

Embracing Digital Financial Tools for SMEs Growth and Sustainability in Uganda

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Abstract

Small and medium-sized enterprises (SMEs) play a critical role in Uganda's economic development, accounting for over 90% of the private sector and contributing significantly to employment and income generation. However, many SMEs face persistent challenges related to poor financial management, limited access to credit, and informal operations. The rise of digital financial tools such as mobile money platforms (MTN MoMo), digital bookkeeping systems (QuickBooks), and SMEs-focused platforms (TradiPulse) offers a unique opportunity to transform how these enterprises manage resources, make decisions, and scale operations in both urban and rural contexts.

Keywords: SMEs, digital financial tools, mobile money, financial inclusion, digital accounting software.

1. Introduction

Small and medium-sized enterprises (SMEs) are widely recognized as engines of economic growth and development, particularly in emerging economies. In Uganda, SMEs account for approximately 90% of the private sector, contribute over 20% to GDP, and employ more than 2.5 million people, representing over 80% of Uganda's labor force (Uganda Investment Authority [UIA], 2022; UBOS, 2021). Despite their importance, most SMEs in Uganda operate informally and face critical challenges such as limited access to credit, poor financial record-keeping, low digital adoption, and weak business resilience (World Bank, 2021). Digital financial tools such as mobile money services (MTN MoMo, Airtel Money), cloud-based accounting software (QuickBooks), and SME-focused platforms (TradiPulse) are increasingly emerging as viable solutions to improve business management, financial inclusion, and market access for SMEs. According to the Bank of Uganda (2023), mobile money transactions in Uganda reached UGX 164 trillion in 2022, demonstrating the growing reliance on digital financial ecosystems. The adoption of mobile money has shown a positive correlation with business performance, including increased sales and improved customer convenience (GSMA, 2022).

However, while these tools are available, adoption among SMEs remains low, particularly outside major urban centers. Studies by UNCDF (2022) and FSD Uganda (2023) indicate that fewer than 30% of SMEs actively use digital accounting or fintech solutions, and many lack the skills or infrastructure to benefit

fully from them. There is thus a critical need to understand how digital financial tools can be better integrated into SME operations, especially in post-conflict and underserved regions of Uganda, where access to financial services and digital infrastructure remains limited.

This paper explores the potential of digital financial tools to enhance SME growth and sustainability in Uganda. It assesses usage patterns, barriers to adoption, and the perceived value of these technologies among small business owners, with a particular focus on how platforms like MoMoPay, TradiPulse, and QuickBooks can support inclusive economic development. By analyzing both opportunities and challenges, the study aims to inform strategies for scaling digital adoption among SMEs in Uganda in line with the country's Digital Transformation Roadmap 2023–2027.

1.1 Problem Statement

Despite the critical role that small and medium-sized enterprises (SMEs) play in Uganda's socio-economic development, a significant proportion continue to operate with limited access to formal financial systems and digital tools. According to the Uganda Investment Authority (2022), over 60% of SMEs in Uganda operate informally, lacking reliable accounting systems, access to credit, and consistent customer management practices. This informality undermines their ability to grow, secure financing, or scale beyond local markets. While mobile money platforms such as MTN MoMo and Airtel Money have become widely used for personal transactions with the Bank of Uganda (2023) reporting over UGX 164 trillion in mobile money transaction value in 2022 the integration of such platforms into formal business operations remains relatively low among SMEs. A study by FSD Uganda (2023) found that only 28% of SMEs in Uganda use any form of digital accounting or enterprise management software, such as QuickBooks or Tally. This is attributed to barriers such as low digital literacy, limited awareness, high perceived costs, and lack of training (UNCDF, 2022).

Digital platforms specifically designed for SMEs like TradiPulse, which aims to formalize record-keeping, customer engagement, and sales tracking are still in the early stages of adoption and awareness. This suggests a critical gap between availability and actual utilization of digital financial tools among SMEs, especially in rural or underserved regions where infrastructure, connectivity, and skills are even more constrained (World Bank, 2021). The lack of digital integration has far-reaching implications, including reduced access to credit, poor business planning, and vulnerability to economic shocks especially for youth- and women-led enterprises. Without targeted efforts to promote the adoption of accessible, affordable, and user-friendly digital financial tools, SMEs risk remaining locked out of the broader digital economy, limiting their contribution to Uganda's Vision 2040 and Digital Transformation Roadmap 2023–2027.

This study addresses the need to understand why the uptake of digital financial tools among SMEs remains low, and how these tools can be effectively harnessed to enhance business performance, financial inclusion, and long-term sustainability.

1.2 Research Questions

1. What is the current level of awareness and utilization of digital financial tools among SMEs in Uganda?

2. What are the key challenges and barriers faced by SMEs in adopting digital financial tools?
3. How do SMEs perceive the impact of digital tools on their financial and operational performance?
4. What strategies can enhance the adoption and effective use of digital financial tools among SMEs?

1.3. Objectives

1.3.1 General Objective

To examine the adoption, challenges, and impact of digital financial tools on the growth and sustainability of small and medium-sized enterprises (SMEs) in Uganda.

1.3.2 Specific Objectives

1. To assess the level of awareness and usage of digital financial tools like mobile money, digital accounting software, SME platforms among SMEs in Uganda.
2. To identify the barriers affecting the adoption of digital financial tools among SMEs.
3. To evaluate the perceived benefits and impact of digital financial tools on financial management, customer engagement, and business performance.
4. To explore strategies that can promote greater uptake of digital financial solutions, particularly in underserved and rural regions.

1.3.3 Hypotheses of the Study

H₁: There is a significant relationship between the level of awareness of digital financial tools and their adoption among SMEs in Uganda.

H₂: SMEs that adopt digital financial tools such as mobile money, QuickBooks, TradiPulse show significantly better financial management compared to those that do not.

H₃: Lack of digital literacy, high perceived costs, and limited internet access significantly hinder the adoption of digital financial tools among SMEs.

2. Methodology

2.1 Study Design

This study adopted a quantitative cross-sectional survey design, which is widely used to capture numerical data at a single point in time and explore relationships among variables (Creswell & Creswell, 2018). The design was selected to examine the adoption, usage, and impact of digital financial tools specifically TradiPulse, MoMoPay, and QuickBooks among small and medium-sized enterprises (SMEs) in Uganda. A cross-sectional approach is appropriate because it enables statistical analysis of associations between key variables such as awareness, adoption levels, perceived benefits, and business performance indicators (Babbie, 2020).

Although primarily quantitative, this design is embedded within a pragmatist paradigm, which emphasizes methodological flexibility to best address the research questions at hand (Ivankova & Plano Clark, 2018). Pragmatism supports the integration of quantitative evidence with qualitative insights where necessary, allowing for a more comprehensive understanding of SMEs' digital adoption behavior. This approach is particularly relevant in diverse contexts like Uganda, where structural, technological, and socio-economic factors simultaneously influence SME decision-making (Adhikari & Timsina, 2024; Harris, 2022).

By aligning with a cross-sectional survey strategy under a pragmatist stance, the study ensures both empirical rigor and practical relevance. While critics argue that pragmatism can be interpreted as a "paradigm of convenience" (Hampson & McKinley, 2023), its strength lies in prioritizing the research problem over strict allegiance to either positivist or interpretivist traditions. In this study, it provides a robust framework for evaluating how SMEs in Uganda engage with digital financial tools in pursuit of growth and sustainability.

2.2 Study Population

The target population included owners and managers of registered SMEs operating in selected districts across Northern Uganda Gulu city. According to the Uganda Bureau of Statistics (UBOS, 2021), there are over 1.1 million registered SMEs in the country, the majority of which are in the trade, services, and manufacturing sectors. The study focused on both urban and rural SMEs to capture variations in digital adoption and access.

2.3 Sample Size and Sampling Technique

Using Krejcie and Morgan's (1970) sample size determination table for a population 384, minimum sample of 191 SMEs was determined. A stratified random sampling technique was employed to ensure representation across Northern regions of Uganda, and between urban and rural enterprises. Within each stratum, SMEs were selected using simple random sampling.

2.4 Data Collection Methods and Instruments

Data was collected using a structured questionnaire administered through the KoboCollect mobile application designed to capture quantitative information on SMEs' adoption and usage of digital financial tools. The instrument was divided into four sections: (i) demographic and business profile of the SME, (ii) awareness and usage of tools such as MTN MoMo, QuickBooks, and TradiPulse, (iii) perceived challenges and barriers to adoption, and (iv) the perceived impact of digital tools on financial management and overall business performance. The use of structured questionnaires is a widely accepted method in SME and technology adoption studies, as it enables systematic data collection across diverse respondents (Creswell & Creswell, 2018; Saunders, Lewis, & Thornhill, 2019).

The questionnaire was administered primarily through face-to-face distribution and online surveys to reach a broad spectrum of SMEs in both urban and peri-urban contexts. This dual approach was adopted to accommodate differences in internet access and digital literacy among participants, ensuring inclusivity (World Bank, 2020). To enhance validity and reliability, the tool was pretested with a purposive sample of 20 SMEs in Gulu City. Feedback from the pretest informed revisions to improve

clarity, relevance, and wording of items. Internal consistency of the Likert-scale items was further checked using Cronbach's alpha, with coefficients above the 0.70 threshold considered acceptable (Tavakol & Dennick, 2011).

Although this study was primarily quantitative, open comment sections were included in the questionnaire to capture respondents' additional perspectives. These qualitative insights were used to supplement the quantitative findings, providing contextual depth to issues such as barriers to adoption and perceived benefits of digital tools.

2.5 Data Analysis

Quantitative data collected through KoboCollect were exported to Microsoft Excel for initial cleaning and subsequently analyzed using the Statistical Package for the Social Sciences (SPSS) Version 26. Data coding was carried out to ensure consistency and accuracy before statistical analysis. Descriptive statistics including frequencies, percentages, and means were used to summarize demographic characteristics of SMEs, such as business size, years of operation, and sector of engagement. Adoption rates of digital financial tools like MTN MoMo, QuickBooks, and TradiPulse were similarly summarized to highlight patterns of awareness and usage among respondents.

To address the study's hypotheses and research questions, inferential statistical tests were applied. Specifically, chi-square tests were used to examine associations between categorical variables such as business size and tool adoption; Pearson correlation was employed to measure the strength and direction of relationships between awareness, adoption, and perceived impact; and linear regression analysis was conducted to assess the predictive influence of digital tool usage on SME performance. Statistical significance was tested at the 95% confidence level ($p < 0.05$).

The results were presented in both tabular and graphical formats to enhance clarity and facilitate interpretation. This analytical strategy enabled the study to not only describe adoption patterns but also test relationships and predictive models, offering robust insights into the role of digital financial tools in SME sustainability.

2.6 Ethical Considerations

The study adhered to ethical research standards. Participation was voluntary, and informed consent was obtained from all respondents. Anonymity and confidentiality were maintained throughout. Ethical approval was sought from a recognized Institutional Review Board (IRB) prior to data collection.

3. Results

3.1 Demographic Characteristics of Respondents

The study surveyed a total of 384 respondents from SMEs across Uganda, ensuring representation from the four major regions of the country. The Central region accounted for the highest proportion of respondents (34.1%), followed by the Western region (26.6%), the Eastern region (21.1%), and the Northern region (18.2%). This distribution highlights the national scope of the study and reflects Uganda's economic activity spread across regions. In terms of gender, the majority of respondents were male (58.3%), while 41.7% were female. The age distribution showed that 46.7% of respondents were

With regard to business type, 41.7% of SMEs were engaged in the services sector, 33.3% operated in retail, while 25.0% were involved in manufacturing. In terms of educational attainment, many respondents (25.0% had attained tertiary education, while 66.7%) had completed secondary education, and 8.3% had only primary education.

These findings suggest that Uganda's SME sector is largely driven by a relatively young, educated workforce, concentrated in service-oriented enterprises. Regional representation demonstrates that although economic activity is strongest in the Central region home to the capital city Kampala SMEs across all regions actively contribute to the country's economic landscape

Table 1: Demographic Characteristics of Respondents

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	224	58.3
	Female	160	41.7
Age Group	18–25 years	64	16.7
	26–35 years	179	46.7
	36–45 years	96	25.0
	46+ years	45	11.6
Business Type	Retail	128	33.3
	Services	160	41.7
	Manufacturing	96	25.0
Education Level	Primary	32	8.3
	Secondary	256	66.7
	Tertiary	96	25.0

3.2 Awareness and Adoption of Digital Financial Tools

The findings indicate high levels of awareness of digital financial tools among SMEs in Uganda. A significant majority (85%) of respondents reported awareness of mobile money platforms such as MTN MoMo and Airtel Money, confirming the dominance of mobile money services as the primary financial innovation in the country. In contrast, awareness of digital bookkeeping software (e.g., QuickBooks, Tally) was more moderate, with 62% of SMEs reporting knowledge of such tools; however, only 28% actively used them in their business operations. Awareness of SME-specific solutions like TradiPulse was notably low, with only 14% of respondents indicating familiarity with the platform.

In terms of adoption, mobile money services were the most widely used, reflecting their accessibility and integration into Uganda's financial ecosystem. Conversely, the uptake of bookkeeping software and SME-focused platforms remains limited, suggesting barriers such as cost, digital literacy gaps, and lack of tailored training for SME owners.

Table 2: Awareness and Adoption of Digital Financial Tools

Tool Used	Users (n)	Percentage (%)	Common Uses
Mobile Money (MoMoPay, Airtel Money)	326	85.0%	Customer payments, deposits
QuickBooks/Tally	107	27.9%	Bookkeeping, financial reporting
TradiPulse	54	14.1%	Sales tracking, business analytics
Excel/Manual	96	25.0%	Inventory management, budgeting
None	32	8.3%	Not using any digital tools

3.3 Perceived Benefits of Digital Financial Tools

The findings show that SMEs that had adopted digital financial tools experienced a wide range of benefits. A substantial proportion of respondents (71%) reported improved tracking of sales and expenses, while 65% indicated that digital tools facilitated easier access to credit due to improved financial records. Additionally, 59% of SMEs observed enhanced customer service and faster transaction speeds. Importantly, SMEs that integrated both mobile money platforms and digital accounting tools reported significantly higher business performance (mean = 4.1/5) compared to their counterparts who had not adopted such tools (mean = 2.9/5), a difference that was statistically significant ($p < 0.05$).

These results suggest that adoption of digital financial tools does not only improve operational efficiency but also strengthens SMEs' credibility with financial institutions, thereby enhancing their opportunities for growth and sustainability.

Table 3: Perceived Benefits of Digital Financial Tools

Benefit	Strongly Agree (n, %)	Agree (n, %)	Neutral (n, %)	Disagree (n, %)	Strongly Disagree (n, %)
Improved record-keeping	230 (59.9%)	115 (29.9%)	31 (8.1%)	8 (2.1%)	0 (0.0%)
Faster transactions	269 (70.1%)	77 (20.1%)	19 (4.9%)	12 (3.1%)	7 (1.8%)
Better financial visibility	211 (55.0%)	115 (29.9%)	38 (9.9%)	12 (3.1%)	8 (2.1%)
Increased customer trust	192 (50.0%)	134 (34.9%)	38 (9.9%)	15 (3.9%)	5 (1.3%)

3.4 Barriers to Adoption of Digital Financial Tools

Despite the potential benefits, several barriers hindered the adoption of digital financial tools among SMEs in Uganda. The most frequently reported challenge was lack of digital skills or training, cited by 246 respondents (64%), highlighting a persistent digital literacy gap among small business owners. High costs of acquiring and maintaining digital solutions were reported by 181 SMEs (47%), suggesting affordability remains a critical concern. Additionally, 158 respondents (41%) cited limited internet access or smartphone availability, a challenge that disproportionately affects rural enterprises. Finally, 112 SMEs (29%) expressed skepticism or lack of trust in digital systems, reflecting concerns about data privacy and fraud.

These findings align with FSD Uganda (2023), which emphasized digital literacy, affordability, and infrastructure gaps as leading constraints to SME digitization efforts.

Table 4: Barriers to Adoption of Digital Financial Tools

Barrier	Frequency (n)	Percentage (%)
Limited digital literacy	246	64.1%
High cost of tools/subscriptions	181	47.1%
Limited internet/equipment	158	41.1%
Trust and data privacy concerns	112	29.2%
No time to learn new systems	19	4.9%

4. Discussion of Results

4.1 Demographic Characteristics of Respondents

The survey covered 384 SMEs across Uganda, providing a broad representation of the entrepreneurial landscape. As shown in Table 1, the gender distribution revealed that 58.3% of respondents were male, while 41.7% were female. This gender gap aligns with findings by UBOS (2023), which reported that men still dominate SME ownership in Uganda, although female entrepreneurship is steadily increasing due to greater access to mobile financial services. Women-owned SMEs are often concentrated in retail and informal trade, where mobile money platforms such as MTN MoMo have proven especially transformative (UNCDF, 2022). In terms of age, the largest proportion of respondents (46.7%) fell within the 26–35 years' category, followed by 25.0% aged 36–45 years. This suggests that SMEs in Uganda are largely run by young and middle-aged adults, consistent with Uganda's national demographic profile, where over 75% of the population is below the age of 35 (World Bank, 2023). Younger entrepreneurs are more likely to experiment with digital solutions like TradiPulse and QuickBooks compared to older business owners, who may face barriers in digital adoption due to limited exposure and digital literacy (FSD Uganda, 2023).

The distribution by business type shows that services (41.7%) and retail (33.3%) dominate the SME sector, while manufacturing accounts for 25%. This reflects Uganda's SME ecosystem, where most enterprises are service- or trade-oriented with limited value-addition through manufacturing (UIA, 2022). The service and retail sectors are particularly suited for digital financial tools, as they require efficient payment systems, transaction tracking, and inventory management. Regarding education, the majority of respondents (66.7%) had attained secondary-level education, while 25% had tertiary education and only 8.3% had primary education. This indicates that a significant proportion of SME owners possess at least basic literacy, which is a prerequisite for adopting digital technologies. Studies by GSMA (2022) emphasize that literacy and numeracy are critical enablers of mobile money and digital tool usage among SMEs. However, the relatively low proportion of tertiary-educated respondents suggests that advanced digital accounting tools like QuickBooks may face limited uptake unless supported by training and awareness programs.

Overall, the demographic analysis highlights that SMEs in Uganda are youth-driven, male-dominated, and largely concentrated in trade and services, with moderate educational backgrounds. These characteristics have important implications for digital financial tool adoption: while youthful entrepreneurs are more receptive to innovation, limited higher education and persistent gender disparities may slow widespread uptake without targeted interventions in training, affordability, and inclusivity.

4.2 Awareness and Adoption of Digital Financial Tools

The results in Table 2 reveal that awareness and adoption of digital financial tools among SMEs in Uganda remains uneven, with mobile money services leading by a significant margin. A large majority (85%) of SMEs reported using mobile money platforms such as MTN MoMo and Airtel Money. This finding aligns with GSMA (2023), which reported that Uganda is among the top five mobile money markets globally, with over 35 million registered accounts. The widespread adoption can be attributed to the affordability, accessibility, and reliability of mobile money, especially for small businesses in retail and services that rely heavily on cashless transactions for customer payments and deposits (FSD Uganda, 2023).

However, uptake of digital accounting and bookkeeping tools was comparatively lower. Only 27.9% of SMEs used software such as QuickBooks or Tally. This is consistent with UIA (2022), which noted that most SMEs in Uganda still depend on manual bookkeeping methods. The limited usage may reflect barriers such as cost, lack of training, and limited internet access. Nevertheless, SMEs that adopted accounting tools demonstrated stronger financial management capacity, particularly in generating reports for loan applications and credit access (World Bank, 2022). Adoption of SME-focused tools such as TradiPulse was even lower, with only 14.1% of SMEs reporting usage. This suggests that while such innovations exist, their penetration is still at an early stage. This gap highlights both a market opportunity for local innovators and a need for targeted awareness campaigns to demonstrate the value of such tools in sales tracking and business analytics.

Interestingly, 25% of SMEs still relied on Excel or manual methods for financial management. While this reflects a level of digitization, it underscores a preference for simpler, low-cost solutions, especially

among SMEs with lower digital literacy. Furthermore, 8.3% of respondents reported not using any digital financial tools at all, which indicates persistent gaps in ICT infrastructure and knowledge. Therefore, while mobile money has achieved near-universal adoption, the uptake of more sophisticated digital tools such as QuickBooks and TradiPulse remains limited. This imbalance suggests that Uganda's SMEs are still in the early stages of digital financial transformation. Scaling adoption will require addressing barriers such as digital literacy, affordability, and localized support systems, as also emphasized by UNCDF (2023).

4.3 Perceived Benefits of Digital Financial Tools

The findings reveal that digital financial tools are associated with several operational and strategic benefits for SMEs in Uganda. A majority of respondents strongly agreed that these tools improved record-keeping (59.9%) and transaction efficiency (70.1%). This indicates that digital systems such as mobile money platforms and bookkeeping software significantly reduce the inefficiencies of manual processes, aligning with prior studies that highlight digitization as a pathway to improved financial management (GSMA, 2022; FSD Uganda, 2023).

Beyond efficiency, 55% of SMEs strongly agreed that digital tools enhanced financial visibility, enabling better monitoring of sales, expenses, and cash flow. This finding suggests that digital platforms are not only transactional but also strategic, supporting data-driven decision-making. Improved visibility can enhance SMEs' credibility with lenders, increasing their chances of accessing formal credit facilities. Another critical benefit was increased customer trust, strongly agreed upon by 50% of respondents. This reflects how transparent and traceable digital transactions can build stronger customer relationships, especially in contexts where informal practices dominate. Trust is a crucial component of business sustainability, and its enhancement through digital adoption indicates broader socio-economic value.

The cumulative benefits were further validated through comparative analysis, which showed that SMEs integrating both mobile money and digital accounting tools reported significantly higher performance scores compared to non-users (mean = 4.1 vs. 2.9, $p < 0.05$). This reinforces the hypothesis that digital tools contribute not only to operational efficiency but also to overall business performance and resilience. These results are consistent with evidence from other African contexts. In Kenya, where mobile money penetration through M-Pesa exceeds 90%, SMEs have reported significant gains in customer convenience, sales growth, and reduced operational risks (Jack & Suri, 2016). Similarly, studies in Nigeria indicate that SMEs using digital accounting tools such as QuickBooks experience improved creditworthiness, as lenders increasingly rely on digital financial records to assess loan eligibility (Okundaye et al., 2019). Rwanda provides another useful parallel, where government-led digitalization programs have enabled SMEs to streamline payments and enhance tax compliance, contributing to both business growth and national revenue mobilization (BNR, 2021).

These cross-country comparisons suggest that the benefits observed in Uganda are part of a broader continental trend. However, Uganda's relatively lower adoption rates particularly for accounting software and SME-specific platforms highlight the need for stronger institutional support, training, and policy interventions to replicate the transformative outcomes seen in peer countries.

In conclusion, digital adoption stands out as a critical driver of SME competitiveness in Uganda. Targeted interventions that expand access to affordable digital tools, strengthen digital literacy, and build SME capacity could amplify these benefits, enabling businesses to scale sustainably in line with the national Digital Transformation Roadmap (2023–2027).

4.4 Recommendations

The study recommends strengthening digital literacy programs for SMEs to enhance their ability to effectively use financial technologies. Technology providers should design affordable, user-friendly tools with flexible pricing models, while policymakers focus on expanding internet access, improving smartphone penetration, and enforcing data privacy protections to build trust. Financial institutions are also encouraged to leverage digital records to ease credit access for SMEs, further promoting adoption.

4.5 Conclusion

In conclusion, digital financial tools present a vital opportunity for SMEs in Uganda to improve efficiency, transparency, and competitiveness. Despite challenges such as cost, limited skills, and infrastructure gaps, the findings show that with supportive interventions, SMEs can fully harness digital transformation to drive sustainable growth and contribute significantly to national economic development.

5. List of Abbreviations

- SMEs** – Small and Medium-Sized Enterprises
- GDP** – Gross Domestic Product
- UIA** – Uganda Investment Authority
- UBOS** – Uganda Bureau of Statistics
- MTN MoMo** – Mobile Telecommunications Network Mobile Money
- GSMA** – Global System for Mobile Communications Association
- UNCDF** – United Nations Capital Development Fund
- FSD** – Financial Sector Deepening
- ICT** – Information and Communication Technology
- IRB** – Institutional Review Board
- MSMEs** – Micro, Small, and Medium Enterprises
- UGX** – Ugandan Shilling (currency code)
- SPSS** – Statistical Package for the Social Sciences

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