pharmacy**
Dankaz Enterprise	**Joy Salon**	**Shaleen Investment**
Devido Cyber	**Joykim Eatery**	**Singil Electronics**
Eddy Electricals	**Julienne General Suppliers**	**Sliver Shop**
Ehoisa Mama Mboga	**Kelkar Eatery**	**Startgrass Investment**
Elizer Enterprise	**Kelly Shop**	**Susan Salon**

Enkare Supplier	**Kim Enterprise**	**Tallus Glassware**
Faith Shop	**Lenapu Agencies Limited**	**Tausi Lyke**
Feryye Electronics	**Maasai Kajiado Women Dairy Cooperative Society (MKWDCS)**	**Teras Electricals**
Flame Enterprise	**Mama Brayo Enterprise**	**Terry Shop**
Gamers Yard	**Mama Hope**	**Ushanga Kenya Kajiado Cooperatives**
Gerri Groceries	**Marian Groceries**	**Wandayi Shop**
Glassmart Electricals	**Marik Electricals**	**Warp and Weave Enterprises**
Heddi Harware	**Medi Furnitures**	**Wejan Investments**
Hedu Shop	**Methula Enterprise**	**Wetech System Solutions**
Hellen Salon	**Miami Hardware**	**Nashipai Enterprise**
Zeed Shop	**Zircon Tech Solutions**	

Appendix III: KeMu Research Approval Letter

KENYA METHODIST UNIVERSITY
INSTITUTIONAL SCIENTIFIC AND ETHICS REVIEW COMMITTEE (KEMU-ISERC)
P. O. BOX 267 MERU - 60200, KENYA FAX: 254-64-30162
TEL: 254-064-30301/31229/30367/31171 EMAIL: serc@kemu.ac.ke

Our Ref: KEMU/ISERC/BUS/51/2026 June 10, 2026

SARAFINO LEPARMARAI
BUS-3-0017-1/2023

Dear Sarafino,

SUBJECT: INFLUENCE OF DIGITAL FINANCIAL SERVICES ON FINANCIAL INCLUSION AMONG WOMEN-OWNED ENTERPRISES IN KAJIADO CENTRAL, SUBCOUNTY

This is to inform you that Kenya Methodist University Institutional Scientific Ethics and Review Committee has reviewed and approved your research proposal. Your application approval number is KEMU/ISERC/BUS/51/2026. The approval period is 10th June, 2026 – 10th June, 2027.

This approval is subject to compliance with the following requirements:-

I. Only approved documents including (informed consents, study instruments, MTA) will be used.

II. All changes including (amendments, deviations, and violations) are submitted for review and approval by Kenya Methodist University Institutional Scientific Ethics and Review Committee.

III. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to KeMU ISERC within 72 hours of notification.

IV. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to KeMU ISERC within 72 hours.

V. Clearance for export of biological specimens must be obtained from relevant institutions.

VI. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.

VII. Submission of an executive summary report within 90 days upon completion of the study to KeMU ISERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

KENYA METHODIST UNIVERSITY ★ KEMU ISERC ★ P.O. Box 267-60200, MERU ★ 10 JUN 2026

Yours sincerely,

MR. HERBERT KIBEBE
CHAIR (ISERC)

Appendix IV: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **711395**

Date of Issue: **22/June/2026**

RESEARCH LICENSE



This is to Certify that Mr.. SARAFINO LEPARMARAI of Kenya Methodist University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kajiado on the topic: INFLUENCE OF DIGITAL FINANCIAL SERVICES ON FINANCIAL INCLUSION AMONG WOMEN-OWNED ENTERPRISES IN KAJIADO CENTRAL SUB-COUNTY for the period ending : 22/June/2027.

License No: **NACOSTI/P/26/4191528**

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Applicant Identification Number

Ag. Director General
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