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Chapter Two: Literature Review

Introduction

The evolution of digital finance has significantly reshaped financial ecosystems worldwide, disrupting traditional banking models and fostering financial inclusion through innovative technologies (Wachira V. , 2021). Nowhere is this transformation more evident than in Kenya. Since the pioneering launch of M-Pesa in 2007, fintech innovations, —including mobile money services, digital credit platforms, blockchain solutions, and API-driven open banking initiatives—has steadily redefined the operational landscape of conventional banks. These innovations have collectively pressured traditional institutions to rethink deposit mobilization, credit provision channels, branch and agent networks, fee-based revenue diversification, and core system modernization (Central Bank of Kenya, 2021).

This literature review examines the emergence and diffusion of these digital finance innovations in Kenya from 2007 through 2024, and how they have reshaped the banking industry across multiple impact dimensions. Given Kenya's reputation as a fintech leader in sub-Saharan Africa, the review is geographically confined to the Kenyan market. Although global digital finance trends offer useful comparative insights, the focus here is on literature that directly examines Kenyan financial institutions and their responses to digital disruption.

Accordingly, the review delineates its conceptual scope through nine key segments:

1. Mobile Money Platforms

Kenya's mobile money ecosystem has expanded from a single provider in 2007 to over 32 by 2023, processing Ksh 1,151.3 billion in transactions and serving 48 million registered users (Tiony & Yego, 2023)

2. Digital Credit Products

Following the Central Bank of Kenya's December 2021 regulatory amendments, 22 digital credit providers have been licensed. Platforms such as M-Shwari, KCB M-Pesa, and Fuliza now integrate savings with micro-loans initiated through mobile wallets (Central Bank of Kenya, 2021).

3. App-Based Micro Lending

Fintech companies like Tala and Branch leverage alternative data analytics to underwrite loans in minutes. By 2023, 70% of Tala customers had borrowed more compared to the previous year, and 78% expressed willingness to continue using digital lending platforms (Tala, 2023).

4. Payment Gateways and API Integrations

Merchant-oriented platforms such as Pesapal, Cellulant, Flutterwave, and Paystack have underpinned Kenya's e-commerce boom.

5. Embedded Finance / Banking-as-a-Service (BaaS)

Services such as Pezesha's API infrastructure enable real-time SME credit, as evidenced by a US $11 million funding round in 2022 to expand embedded lending solutions on platforms like Twiga and Jumia

6. Pay-As-You-Go Asset Financing

Innovative models like M-Kopa have extended US $1.5 billion in credit to over 5 million customers across five African markets using a pay-as-you-go asset financing strategy (Apofeed, 2024).

7. Insurtech and Parametric Insurance

Kenya's emerging insurtech sector includes initiatives such as Turaco's launch of the first licensed micro-insurance underwriting entity in 2024 and blockchain-enabled firms like Etherisc protecting smallholder farmers through smart contract–based crop insurance.

8. Agency Banking Networks

Traditional banks have increasingly relied on agent networks for deposits, withdrawals, and bill payments, channel volumes reached Ksh 1.83 trillion in 2022 (Statista, 2022).

9. Cryptocurrency P2P Trading

Kenya ranks among the world's leaders in peer-to-peer crypto exchange volumes, with approximately 8.5% of adults holding digital assets (Onyango, 2021).

The literature reviewed spans publications from 2017 to the present, capturing both the genesis of Kenya's mobile money revolution and the subsequent evolution of fintech innovations. Inclusion criteria focus on empirical and theoretical studies, industry reports, regulatory documents, and comparative analyses that address the interplay between digital finance and traditional banking in Kenya. Studies that discuss digital finance outside the Kenyan context or that fail to capture the current technological and regulatory environment have been excluded.

By integrating conceptual frameworks with empirical evidence, the review contextualizes the ongoing digital disruption in Kenya's financial sector. It critically examines how incumbent banks have responded through digital partnerships, agent networks, and system upgrades, and identifies gaps requiring further investigation. This foundation sets the stage for a deeper exploration of the disruptive and adaptive strategies shaping Kenya's evolving digital finance landscape.

This review is guided by a conceptual framework integrating Disruptive Innovation Theory, Transaction Cost Theory, and adoption-focused models such as the Technology Acceptance Model and Diffusion of Innovation, applied to Kenya's financial landscape.

Search Strategy / Selection Criteria

To explore how digital finance is impacting traditional banking in Kenya, a systematic search strategy was developed to identify relevant, credible, and up-to-date academic literature. The purpose was to gather insights from published research and reports that examine the growth of digital financial services in Kenya and their implications for conventional banking institutions.

Search Strategy

The literature search was conducted through the following academic databases and digital libraries:

- Google

- JSTOR

- ScienceDirect

- EBSCOhost

- World Bank and IMF publications

- Central Bank of Kenya (CBK) reports

- FSD Kenya (Financial Sector Deepening Kenya)

The search employed the following keywords and phrases:

- "Digital finance in Kenya"

- "Impact of mobile money on Kenyan banks"

- "Fintech and traditional banking in Kenya"

- "Digital transformation of Kenyan banks"

- "M-Pesa and the banking sector"

- "Banking innovation Kenya"

- "Central Bank of Kenya digital finance"

Boolean operators like AND, OR, and NOT were used to refine results. For example:

"digital finance" AND "traditional banking" AND "Kenya"

Inclusion Criteria

The selection of literature was guided by the following inclusion criteria:

- Time frame: Publications from 2017 to 2025, in line with lecturer instructions, to capture recent trends and developments in digital finance within Kenya.

- Focus: Studies that specifically analyze the Kenyan financial sector, particularly the interaction between digital finance innovations (such as M-Pesa, mobile banking apps, agency banking, and fintech startups) and traditional banking institutions.

- Type of publication: Peer-reviewed journal articles, academic books, institutional reports, and working papers published by reputable organizations like the Central Bank of Kenya, FSD Kenya, World Bank, and scholarly authors.

- Relevance: Must provide insights into how digital financial services have influenced banking operations, customer behavior, financial inclusion, or institutional adaptation in Kenya.

Exclusion Criteria

- Non-scholarly sources such as blogs, newspaper articles, and social media content were excluded.

- Global studies without direct reference or applicability to the Kenyan context were also excluded.

- Raw or unpublished data without analysis were not considered.

Time Frame Justification

The selected period of 2017 to 2025 corresponds with significant transformations in Kenya's financial landscape, including:

- The rapid expansion of mobile money services and digital banking platforms.

- The impact of the COVID-19 pandemic on digital payment adoption.

- Regulatory developments by the Central Bank of Kenya, such as the introduction of digital credit guidelines and oversight of fintech services.

- The entry and rise of fintech startups that are reshaping customer interaction with financial institutions.

Focusing on this period allows for a detailed understanding of the dynamic between traditional banks and emerging digital finance models in Kenya's economic environment.

Theoretical and Conceptual Framework

Theoretical and conceptual frameworks in literature reviews serve to integrate diverse studies by providing an organizing lens for understanding how key constructs relate. A well-formulated framework situates research in established theory, identifies relevant variables, and guides the synthesis of empirical findings (Rosengard, 2016) (Reuters., 2019). In the context of digital finance in Kenya (2017–2025), an appropriate framework must span multiple disciplines – economics, innovation studies, and institutional theory – to capture the complexity of mobile money, fintech platforms, digital credit, bank transformation, regulation, and user behavior. We therefore employ a hybrid approach, mapping distinct theories to different facets of the phenomenon and integrating them where they overlap. The following sections outline the major theories, each with their core propositions and relevance to Kenya's digital finance ecosystem.

Theoretical Frameworks

Disruptive Innovation Theory

Disruptive Innovation Theory (Christensen 1997) describes how new technologies or business models can "upend" incumbent providers by offering initially lower-end or niche solutions that incumbents overlook. Disruptions often start by serving overlooked market segments (e.g. the unbanked in Kenya) and then improve to challenge mainstream players (Christensen, 1997) (Kimari & A., 2022). In Kenya, mobile money (M-Pesa) and fintech credit apps exemplify disruptive innovators. Prior to M-Pesa, rural Kenyans had little access to banks, and traditional banks "largely ignored" these low-value customers (Zandbergen, 2018). Safaricom's leadership recognized a "job to be done" (money transfer for the rural poor) and launched M-Pesa to meet it (Zandbergen, 2018). Over time, M-Pesa and bank-led mobile solutions extended beyond basic transfers to include loans, savings, and payments (Reuters., 2019). This expansion illustrates Christensen's trajectory: what began as a simple, accessible service for non-consumers has grown into a broad financial ecosystem that competes with banks. Empirical evidence confirms that Kenya's financial inclusion soared "thanks to mobile banking", the share of Kenyans with a formal account rose from 42% in 2011 to 75% in 2014 (Brazzel, 2018), while traditional banking infrastructure remained sparse. Thus, disruptive innovation theory predicts and helps explain how mobile money and fintech can "redraw" the competitive landscape by offering new value networks. In our framework, disruptive innovation theory highlights the competitive pressures on banks: digital entrants with lower cost structures and new value propositions threaten banks' customer base and profits (Zandbergen, 2018) (Kimari & A., 2022).

Transaction Cost Theory

Transaction Cost Theory (stemming from Coase 1937 and Williamson 1975) holds that firms and markets organize to minimize the costs of transactions, such as search, negotiation, and enforcement costs. In financial services, high transaction costs of cash or branch banking can exclude the poor. Digital finance reduces transaction costs (e.g. through mobile channels), thereby expanding market reach (Kimari & A., 2022). In Kenya, for instance, the cost of sending money via mobile phones is "presumed to be lower than those of banks and money transfer companies" (Kimari & A., 2022). Mobile money transactions often cost only a few shillings, well below typical bank transfer fees. Lower transaction costs have a direct effect on adoption: affordable fees make customers more willing to use the service (Kimari & A., 2022). Transaction cost theory thus predicts that innovations (mobile credit, agency banking, etc.) that cut costs will flourish, boosting usage and forcing incumbents to adapt. Empirical studies in Kenya confirm that fintech platforms emphasize cost savings: one analysis notes that "FinTech innovations are based on easy usage and lower costs from the customer perspective" (Kimari & A., 2022). In the framework, transaction cost reductions (through mobile money or digital credit) act as key mechanisms linking digital finance to greater inclusion and market size. Lower costs also enable Fintechs to penetrate underserved segments, thereby contributing to banks' loss of monopoly on transactions. Hence, we posit that Transaction Cost Theory explains how digital finance expands usage and exerts pressure on banks (by eroding fee income and displacing bank services) (Kimari & A., 2022)

Financial Intermediation Theory

Financial Intermediation Theory emphasizes the role of institutions (banks, MFIs, etc.) in channeling funds, reducing information asymmetries, and providing payment services. Fintech and mobile finance challenge traditional intermediation by offering alternative channels. Industry observers note that Kenya's rapid fintech growth is "upsetting the existing financial intermediation system", accelerating disintermediation of banks (Kenya Bankers Association, 2023). In practice, services like M-Pesa and agency banking allow peer transactions and direct digital lending outside bank branches. According to central bank and industry reports, these developments have significantly eroded the distinction between banks and telecom firms in financial services (Reuters., 2019).

In our framework, Financial Intermediation Theory frames how and why banks' core functions may be undermined or transformed. If digital platforms can intermediate payments and credit with lower overhead, traditional banks must reevaluate their intermediation role. Thus, we incorporate this theory to analyze effects such as disintermediation (customers bypassing banks for payments/loans) and re-intermediation (banks partnering with FinTechs). This perspective complements Disruptive Innovation Theory by focusing on the economic functions being displaced. For example, Kenya's banks have begun offering their own mobile apps and partnering with telecoms, reflecting a shift in intermediation strategy prompted by fintech competition (Kenya Bankers Association, 2023) (Rosengard, 2016).

Network Effects Theory

Network Effects Theory (Katz & Shapiro 1985) captures the idea that the value of a networked service grows with each additional user. In digital finance, positive network effects help explain the explosive growth of mobile money. For M-Pesa, researchers highlight that Safaricom's design "captured network effects" to rapidly reach critical mass (Mas, 2010) (Mas, 2010). As the World Bank notes, "the value to the customer of a payment system depends on the number of people connected and actively using it, the more people on the network, the more useful it becomes" (Mas, 2010). In Kenya, this effect is pronounced: once millions used M-Pesa, every other user found more counterparts for transfers, reinforcing adoption and making it more difficult for competitors to catch up. Network effects are central to our framework as they drive *demand-side economies of scale*. They help explain why mobile money services have grown virally and why they "zoom past" banking in user numbers (Brazzel, 2018). We position network effects as a key construct influencing user adoption (in tandem with TAM factors like ease-of-use) and competitive dynamics: a large user base attracts even more users (including merchants and agents) and raises switching costs for customers. Thus, while Diffusion Theory describes adoption over time, Network Effects Theory explains the accelerating "self-reinforcing" adoption that amplified fintech's impact on banks.

Diffusion of Innovation (Rogers)

Diffusion of Innovation theory (Rogers 2003) describes how new ideas spread through populations, driven by factors like *relative advantage*, *compatibility*, *trialability*, *observability*, and *complexity*. Rogers emphasizes that perceived relative advantage and ease-of-use predict faster diffusion of new technologies (Kingiri & Fu, 2018). In Kenya's case, digital finance innovations spread due to their clear advantages (e.g. convenience and low cost) over cash. Rogers also notes the role of communication channels and social systems in diffusion. In the Kenyan rural context, for example, initial mobile banking users often persuaded relatives to adopt the service (word-of-mouth network diffusion). Empirical studies of M-Pesa adoption confirm diffusion patterns: early adopters in urban areas led a wave of uptake into rural regions, aided by strong agent networks (reflecting network effects and social proof). Our framework uses Diffusion theory to conceptualize the *adoption process* of digital finance in Kenya. It highlights that even disruptive services require time to diffuse, and that diffusion is constrained or enabled by context. For instance, limited digital literacy or agent infrastructure can slow diffusion despite a service's advantage. By combining Rogers' insights with Technology Acceptance factors (below), we model how Kenyan customers move through Rogers' adopter categories. In summary, Diffusion theory explains the spatio-temporal spread of digital finance (the "how fast, how wide"), complementing Network Effects (the "value accumulation") and TAM (individual acceptance factors).

Institutional Theory

Institutional theory (DiMaggio & Powell 1983) explains organizational behavior in terms of coercive, normative, and mimetic pressures. In Kenya's digital finance landscape, regulatory changes and industry norms exert strong institutional pressures on both fintech firms and traditional banks. For example, Kenya's Central Bank instituted clear guidelines for mobile money operators and licensed digital credit providers (2021–22) (Reuters., 2019). These coercive pressures force formalization (e.g. requiring licensing of previously unregulated mobile lenders).

Normative pressures come from the industry: banks see peers adopting fintech and feel compelled to follow (mimetic isomorphism). Scholars have noted that Kenya's policy and regulatory environment has been unusually supportive of mobile finance (Rosengard, 2016) (Kenya Bankers Association, 2023), enabling innovation while gradually imposing consumer protections. Institutional theory thus sits in our framework as a moderating context. It helps explain why and how Kenyan banks transform: not only due to market competition, but also due to regulatory mandates (coercive) and professional standards (normative) pushing banks to digitize their services. For instance, the Central Bank's encouragement of agency banking and its oversight of digital credit providers reflect institutional change that banks must accommodate. Institutional isomorphism may also cause banks to "mimic" successful fintech practices to maintain legitimacy. In sum, Institutional theory illuminates the environmental forces (policy, culture, legitimacy) that shape all other processes in the model.
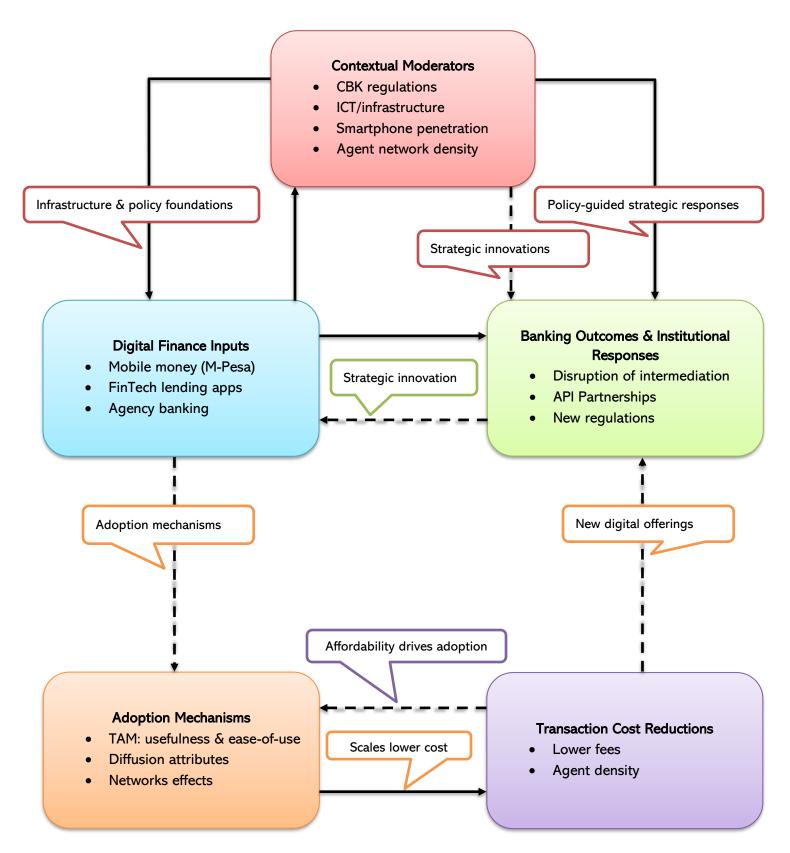
Technology Acceptance Model (TAM)

The Technology Acceptance Model (Davis 1989) posits that perceived usefulness and perceived ease-of-use drive user acceptance of new technology. In the Kenyan context, TAM factors are critical determinants of customer uptake of mobile banking and fintech. Relative advantage (usefulness) and simplicity were key to M-Pesa's rapid adoption: as Rosengard observes, the "magic of mobile banking" was its low cost and ease (working on even basic phones) (Brazzel, 2018) (Kimari & A., 2022). Studies of African fintech find that customers favor solutions that are easy, affordable, and trusted (Kimari & A., 2022) (Kingiri & Fu, 2018). Our framework integrates TAM by linking customer behavior with adoption of digital finance: for example, ease-of-use reduces perceived transaction costs (reinforcing Transaction Cost Theory) and increases diffusion rate (per Rogers). Furthermore, as TAM's antecedents, factors like smartphone penetration, literacy, and trust in providers become relevant in the model. By embedding TAM, we explicitly account for human factors: even the best technology will not be adopted if customers do not perceive it as useful and accessible. Hence, in the Kenyan digital finance framework, TAM complements other theories by emphasizing the micro-level (user) side of adoption, feeding into network growth and the resulting competitive impacts on banks.

Synthesized Conceptual Model

Integrating these theories yields a holistic conceptual model of digital finance's impact on Kenyan banking. In Figure 1 (below), we link digital finance constructs (mobile money, fintech platforms, digital credit, bank IT upgrades) to theoretical drivers and banking outcomes. Key relationships include:

- **Adoption Factors:** Diffusion of Innovation and TAM explain customer uptake of mobile money and digital banking (relative advantage, ease-of-use, social networks). As adoption grows, Network Effects kick in (the service value rises with more users) (Mas, 2010). Regulatory "push" (Institutional Theory) and outreach (agents, marketing) facilitate this diffusion.
- **Transaction Costs:** Lower costs of digital transactions (Transaction Cost Theory) incentivize use and expand transaction volume (Kimari & A., 2022). This amplifies network effects (more volume increases value) and broadens inclusion (Reuters., 2019).
- **Disruption of Banks:** Disruptive Innovation Theory and Financial Intermediation Theory capture how expanded fintech usage erodes traditional banking. As digital channels siphon off simple transactions and small loans (areas banks traditionally avoided or charged high fees), banks face increased competition (Zandbergen, 2018) (Kenya Bankers Association, 2023). They must respond through service innovation (e.g. mobile banking apps, partnerships) to retain relevance.
- **Institutional Moderation:** Throughout, Institutional Theory shapes the environment. Coercive policies (e.g. mobile money regulations) and normative pressures (industry standards, customer expectations) can either accelerate or constrain the above processes (Rosengard, 2016) (Kenya Bankers Association, 2023). For instance, supportive regulation can magnify transaction cost reductions and enable wider diffusion, whereas new lending rules may restrict reckless fintech practices.

In summary, the synthesized model posits that digital finance channels lower transaction costs and leverage network-driven adoption (Diffusion+TAM), which in turn challenges banks' intermediation (Disruptive Innovation, Financial Intermediation). Banks' adaptation (digital transformation, new services) and ultimate outcomes are shaped by institutional context. Empirical evidence from Kenya supports these links: digital finance has driven account growth and usage (Reuters., 2019) (Brazzel, 2018) while prompting banks to innovate under regulatory guidance (Rosengard, 2016) (Kenya, 2021). The framework thus captures the key constructs and relationships identified in the Kenyan literature.

Figure 1: *Conceptual framework linking digital finance drivers and theories to traditional banking outcomes.* (Digital finance adoption is driven by diffusion/TAM and network effects; transaction cost reductions enable inclusion; disruptive innovation and intermediation theory explain competitive impacts on banks; institutional theory moderates the environment.)

Organization of the Review

To guide readers through the literature, this review is organized thematically into five interlinked sections, each corresponding to a major cluster in the conceptual framework:

Digital Finance Innovations (Drivers)

- **Objective:** Survey the emergence and characteristics of Kenya's key fintech inputs (mobile money, digital credit/fintech apps, agency banking).

- **Coverage:** Empirical studies on M-Pesa's market-creating trajectory; the rise of app-based lending platforms (Tala, Branch); evolution of agency networks.

- **Key Literature:** Mas & Radcliffe (2010); Hughes & Lonie (2007); FSD Kenya (2023).

Adoption Mechanisms

- **Objective:** Examine the individual- and network-level processes that propel uptake of digital finance.

- **Coverage:** Technology Acceptance Model adaptations in Kenya; Rogers' diffusion attributes in mobile-money contexts; evidence of network effects and viral growth.

- **Key Literature:** Davis (1989); Rogers (2003); Jack & Suri (2014); Kimari, Lio & Ogada (2022).

Transaction Cost Reductions and Market Formation

- **Objective:** Analyze how digital channels lower user costs, shape market structures, and drive inclusion.

- **Coverage:** Transaction Cost Theory applied to mobile payments; agent-density effects; niche creation and competitive dynamics in digital credit markets.

- **Key Literature:** Coase (1937); Williamson (1975); Central Bank of Kenya (2021); Bergek et al. (2008).

Banking Outcomes & Institutional Responses

- **Objective:** Critically review how traditional banks have been disrupted and how they have adapted through partnerships, new offerings, and system modernization.

- **Coverage:** Cases of bank-fintech collaborations (KCB M-Pesa, Equity API initiatives); bank responses under Institutional and Disruptive Innovation theories; regulatory mandates and policy briefs.

- **Key Literature:** Christensen (1997); DiMaggio & Powell (1983); Kenya Bankers Association (2023); Rosengard (2016).

Contextual Moderators and Regulatory Evolution

- **Objective:** Situate the above themes within Kenya's evolving enabling environment: regulatory frameworks, ICT infrastructure, and agent network expansion.
- **Coverage:** CBK'S digital-credit guidelines; National Payments System Act; mobile-network competition data; infrastructure and penetration statistics.
- **Key Literature:** Central Bank of Kenya (2021); Communication Authority of Kenya (2018); GSMA (2015, 2016).

Flow and Transitions

- **Section 1 – Section 2:** From *what* has been developed (Section 1) to *how* it spreads and is adopted (Section 2).
- **Section 2 – Section 3:** From *why* users adopt (TAM/diffusion) to *what* costs and market structures result (Section 3).
- **Section 3 – Section4:** From *changes in market functioning* (lower costs, inclusion) to *how banks respond* strategically and institutionally (Section 4).
- **Section 4 -Section5:** From *banking outcomes* to *the broader regulatory and infrastructural context* that shapes all the above (Section 5).
- **Conclusion/Synthesis:** After section 5, a final integrative summary will draw connections across all 5 themes, highlight research gaps, and transition to the subsequent "Critical Analysis and Synthesis" section.

Critical Analysis and Synthesis

The Kenyan financial sector has experienced rapid digital transformation under a largely "test-and-learn" regulatory approach. In the early 2000s regulators issued non-objection letters (e.g. for M-Pesa) rather than strict bans. Today multiple agencies share oversight: the Central Bank of Kenya (CBK) governs banking and payments, the Communications Authority (CA) licenses telecom-based payment platforms, the CMA (Capital Markets Authority) and IRA (Insurance Regulator) have introduced regulatory sandboxes (2019) for fintech pilots, and the Data Protection Act 2019 now governs consumer data usage. This sectoral regulatory framework encourages innovation while protecting consumers. For example, the CBK and CAK jointly adopted a "no objection" stance that let M-Pesa scale nationally, and the CMA's sandbox (launched 2019) has already yielded new crowdfunding regulations. However, stakeholders (industry and regulators) agree on the need for a more coherent fintech strategy. A recent industry report notes Kenya's regulators are generally receptive but highlights proposals for a unified fintech policy and single digital sandbox to reduce overlap. In sum, Kenyan policy has evolved to accommodate fintech – from the CBK's 2021 Digital Credit Act (licensing digital lenders) to Kenya's 2022–25 National Payments Strategy – but literature stresses continued reforms (e.g. FinTech offices, sandbox coordination) to balance innovation with stability.

Effects on bank performance.

Research suggests that banks embracing digital finance tend to see improved performance outcomes. For instance, (Ky, Rugemintwari, & Sauviat, 2022) analyze East African banks and find a strong positive relationship between time since a bank adopted mobile money and its profitability, efficiency and stability. In Kenya specifically, banks that enabled mobile and internet banking have observed higher deposits and lending volumes, which translate into financial gains. One empirical study of Kenyan banks concludes that "ease of access to digital banking" significantly increases financial performance (e.g. deposit growth, loan expansion). Likewise, technology-driven initiatives (e.g. mobile wallets, USSD platforms) help banks diversify income; a large panel study notes

income diversification and broader deposit mobilization are key channels whereby mobile money partnerships boost bank profits. At the same time, literature and industry reports warn that fintech heightens competition and compresses traditional margins. For example, one analysis (on Chinese banks) observes that intense third-party competition has squeezed net interest income, so banks use digital finance to innovate and mitigate profit pressure. In Kenya, banking surveys similarly report that rising fintech alternatives have compressed interest spreads and ROE. In short, the evidence points to a net benefit for banks that effectively integrate digital channels (through cost savings and new revenue), even as they face margin pressure that makes the adoption of fintech solutions imperative.

Strategic Partnerships in the Banking Sector

Traditional banks have responded to fintech disruption by forming strategic partnerships with technology firms, telcos and payment platforms. The Central Bank confirms that "Kenyan financial institutions are increasingly focusing on collaboration and partnerships with Fintech start-ups" to deliver innovative services (Towett, 2024). These alliances span co-branded mobile wallets (e.g. M-Shwari with Safaricom's M-Pesa, KCB M-PESA, NCBA Pesacloud) to joint investments in payment infrastructure and regtech. Partnerships yield concrete benefits: banks leverage fintech capabilities to expand reach while keeping costs down. For example, alternative channels (mobile apps, USSD, agent networks) cut bank staff costs and extend branchless banking into new regions (Towett, 2024). Empirical evidence underscores the strategic value of such alliances. A 2025 study of Nairobi banks found a strong positive correlation between a bank's use of fintech partnerships and its performance (correlation R=0.653, p<0.001). In practice, successful partnerships have rapidly scaled customer bases. The M-Shwari example is illustrative: launched in 2013 by CBA (now NCBA) with Safaricom, it grew to 7.2 million customers and KSh20.6 million in loans by end-2014. In sum, literature and industry sources agree that bank–fintech alliances are a key adaptation strategy – enabling banks to innovate, acquire customers, and improve performance much faster than they could alone.

Consumer Adoption of Digital Finance

Kenyan consumers have embraced digital finance rapidly, especially via mobile platforms. National surveys show massive growth in mobile money usage: by 2021, 81.4% of adults had used mobile money, up from only 27.9% in 2009 (Kodongo, 2024). Mobile banking (via apps or mobile apps) is also rising, with usage growing from ~25% in 2019 to 34% in 2021 (Kodongo, 2024). This penetration is driven by widespread mobile access and the convenience of digital channels. FinAccess data highlight that mobile banking adoption accelerated across all demographic groups, notably among rural and female consumers, as smartphone prices fall and network coverage improves (Kenya National Bureau of Statistics (KNBS), 2021). Convenience and accessibility are key factors: users cite 24/7 availability, ease of transactions and bill payments as major benefits of digital channels (Kenya National Bureau of Statistics (KNBS), 2021) (Towett, 2024). However, studies also note barriers: some segments still mistrust or lack familiarity with formal digital services. For example, initial rollouts of mobile wallets included safeguarding user funds (trust accounts) to overcome liquidity fears (Aubra, Nanjira, & Lakshmee, 2024). Overall, the literature portrays Kenyan consumers as highly receptive to digital finance, especially mobile money, while traditional banking declines in relative importance (Kodongo, 2024) (Kenya National Bureau of Statistics (KNBS), 2021).

Rural – Urban Inclusion Gaps

Digital finance has substantially improved access to financial services in rural areas, narrowing historical gaps. In earlier years, urban residents dominated formal finance; by 2021 mobile money was near-universal in both rural and urban communities. FinAccess reports indicate rural and female populations adopted mobile banking faster than their urban/male counterparts in recent years (Kenya National Bureau of Statistics (KNBS), 2021), helping

close the urban–rural inclusion divide. For instance, enhanced rural network coverage and agent deployment have made mobile money ubiquitous outside cities. Nevertheless, some gaps persist: rural users may still lag in usage of newer services (e.g. online investment or insurance apps) due to lower digital literacy and limited internet connectivity (Kenya National Bureau of Statistics (KNBS), 2021) (Towett, 2024). A central bank innovation survey likewise notes that banks are expanding fintech outreach to underserved areas, but uneven infrastructure means "last-mile" inclusion efforts are ongoing. In summary, while mobile finance has extended banking reach well beyond urban centers (Kenya National Bureau of Statistics (KNBS), 2021) (Kodongo, 2024), literatures caution that digital inclusion remains incomplete – policy and industry efforts are needed to ensure rural consumers fully benefit from the digital finance revolution.

Implications for the research

The review of existing literature reveals several strategic, operational, and theoretical implications that directly inform this study on digital finance and its impact on traditional banking in Kenya:

Regulatory Adaption as a Research Lens

The Kenyan banking sector operates within a rapidly evolving regulatory ecosystem. Literature highlights that while initial fintech growth was supported by a permissive "test-and-learn" approach, current regulations (e.g., the CBK Digital Credit Providers Act, Data Protection Act 2019) demand strategic compliance and innovation from traditional banks (Central Bank of Kenya, 2021) (Aubra, Nanjira, & Lakshmee, 2024). The research will examine how these shifting policy frameworks influence banks' capacity to adapt and innovate, aligning with institutional and transaction cost theory.

Technological Integration and Customer Experience

Empirical findings show a direct link between digital tool adoption and improvements in bank performance (Ky, Rugemintwari, & Sauviat, 2022) (Mugambi, 2022). This research will assess how specific digital channels — such as mobile banking apps, agency networks, or USSD platforms — influence customer acquisition, satisfaction, and retention in Kenya's banking sector.

Strategic Alliances with Fintech Firms

Studies emphasize the competitive advantage that comes from bank–fintech collaborations (Towett, 2024). This study will investigate how partnerships such as KCB M-Pesa or NCBA's M-Shwari serve as survival and growth mechanisms for banks responding to digital disruption, thus operationalizing the Disruptive Innovation Theory.

Addressing the Urban – Rural Digital Divide

Although digital finance has narrowed the inclusion gap, FinAccess data suggest that rural populations continue to face challenges in accessing and effectively using these tools (Kenya National Bureau of Statistics (KNBS), 2021). This research has the potential to uncover how traditional banks can deploy digital strategies that bridge this gap, thereby expanding both their market reach and social impact.

Theoretical Advancement

While prior studies have focused on isolated factors (e.g., customer behavior or bank profits), this work combines Disruptive Innovation Theory, Transaction Cost Theory, and Technology Adoption Models (TAM & DOI) into a

unified hybrid framework. This makes its contribution not just empirical, but also conceptual, positioning this study as a bridge between technological, strategic, and institutional perspectives on banking transformation in Kenya.

Summary

The reviewed literature demonstrates that digital finance has fundamentally transformed Kenya's banking landscape, reshaping how financial services are accessed, delivered, and regulated. Across both empirical and conceptual studies, there is consensus that mobile money, app-based lending, and API-driven banking models have accelerated financial inclusion, enhanced operational efficiency, and altered traditional revenue streams for incumbent banks (Wachira & Murigi, 2021) (Mugambi, 2022) (Misati, Njoroge, Kamau, & Ouma, 2021).

However, while the digital shift offers enormous potential, it also presents structural and regulatory challenges. Gaps persist in system integration, rural digital access, and adaptive regulation frameworks (Central Bank of Kenya, 2021) (Financial Sector Deepening (FSD) Kenya, 2023). Additionally, while fintech partnerships have allowed banks to reach new customer segments and diversify income (Tiony & Yego, 2023), competition from digital-first challengers continues to compress traditional profit margins (Ky, Rugemintwari, & Sauviat, 2022).

The literature underscores that the long-term success of traditional banking in the digital age depends on its ability to reduce transaction costs, embrace innovation, and deepen customer adoption, all concepts embedded in the study's hybrid theoretical framework, combining Disruptive Innovation Theory, Transaction Cost Theory, and technology adoption models like TAM and Diffusion of Innovation.

Thus, this review has provided both a conceptual foundation and a synthesis of empirical findings that support the need for continued research. The upcoming sections of this paper will examine these dynamics in greater depth, focusing on how Kenyan banks are navigating digital disruption, what adaptive strategies they employ, and how these changes influence customer access, institutional stability, and market competitiveness.

Chapter Three: Methodology

Research Design

This study adopts a descriptive and exploratory research design to map and explain developments in Kenya's fintech sector. The descriptive element will document "what" fintech trends and figures look like (e.g. adoption rates, usage patterns), while the exploratory aspect will probe "how" and "why" these innovations have diffused into the market. A mixed-methods approach is employed, combining quantitative trend analysis with qualitative case study insights. Mixed methods are particularly appropriate here because they allow triangulation of findings: quantitative data reveal broad patterns, and qualitative case studies add depth and context. As one review notes, mixed approaches "answer a wider range of research questions, increase validity through triangulation, and obtain deeper understandings…leading to new and richer insights" (Tashakkori & Teddlie, 2010). For example, we will pair statistical trends (e.g. mobile money account penetration from 2017–2024) with qualitative analyses of key innovations (M-Pesa, M-Shwari, etc.) to achieve a holistic picture. This design suits the fintech topic, where both measurable outcomes (usage rates, financial inclusion metrics) and process insights (user experiences, regulatory responses) are critical. Prior fintech studies similarly employ sequential exploratory mixed methods – e.g. interviews with experts followed by surveys – to uncover adoption barriers and validate them quantitatively (Tashakkori & Teddlie, 2010).

Sources of Data

All data will be secondary. Quantitative data sources include: (a) Central Bank of Kenya (CBK) publications and statistical releases (e.g. annual banking innovation surveys, payment system reports); (b) Kenya National Bureau of Statistics (KNBS) datasets (e.g. national income and demographic statistics); (c) FinAccess household survey data (CBK/KNBS/FSD Kenya collaborative survey of financial access) (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021); and (d) industry reports (e.g. GSMA mobile money reports, World Bank Findex, or credible market research on digital finance). These datasets provide figures on mobile money accounts, digital transactions, banking services, and financial inclusion in Kenya. For example, the FinAccess surveys (2006–2021) are widely used to track national usage of financial services (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021). Qualitative sources include case studies of major fintech innovations (e.g. Ndung'u's M-Pesa case study (Ndung'u, 2021), analyses of digital lending apps, mobile banking) and expert-authored policy documents. Policy documents and white papers from CBK, the National Treasury, and institutions like FSD Kenya or international think-tanks will be reviewed to understand strategic and regulatory context. We will also consult expert commentaries and industry whitepapers (e.g. analyses by Kenyan banking associations or global consultancies) to capture practitioner perspectives. These qualitative sources provide narrative insights into how fintech disrupts traditional finance and inform interpretation of statistical trends.

Data Collection Procedures

A systematic search and retrieval process will be conducted. Databases and search tools: We will use academic databases (Google Scholar, JSTOR, ScienceDirect), government and institutional repositories (CBK and KNBS websites, World Bank Findex portal), and credible secondary sources (e.g. African Development Bank, FSD Kenya, GSMA reports). Keywords will include combinations of terms such as "Fintech Kenya", "digital finance Kenya", "mobile money adoption Kenya", "financial inclusion Kenya", "digital banking Kenya", and specific innovation names (e.g. "M-Pesa", "M-Shwari", "Tala Kenya"). Search strategy: Results will be filtered by date (2017–2024)

and relevance (Kenya-focused). We will also gather official reports directly from institutional websites (e.g. FinAccess survey reports on KNBS site (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021), CBK annual reports, KNBS statistical abstracts).

Selection Criteria: Only sources published in 2017 or later will be included, to match our timeframe (exceptions allowed for foundational works on Kenyan fintech, e.g. key M-Pesa analyses). All sources must have credible authorship: peer-reviewed journals, official reports, or recognized industry publications. For empirical data, we prioritize national surveys and regulator data over anecdotal accounts. Publications must explicitly address Kenya or include Kenyan data, since the study's scope is national. Non-credible sources (unverified blog posts, opinion pieces without data) will be excluded.

Screening: After gathering candidate sources, we will review each to ensure relevance and credibility. Ineligible studies (e.g. those focusing on other countries without Kenya data, or older than 2017 without seminal value) will be removed. Duplicates will be merged. Data and findings from the remaining sources will be extracted and catalogued. Any limitations (e.g. differences in data collection methods across years) will be noted. This transparency in procedure aligns with best practices for literature synthesis and ensures reproducibility.

Data Analysis Techniques

Quantitative Analysis

Quantitative data will be analyzed using descriptive statistics. We will compute frequencies and percentages of key variables (e.g. proportion of adults with mobile money accounts, percentage of banked population, share of transactions done digitally). Time-series trends (2017–2024) will be visualized with trend charts or line graphs to show growth or decline in fintech usage. Comparative tables may contrast indicators across demographics (urban vs rural, gender, age groups) and over time. For example, FinAccess data will be used to tabulate changes in formal and informal service usage (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021). We may also calculate basic averages (e.g. mean transaction size) or indices (e.g. composite financial inclusion index), as appropriate. The results of these analyses will be interpreted in light of the research questions: for instance, upward trends in mobile money accounts will support hypotheses about increasing adoption, whereas any stagnation might prompt examination of barriers. All quantitative results will be clearly linked to the hypotheses or questions. For example, if H1 predicts rising fintech adoption, we will show percentage growth of mobile money users and discuss it. If data shows a surprising pattern (e.g. decline in a certain metric), we will explore possible explanations in the discussion. Charts and tables (with appropriate labels and sources) will be used to illustrate these findings, making comparisons explicit.

Qualitative Analysis

For qualitative data, we will conduct thematic analysis of 3–5 case studies of major fintech innovations. Likely cases include Kenya's mobile money (M-Pesa), mobile banking products (e.g. M-Shwari or Eazzy Banking), digital credit apps (e.g. Tala, Branch), and other notable fintech (e.g. PayPal-Kenya partnership, InsurTech pilots). Each case will be described in terms of its history, features, and context. We will extract key qualitative findings from each case, focusing on themes such as drivers of adoption (innovation advantages, cost/efficiency), barriers (trust, literacy, regulation), and outcomes (financial inclusion, business impact). Data (textual content from case documents, reports, interviews if available) will be coded using both deductive and inductive coding (Rohm & Doerr, 2025). Deductive codes will be based on our conceptual frameworks: for example, themes related to

Christensen's disruptive innovation (e.g. reaching underserved markets), transaction cost economics (e.g. reducing costs of remittances or payments), TAM/DOI factors (perceived usefulness/ease of use, social influence, innovativeness). Inductive coding will allow new themes to emerge from the data (e.g. unique cultural factors in Kenya). The coding framework will thus integrate existing theory and novel observations (Rohm & Doerr, 2025). For each case, we will systematically identify these themes. Cross-case comparison will follow pattern-matching and constant comparison methods (comparing themes across cases to find commonalities or differences) (Rohm & Doerr, 2025).

Throughout the qualitative analysis, we will explicitly link findings back to theory. For example, we will interpret how M-Pesa's growth aligns with diffusion of innovation (Rogers) stages, or how a mobile lending app's challenges reflect perceived risk/ease-of-use in TAM (Hurani & Abdel-Haq, 2025). TAM provides a robust framework for understanding user attitudes toward fintech, especially in underbanked contexts (Hurani & Abdel-Haq, 2025). Thus, themes like "trust and security concerns" or "ease of transaction" will be discussed in TAM terms (perceived usefulness/ease of use). Likewise, any narrative of fintech lowering transaction costs will be interpreted via transaction cost theory. By weaving in these conceptual lenses, our qualitative interpretation will be theory-informed. All key themes will be illustrated with evidence (e.g. quotes from expert commentary or summary of case report findings).

Ethical Considerations

This research uses only publicly available data and secondary analyses; no human subjects are directly involved. We will nonetheless uphold strict ethical standards: all sources will be properly cited in text to avoid plagiarism, in accordance with APA style. We commit to transparency by explicitly acknowledging data limitations (e.g. survey sampling bias, gaps in published data) and any assumptions made. There will be no fabrication or falsification of data or references. Where data from different sources conflict, we will report the discrepancy and reason through possible causes (differences in definitions, time periods, etc.). Credit will be given to original authors for all ideas and statistics. By detailing our search and selection criteria, we allow reproducibility and scrutiny of our methodology. In summary, we adhere to academic integrity: reporting findings honestly, citing sources fully, and discussing uncertainties candidly.

Expected Outcomes and Research Parameters

We anticipate strong growth in fintech adoption in Kenya from 2017 to 2024. For example, the 2021 FinAccess survey shows that the rural–urban gap in formal financial access narrowed because rural adoption of mobile money surged (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021). Building on this, we expect mobile money penetration to increase further, pushing overall financial inclusion higher. Nearly all banks and microfinance institutions are likely to have implemented mobile banking platforms (CBK data show 98% had mobile banking by 2024 (Central Bank of Kenya, 2024)), so we also expect banking sector adaptation: traditional banks will increasingly offer digital services (mobile apps, agency networks) to retain customers. However, challenges will persist: rural areas and low-income segments may still face barriers (e.g. limited network or digital literacy), so fully inclusive penetration may lag behind urban areas. We will test these hypotheses against the data (e.g. comparing rural vs urban usage rates). If some outcomes contradict expectations (for instance, a stagnation in adoption despite expectation), we will examine possible explanations (such as undercounted informal transactions or recent policy changes) and report them.

Research Parameters: The study covers the period 2017–2024 and is geographically limited to Kenya (nationally, with county-level insights where available). We focus on major institutions: commercial banks (e.g. KCB, Equity, Co-op Bank), mobile network operators (Safaricom, Airtel), and leading fintech firms. The analysis concentrates on

published secondary data from these years; we will not conduct new surveys or interviews. By delimiting the scope (Kenya, post-2017, secondary sources only), we maintain clarity and relevance.

Contingencies: If contradictory findings emerge (e.g. one report shows rapid fintech adoption while another indicates leveling off), we will explore differences in data collection and definitions to reconcile them. For example, we might note if one survey includes digital credit usage and another does not. Any such discrepancies will be transparently discussed in the analysis. Sensitivity checks (e.g. comparing multiple data sources for the same indicator) will be performed to assess robustness. In all cases, we will explain unexpected results by referring back to theory and context (e.g. regulatory shifts, economic events like COVID-19) rather than dismissing them.

Expected Impact: Ultimately, we expect the methodology to uncover a multi-dimensional view: quantitative trends will demonstrate broad fintech expansion, while qualitative cases will highlight mechanisms (innovation drivers and barriers). The findings should reflect our hypotheses (increased adoption, bank digitization, narrowing but incomplete rural inclusion) and be framed within the conceptual models (disruptive innovation, TAM/DOI, etc.) introduced earlier.

Sources: Foundational data will come from CBK and KNBS publications (e.g FinAccess survey reports (Central Bank of Kenya; Kenya National Bureau of Statistics, 2021), CBK innovation surveys (Central Bank of Kenya, 2024)) and peer-reviewed studies on fintech (e.g mixed-methods frameworks (Central Bank of Kenya, 2024) (Tashakkori & Teddlie, 2010), TAM in fintech (Hurani & Abdel-Haq, 2025)). All cited material will be duly referenced in APA format.

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