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## DIGITAL TRANSFORMATION TOOLS AND STRATEGIC DECISION-MAKING IN SMALL AND MEDIUM BUSINESS START-UPS IN KISUMU SUB-COUNTY, KENYA

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### ABSTRACT

Digital transformation has become a critical driver of competitiveness for small and medium-sized enterprises (SMEs), yet its strategic application in resource-constrained contexts remains underexplored. This study examined the effect of mobile money transfer and cloud computing on strategic decision-making among small and medium business start-ups (SMBSUs) in Kisumu County, Kenya. A sequential explanatory mixed-methods design was adopted, combining a quantitative survey of 199 founders and senior managers across sectors such as retail, agribusiness, services, and manufacturing with qualitative interviews involving 12–15 purposively selected respondents. Quantitative data were analyzed using descriptive statistics, chi-square tests, correlation, and multiple regression in SPSS, while qualitative data were subjected to thematic analysis using NVivo. Findings revealed that mobile money was the most widely adopted tool though it primarily served operational purposes with negligible strategic impact. Conversely, cloud computing showed limited strategic contribution due to infrastructural and skill-related barriers. The study highlights the uneven integration of digital tools into strategic processes and identifies leadership capacity, infrastructure, and cost as key determinants of adoption. These insights inform policy and practice by emphasizing the need for targeted interventions to strengthen digital literacy, improve access to affordable technologies, and foster inclusive digital ecosystems in devolved regions.

**Keywords:** *Strategic Decision-Making, Digital Transformation, SMEs, Kisumu, Mobile Money, Cloud Computing, Order Management Systems*

### INTRODUCTION

Digital transformation is fundamentally altering the way businesses operate, make decisions, and remain competitive. Globally, technologies such as artificial intelligence (AI), cloud computing, mobile platforms, and data analytics are increasingly embedded into the strategic and operational frameworks of enterprises. For small and medium-sized enterprises (SMEs), these tools offer significant advantages, including enhanced decision-making, operational efficiency, and improved customer engagement (Bozintan,

George, & Popa, 2023; Pan & Yu, 2024). In developing countries, however, SMEs often adopt only basic ICT tools due to constraints such as high costs, limited digital literacy, and inadequate technical support. As a result, tools like email, websites, and customer management software are more common than advanced technologies like big data analytics or IoT (Díaz-Arancibia et al., 2024; Barkley & Jokonya, 2023). Nevertheless, even modest digital tools, when strategically deployed, can significantly improve operational performance, financial outcomes, and market access (Dimoso & Utonga, 2024).

In Kenya, national initiatives such as the Digital Economy Blueprint have promoted digital innovation and entrepreneurship. While Nairobi remains the epicenter of tech development, regional counties like Kisumu are experiencing a surge in digital adoption, particularly among start-ups. Over the past decade, Kisumu has seen a rise in small and medium business start-ups (SMBSUs) across sectors like agribusiness, retail, ICT, and transport. These businesses increasingly rely on mobile money, social media, cloud computing, and Order Management Systems (OMS) to engage customers and streamline operations. Despite this growth, many Kisumu-based start-ups lack the strategic frameworks, leadership skills, and resources necessary to fully leverage digital tools. Adoption tends to be reactive and transactional rather than strategic. For instance, while mobile platforms are used for payments and marketing, few businesses integrate data-driven tools or pursue digital transformation as a core growth strategy (Jafari-Sadeghi et al., 2022; Ben Slimane et al., 2022).

The effectiveness of digital transformation in SMEs is influenced by several factors, including the digital competence of founders, organizational innovativeness, infrastructure availability, and the presence of supportive policies and networks (Shahadat et al., 2023; Díaz-Arancibia et al., 2024). Leadership plays a particularly pivotal role. Digitally literate managers are more likely to transition from intuition-based to data-informed decision-making (Afef Khalil et al., 2022). However, in counties like Kisumu, such capabilities are still emerging.

While global literature on digital transformation in SMEs is extensive, it predominantly focuses on large firms or urban start-ups. The experiences of early-stage businesses in smaller, resource-constrained counties remain underexplored. This study addresses this gap by examining how digital transformation tools specifically mobile money, cloud computing, social media, and OMS affect strategic decision-making in Kisumu's SMBSUs. It also considers how leadership competencies and the enabling environment influence the adoption and strategic use of these technologies.

### **Strategic Decision-Making in SMEs**

Strategic decision-making (SDM) refers to the process through which organizations make long-term, high-impact decisions regarding their direction, resource allocation, and competitive positioning. In SMEs, SDM differs from that in larger corporations due to flatter organizational structures, limited formalization, and a reliance on the founder's

intuition and personal networks (Hang & Wang, 2012; Huang, 2009). Rather than following rigid, data-intensive processes, SMEs often adopt a simplified approach involving problem identification, solution exploration, and outcome analysis. Studies from South Africa and Australia reveal that while some SMEs engage in structured decision-making—such as financial analysis and brainstorming—these processes are typically flexible and adaptive (Van Wyk, 2023; Hang, 2012). Gibcus et al. (2003) identify three primary influences on SDM in SMEs: the entrepreneur, the business environment, and the specific decision context.

Recent research indicates that digital transformation is reshaping SDM by enabling real-time, evidence-based decisions. Tools like social media analytics, cloud platforms, and data dashboards enhance agility and customer responsiveness (Nugroho et al., 2024; Yan et al., 2021). However, many SMEs still lack formal decision-making structures, and their use of digital tools remains fragmented. The integration of digital insights into strategic planning is heavily influenced by decision-makers' digital literacy, education, and openness to innovation (Musso et al., 2012). In Kisumu, where infrastructure and institutional support may be limited, understanding how SMEs make strategic decisions and the role of digital tools is essential. This study conceptualizes SDM as the dependent variable, influenced by digital tool usage, leadership capabilities, and environmental enablers or constraints.

### **Mobile Money Transfer**

Mobile money services have transformed financial transactions for SMEs in Kenya. Platforms like M-Pesa have enhanced financial inclusion, reduced reliance on traditional banking, and streamlined business operations (Suri & Jack, 2016; Mutiso & Reuben, 2021). For start-ups, mobile money simplifies supplier payments, facilitates customer transactions, and provides real-time cash flow data that can inform strategic decisions. While mobile money usage is widespread, its strategic integration varies. Urban SMEs often utilize advanced features like pay-bill and bulk payments, whereas SMEs in Kisumu typically rely on basic transfers and bill payments (Wamuyu, 2014). Barriers such as limited digital literacy, inconsistent infrastructure, and security concerns hinder deeper integration. Nonetheless, when effectively utilized, mobile money can enhance competitiveness, improve financial management, and support strategic decision-making in early-stage enterprises.

### **Cloud Computing**

Cloud computing offers SMEs in developing countries scalable, cost-effective IT solutions. Tools like Google Workspace and cloud-based CRMs facilitate collaboration, automate processes, and enable data-driven decision-making (Khayer et al., 2020; Ekawaty et al., 2025). These platforms allow SMEs to access real-time data, streamline operations, and reduce IT overheads. However, adoption in East Africa is constrained by concerns over data security, unreliable internet connectivity, limited digital skills, and mistrust of service providers (Skafi et al., 2020; Hosseini et al., 2019). In Kisumu, cloud

adoption is influenced by leadership support, perceived benefits, internet access, and policy frameworks (Ansong et al., 2023; Alqahtani et al., 2024). When strategically implemented, cloud computing can empower SMEs to scale operations, enhance flexibility, and make informed strategic decisions.

### **STATEMENT OF THE PROBLEM**

Small and medium-sized business start-ups (SMBSUs) in Kenya's devolved regions, particularly Kisumu County, are increasingly adopting digital transformation tools. However, these tools are often used in a transactional rather than strategic manner, limiting their potential to enhance decision-making, operational efficiency, and scalability. While digital transformation is globally recognized as a driver of competitiveness and innovation (Ben Slimane, Triki, & Amara, 2022; Pan & Yu, 2024), its strategic application in regional start-ups remains inconsistent. In Kisumu, start-ups in sectors like ICT, agribusiness, and retail primarily utilize basic tools such as mobile money and social media for routine transactions. Advanced tools like cloud-based order management systems (OMS), customer analytics, and business intelligence platforms are rarely employed for strategic planning (Jafari-Sadeghi et al., 2022). This reactive approach is compounded by limited digital leadership and a lack of strategic vision among founders (Raharjo, Nugroho, & Permatasari, 2024). Existing research tends to focus on urban SMEs, neglecting the unique challenges faced by start-ups in devolved areas like Kisumu (Ben Ghrbeia & Alzubi, 2024). These include digital illiteracy, inadequate infrastructure, and limited access to mentorship and venture capital (Angkhasakulkiat, Watanabe, & Songkram, 2025; Kayser, Heyns, & Moalusi, 2022; Ngoasong, 2017). Consequently, many start-ups rely on surface-level digital tools for survival rather than leveraging them for growth.

### **OBJECTIVE**

#### **General Objective**

The general objective of the study was to explore the effect of digital transformation tools on strategic decision-making among small and medium business start-ups (SMBSUs) in Kisumu Central Sub-County.

#### **Specific Objectives**

The specific objectives were as follows:

1. To assess how mobile money transfer affect strategic decision making among SMEs in Kisumu Central Sub-County.
2. To investigate the relationship between cloud computing and strategic decision making among SMEs in Kisumu Central Sub-County.

### **SIGNIFICANCE OF THE STUDY**

The study advances new knowledge by investigating how early-stage enterprises in under-researched, resource-constrained contexts engage with digital tools in strategic decision-making. It addresses a critical research gap by generating locally relevant

evidence on digital leadership, tool adoption, and enabling conditions for transformation in devolved regions. The findings would inform not only policy but also entrepreneurship training, innovation ecosystems, and academic discourse focused on regional SME growth. Its scope entailed founders, co-founders, or senior managers of start-ups in Kisumu Central Sub-County, which have been operating for five years or less and are engaged in sectors such as agribusiness, retail, ICT, and services by checking current trends of digital uptake and their effect on business strategy conducted within July to October 2025.

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

#### **Theory of Reasoned Action (TRA)**

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen (1975), posits that intentional behavior is best predicted by an individual's intention to perform that behavior. This intention is shaped by two key factors: attitude toward the behavior and subjective norms (Ajzen & Fishbein, 1980). Attitude refers to an individual's evaluation of the behavior's outcomes—whether they are perceived as beneficial or detrimental. Subjective norms involve perceived social pressures and the motivation to comply with expectations from influential stakeholders such as peers, customers, suppliers, or regulators. In Kisumu's SMBSUs, TRA is particularly relevant in explaining how entrepreneurs decide to adopt digital tools like mobile money, cloud computing, social media, and Order Management Systems (OMS). For example, a business owner may adopt mobile money due to its perceived efficiency (attitude) and because customers or suppliers expect its use (subjective norm). TRA thus helps to understand how personal beliefs and social influences shape the intentional use of digital tools in strategic decision-making. However, TRA has limitations. It does not adequately account for structural or organizational constraints such as limited digital literacy, financial barriers, or infrastructural deficiencies. To address these gaps, the study incorporates the Diffusion of Innovation (DoI) Theory and Dynamic Capabilities Theory (DCT), which provide broader organizational and systemic perspectives.

#### **Dynamic Capabilities Theory (DCT)**

The Dynamic Capabilities Theory (DCT), introduced by Teece, Pisano, and Shuen (1997), focuses on a firm's ability to adapt, integrate, and reconfigure internal and external competencies in response to rapidly changing environments. This theory is particularly applicable to SMBSUs, which often operate in volatile markets with limited resources and face rapid technological shifts. In this study, DCT is used to assess how start-ups in Kisumu develop internal capabilities to adopt and integrate digital tools such as cloud computing and OMS into their business models. Key dynamic capabilities include adaptive leadership, digital skills training, and resource reallocation. These capabilities enable firms to align digital tools with strategic objectives, thereby enhancing competitiveness and responsiveness.

The adoption of OMS, for instance, allows businesses to integrate inventory, sales, and logistics into a unified system, enabling real-time decision-making. Clemente-Almendros, Bustinza, and Galiano (2024) and Taghavy, Valaei, and Zolfagharian (2024) emphasize that coordination and flexibility – core elements of dynamic capabilities – are essential for strategic alignment and performance in early-stage firms. In Kisumu’s fragmented and uncertain business environment, DCT provides a valuable framework for understanding why some start-ups are better positioned to leverage digital transformation tools for long-term growth, while others remain stuck in operational routines.

### **Diffusion of Innovation (DoI) Theory**

The Diffusion of Innovation (DoI) Theory, developed by Rogers (1998), explains how innovations spread within a population over time. It identifies five key attributes that influence adoption: relative advantage, compatibility, complexity, trialability, and observability. The theory also categorizes adopters into innovators, early adopters, early majority, late majority, and laggards, offering a framework to assess varying levels of readiness and adoption behavior. In Kisumu, DoI helps explain the uneven adoption of digital tools like OMS and cloud services. Some SMEs adopt these tools quickly due to perceived benefits such as improved order tracking and compatibility with existing systems. Others delay adoption due to perceived complexity, cost, or lack of observable benefits.

Zhu and Kraemer (2005), in a cross-country survey of over 600 retail firms, and Oliveira and Martins (2011), through a systematic review of IT adoption models, found that external factors – such as communication networks, peer influence, and institutional support – play a significant role in shaping adoption patterns. These findings are particularly relevant in Kisumu, where infrastructural and policy support may lag behind national trends. By applying DoI, the study explores how contextual factors – such as access to information, peer behavior, and institutional readiness – affect the pace and depth of digital transformation among SMBSUs.

Together, TRA, DCT, and DoI provide a comprehensive framework for analyzing digital transformation in Kisumu’s start-up ecosystem. TRA focuses on individual-level factors such as attitudes and social norms that influence behavioral intentions. DCT emphasizes organizational readiness, leadership, and the ability to reconfigure resources for strategic alignment. DoI situates these behaviors within broader systemic and environmental contexts, accounting for external influences and diffusion patterns. This integrated approach enables a nuanced understanding of not only whether SMBSUs adopt digital tools like mobile money, cloud computing, social media, and OMS, but also how these tools are strategically applied to enhance decision-making. It also highlights the interplay between individual agency, organizational capacity, and environmental conditions in shaping digital transformation outcomes. By leveraging this theoretical triad, the study aims to uncover the mechanisms through which digital tools are adopted and

strategically utilized in Kisumu's early-stage enterprises. This understanding is critical for designing targeted interventions that support digital capacity-building and strategic integration in resource-constrained, devolved regions.

### **Empirical Literature Review**

#### **Mobile Money Transfer and Strategic Decision-Making**

Mobile money platforms, such as M-Pesa, have become integral to SME operations in Sub-Saharan Africa, offering real-time transactions, access to credit, and customer engagement tools (Wang, 2020; Gosavi, 2018; Mwakio et al., 2024). In Kenya, mobile money has enhanced payment processing and financial inclusion, especially in underserved regions like Taita Taveta. Rakshit et al. (2021) found that digital payments improved SMEs' sustainability during the COVID-19 pandemic by influencing consumer behavior and enhancing accessibility. Cele and Van Belle (2022) emphasized that mobile money's strategic value is maximized when tailored to specific business functions such as marketing or internal operations. Strategic integration, rather than mere access, determines its transformative potential. While urban SMEs often use advanced analytics, those in Kisumu rely on basic applications due to infrastructure and literacy constraints (Mkansi et al., 2019; Sapienza et al., 2023).

Owoseni and Twinomurinzi (2018) linked mobile financial platforms to enhanced dynamic capabilities—adaptive, absorptive, and innovative—though not necessarily to opportunity optimization. Younger entrepreneurs use mobile transaction data for forecasting and customer insights (Kouladoum et al., 2022; Islam et al., 2021; Paas et al., 2020; Grzybowski et al., 2023), but connectivity issues persist in resource-limited areas (Mothobi et al., 2017; 2024). Mutiso and Reuben (2021) reported that mobile money services contributed to 60% of MSME performance in Kitengela, influencing supplier payments, loan access, and customer acquisition. Tiwasing et al. (2024) found that mobile money use correlated with product innovation, though not necessarily with profit growth.

However, Gopaul (n.d.) observed that many SMEs in South Africa make instinctive, unstructured decisions, limiting the strategic impact of mobile money. Digital literacy among leaders is critical; entrepreneurs with higher technical proficiency are more likely to use mobile money strategically (Lyons et al., 2020; Maduku et al., 2016). This aligns with the Theory of Reasoned Action and Dynamic Capabilities Theory, which emphasize perceived benefits and adaptability. Wauyo et al. (2025) stressed the importance of user-centered design in mobile applications, highlighting cultural relevance, affordability, and usability as key adoption drivers. Sumaili et al. (2018) found that Namibian SMEs could only fully leverage mobile ICT when supported by policies, organizational readiness, and scalability.

### Cloud Computing and Strategic Decision-Making

Cloud computing offers scalable, cost-effective IT solutions that support real-time data access and strategic planning (Khayer et al., 2020; Mwavali, 2021). In Kenya, tools like Google Workspace and CRMs are widely used, but advanced cloud applications remain underutilized in regions like Kisumu (Wambugu et al., 2018). While email and web hosting are common, enterprise-level cloud tools for inventory and analytics are rare outside Nairobi (Wambugu & Ndiege, 2018). Yet, cloud platforms can enhance customer service, financial planning, and operational efficiency, enabling SMEs to compete with larger firms (Adane, 2018; Skafi et al., 2025; Odun-Ayo et al., 2021). Nairobi-based firms report better strategic alignment when using cloud tools (Chemjor et al., 2017). Strategic planning is a key enabler of cloud adoption. Gakure and Amurle (2013) found that ICT-focused SMEs in Kenya are more likely to have structured plans, facilitating cloud integration. In contrast, Kisumu start-ups often lack such planning, limiting strategic use. Barriers include poor infrastructure, low digital literacy, and regulatory uncertainty (Makena, 2013; Kihara et al., 2013; Adane, 2022). Internal resistance and weak leadership support also hinder adoption (Khayer et al., 2020). Dahiru et al. (2014) and Abubakar (2016) emphasized that leadership attitudes and organizational readiness are more influential than external pressures in determining cloud adoption. Start-ups with digitally skilled leaders and tailored cloud solutions are better positioned for strategic use (El Skafi et al., 2025). Without such leadership, adoption remains superficial, failing to impact strategic decision-making.

### METHODOLOGY

A cross-sectional descriptive research design was adopted for this study to investigate the influence of digital transformation tools on strategic decision-making among small and medium business start-ups (SMBSUs) in Kisumu Central Sub-County. This design was selected for its effectiveness in capturing a snapshot of the current state of digital tool adoption and its strategic implications within a defined population. The study employed both quantitative and qualitative data collection methods to ensure a comprehensive understanding of the research problem. The target population comprised SMBSUs operating within Kisumu Central Sub-County across various sectors, including retail, agribusiness, ICT, hospitality, and services. The sampling frame was derived from a list of registered businesses obtained from the County Government of Kisumu. A stratified random sampling technique was used to ensure representation across different sectors. The strata were based on the type of business activity, and within each stratum, simple random sampling was employed to select participants. This approach ensured that the sample reflected the diversity of the start-up ecosystem in the region.

**Table 1:** Sample Size

<b>Sector</b>	<b>Estimated Enterprises</b>	<b>% of Total</b>	<b>Sample (n=194)</b>
Agriculture & Agribusiness	1,200	14.6%	29
Retail & Trade	2,100	25.6%	50
Craft & Manufacturing	800	9.8%	19
Food & Hospitality	1,400	17.1%	34
Transport & Logistics	1,200	14.6%	29
Services	1,000	12.2%	24
ICT & Innovation	500	6.1%	11
<b>Total</b>	<b>8,200</b>	<b>100%</b>	<b>196</b>

The sample size was determined using Cochran's formula for finite populations, considering a 95% confidence level and a 7% margin of error. Based on preliminary estimates of the number of active SMBSUs in the sub-county, a minimum sample size of 196 respondents was deemed sufficient. In addition, participants for the FGDs were purposively sampled based on their experience with digital tools and their roles in the local entrepreneurial ecosystem. A total of 2 FGDs were conducted, each comprising 12–15 participants. These discussions provided deeper insights into the contextual factors influencing digital adoption and strategic behavior among SMBSUs. Data collection was conducted using structured questionnaires and focus group discussions (FGDs). The questionnaire was designed to capture both demographic information and detailed insights into the use of digital tools – specifically mobile money, cloud computing, social media, and order management systems (OMS) – and their influence on strategic decision-making.

Descriptive statistics was used to analyze quantitative data, which was presented in graphs, tables, and charts with the aid of Statistical Package for Social Sciences (SPSS) software (version 25). Qualitative data were analyzed using framework analysis which involves a five-step process: familiarization; identifying a thematic framework; indexing; charting; and mapping and interpretation (Ritchie & Spencer, 2002). The mixed-methods approach adopted in this study provided a robust framework for triangulating findings and enhancing the validity of the results. By combining quantitative data with qualitative narratives, the study was able to capture both the measurable impacts of digital tools and the nuanced experiences of start-up founders navigating digital transformation in a resource-constrained environment.

### RESEARCH FINDINGS AND DISCUSSION

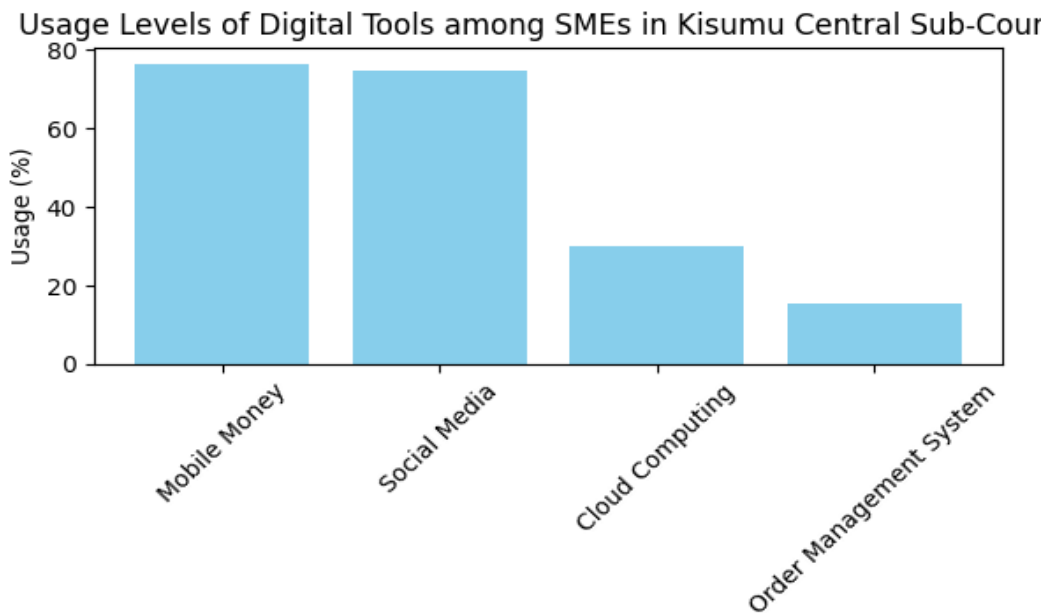
The study explored how four digital tools Mobile Money, Cloud Computing, Social Media, and Order Management Systems (OMS) affect strategic decision-making among SMEs in Kisumu Central Sub-County. The findings reveal adoption patterns, barriers, and the extent to which these tools contribute to strategic agility and informed business decisions.

**Table 2:** Usage Levels of Digital Transformation Tools

Digital Tool	Usage (%)
Mobile Money	76.6
Cloud Computing	29.9

#### Mobile Money and Strategic Decision-Making

Mobile money services were the most widely used digital tool among SMEs, with 76.6% adoption. Despite this high usage, statistical analysis revealed no significant correlation with strategic decision-making ( $r = -0.022$ ). Qualitative data indicated that mobile money is primarily used for operational convenience, such as facilitating payments and managing cash flow, rather than for strategic planning. Respondents emphasized its ease of use and widespread acceptance, but also noted its limited role in informing long-term business strategies. The findings align with the Diffusion of Innovation Theory, which explains rapid adoption of simple, low-cost technologies. However, the Theory of Reasoned Action suggests that while attitudes toward mobile money are positive, the lack of strategic intent limits its impact on decision-making.



**Figure 22:** Usage Levels of Digital Tools among SMEs in Kisumu Central Sub-County

### Cloud Computing and Strategic Decision-Making

Cloud computing had a relatively low adoption rate of 29.9%. The correlation with strategic decision-making was weak and statistically insignificant. Barriers to adoption included unreliable internet connectivity, high costs, and limited digital literacy. While some tech-savvy entrepreneurs acknowledged the potential of cloud tools for data storage and collaboration, the majority of SMEs lacked the infrastructure and skills to leverage these tools for strategic purposes. The Technological-Organizational-Environmental (TOE) framework supports this finding, emphasizing that technological readiness and organizational support are prerequisites for effective cloud adoption.

**Table 3:** Integration of Quantitative and Qualitative Findings

Digital Tool	Quantitative Result	Qualitative Insight	Overall Interpretation
<b>Mobile Money</b>	76.6% use; non-significant	<i>"We use M-Pesa daily for payments."</i>	Operational convenience, low strategic value
<b>Cloud Computing</b>	29.9% use; weak correlation (r=0.259)	<i>"Internet costs and training are barriers."</i>	Limited strategic effect due to constraints

### Summary of Findings

The findings of this study provide critical insights into how different digital transformation tools influence strategic decision-making among small and medium business start-ups (SMBSUs) in Kisumu Central Sub-County. While adoption rates vary across tools, their strategic impact is not uniform, revealing important gaps between operational convenience and strategic integration. Mobile money emerged as the most widely adopted digital tool, with 76.6% of SMEs reporting its use. This popularity reflects the entrenched role of mobile payment platforms such as M-Pesa in Kenya's business ecosystem. However, despite its ubiquity, mobile money contributes minimally to strategic decision-making. Statistical analysis revealed no significant correlation with strategic decision-making ( $r = -0.022$ ), and qualitative evidence reinforced this finding. Respondents consistently described mobile money as a tool for transactional efficiency – facilitating payments, managing cash flow, and reducing reliance on traditional banking systems. While these functions enhance operational convenience, they do not translate into data-driven insights or long-term planning. The absence of strategic integration suggests that mobile money remains a tactical rather than strategic resource, limiting its potential to influence high-level business decisions.

Cloud computing demonstrated similarly limited strategic influence, primarily due to low adoption rates. Only 29.9% of SMEs reported using cloud-based platforms, and correlation analysis indicated a weak, statistically insignificant relationship with strategic decision-making ( $r = 0.259$ ). Qualitative findings highlighted persistent barriers, including unreliable internet connectivity, high subscription costs, and low levels of

digital literacy among business owners and staff. Even among adopters, cloud tools were often used for basic data storage rather than advanced analytics or collaborative planning. These constraints underscore the importance of organizational readiness and infrastructural support in realizing the strategic benefits of cloud computing. Without targeted interventions to improve connectivity and digital skills, cloud technology will remain underutilized in Kisumu's SME sector.

## CONCLUSION

The study concludes that while digital adoption among SMEs in Kisumu is widespread, its strategic integration remains uneven. Tools like mobile money are widely used. However, cloud computing remains constrained by infrastructural and skill-related barriers. These findings underscore the need for capacity-building initiatives, improved connectivity, and policy interventions to promote the strategic use of digital tools. By bridging the gap between adoption and integration, SMEs can leverage technology not only for operational efficiency but also for sustainable growth and competitiveness.

## RECOMMENDATIONS

The findings of this study underscore the need for SMEs in Kisumu Central Sub-County to transition from using digital tools primarily for operational convenience to leveraging them for strategic decision-making. Mobile money, while widely adopted for transactional efficiency, remains underutilized as a source of strategic insight. To unlock its potential, SMEs should integrate mobile money platforms with complementary tools such as Order Management Systems (OMS). This integration would enable businesses to combine cash flow data with market intelligence, thereby improving forecasting and resource planning. Training programs targeting founders and co-founders can further enhance their ability to interpret transactional data for strategic purposes.

Cloud computing adoption remains constrained by infrastructural limitations, high costs, and low digital literacy. To overcome these barriers, SMEs should prioritize investment in affordable cloud solutions supported by reliable internet connectivity. Equally important is capacity building through targeted training programs aimed at improving digital skills among business owners and staff. Enhanced cloud adoption would facilitate real-time collaboration, secure data storage, and informed decision-making, positioning SMEs to compete effectively in dynamic markets.

From a policy perspective, county and national governments should incentivize digital adoption through grants and subsidies, particularly in sectors such as retail, hospitality, and agribusiness. Expanding access to affordable internet and establishing mentorship hubs will strengthen the enabling environment for digital transformation. Public-private partnerships can play a pivotal role in piloting tailored digital solutions for SMEs in devolved regions. Future research should explore longitudinal patterns of digital adoption, regional disparities, and operational challenges faced by frontline staff to provide a more comprehensive understanding of digital transformation dynamics.

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