

DIGITAL FINANCIAL INCLUSION AND BUSINESS GROWTH: A STUDY OF MICRO, SMALL AND MEDIUM ENTERPRISE OPERATORS IN NIGER STATE

**Henry DikoKoce PhD¹ Alfa Mohammed Danlami, Ph.D² Haruna Tanimu Mohammed,
Ph.D³**

¹Department of Marketing

²Department of Social Sciences

³Department of Business Administration and Management,
The Federal Polytechnic, Bida, Niger State, Nigeria

GSM: +2348036268283

Corresponding Author Email: E-mail: mohammed.haruna@fedpolybida.edu.ng

Abstract

DOI: <https://doi.org/10.57233/gujed.v3i2.02>

Digital financial services—particularly mobile banking, mobile money, and fintech platforms are increasingly recognized as critical enablers of MSME performance by reducing transaction costs, expanding market access, and facilitating credit. However, this study examines the relationship between digital financial inclusion and the growth of micro, small, and medium enterprises (MSMEs) in Niger State, Nigeria. Using a quantitative survey design, data were collected from 378 MSME operators across the state's 25 local government areas, selected through multistage sampling. Structured questionnaires measured access to digital finance and business outcomes, with validity confirmed through pilot testing and reliability established via Cronbach's alpha ($\alpha > .70$). Regression analysis revealed that digital financial inclusion significantly enhances MSME sales growth, with the model explaining 58.5% of performance variance ($R^2 = .585$, $F(3,374) = 111.756$, $p < .001$). Mobile banking showed the strongest effect ($\beta = .412$, $p < .001$), followed by mobile money ($\beta = .365$, $p < .001$) and fintech platforms ($\beta = .298$, $p < .001$). It was concluded that the findings demonstrate that integrated digital finance ecosystems are vital to MSME resilience, liquidity, and expansion. The study recommends that banks and telecom policy providers should double their efforts to strengthen mobile banking infrastructure, enhance mobile money usability, and promote fintech adoption alongside financial literacy and consumer protection measures.

Keywords: Digital, Financial inclusion, Business, Growth, MSMEs

1. Introduction

Digital financial services are transforming how micro, small, and medium-sized enterprises (MSMEs) access markets, receive payments, and secure financing. This goes to reducing transaction barriers, enabling e-commerce and remote delivery, and creating data trails that

support credit, tools such as mobile banking, mobile money, and fintech platforms have boosted MSME sales globally (World Bank, 2023; GSMA, 2024). Mobile money merchant payments reached about US\$74 billion in 2023, underscoring the growing role of wallet-to-business transactions in expanding market reach (GSMA, 2024). Fintech innovations—such as open APIs, instant payments, and digital credit—further drive revenue growth and expansion (World Bank, 2024).

In Nigeria, digital inclusion is advancing. The Central Bank's open-banking policy (CBN, 2023), Payment Service Banks like MoMo (MTN) and SmartCash PSB (Airtel) (Paystack, 2022; SmartCash PSB, 2024), and rising broadband penetration of 43.53% by March 2024 (NCC, 2024) are widening access. MSMEs, which contribute over 46% of GDP and 88% of jobs, remain constrained by financing gaps and infrastructure challenges (PwC Nigeria, 2024).

In Niger State, digital finance could expand markets, quicken payments, and sustain growth. However, insecurity in LGAs such as Rafi, Rijau, Wushishi, and Mashegu disrupts trade and reduces operating hours (Ajiboye et al., 2024). High electricity costs, unreliable power, and limited credit access further restrict growth (PricewaterhouseCoopers Nigeria, 2024). Thus, while digital finance offers potential, insecurity, power shortages, and weak connectivity shape its effectiveness. This study investigates how mobile banking, mobile money, and fintech platforms influence MSME sales growth in Niger State.

2. Literature Review

This study draws on conceptual, theoretical, and empirical literature to explain how mobile banking, mobile money, and fintech platforms influence MSME sales growth.

2.1 Conceptual Review

2.1.1 Access to Mobile Banking

Mobile banking involves using mobile devices to access formal financial services—deposits, transfers, bill payments, and credit. It extends banking beyond physical branches, especially in developing economies (Nguyen & Dang, 2020). Unlike mobile money, it is bank-led and requires an account with a licensed institution. Research shows mobile banking improves SMEs' financial management by lowering transaction costs, reducing information asymmetry, and enabling digital credit (Asiimwe & Lwanga, 2021; Klapper et al., 2025).

2.1.2 Access to Mobile Money Services

Mobile money stores electronic value on phones, enabling transfers, deposits, and payments without a bank account. It is telco-driven and supported by agent networks that provide cash-in/cash-out services (GSMA, 2024). For many in developing regions, it represents first-time access to finance. Studies confirm its role in stabilizing revenues, improving resilience, and expanding markets by allowing secure, low-cost transactions (Turinawe, 2023). For MSMEs, it

facilitates customer collections, supplier payments, and operations in low-infrastructure settings (Chironga et al., 2020).

2.1.3 Access to Fintech Platforms

Fintech firms deliver services such as payments, lending, insurance, and investments through integrated digital ecosystems (EIB, 2024). Unlike bank- or telco-led models, fintechs combine multiple functions—analytics, instant payments, and alternative credit scoring—into one platform. For MSMEs, fintech platforms enable faster customer acquisition, efficient payment processing, and new credit opportunities through transaction-based data models (Song et al., 2023).

2.1.4 Sales Growth of MSMEs

Sales growth, often measured by revenue increases and market expansion, reflects competitiveness and sustainability (Afolabi et al., 2021). Digital financial inclusion supports growth by easing payments, improving cash flow, and unlocking working capital (World Bank, 2023). Mobile banking enhances financial control, mobile money expands transaction reach, and fintech platforms combine these benefits by connecting MSMEs to digital markets and credit access (Song et al., 2023).

2.2 Theoretical Review

2.2.1 Diffusion of Innovations (DOI)

Rogers' (1962) DOI explains technology adoption through relative advantage, compatibility, complexity, trialability, and observability. Recent work confirms its relevance for digital finance (Alshahrani et al., 2022). For MSMEs, adoption depends on perceived benefits and usability of mobile banking, mobile money, and fintech, with outcomes varying across urban and rural Niger State (Okeke, 2021).

2.2.2 Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)

UTAUT2 (Venkatesh et al., 2012) emphasizes performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit. Studies extend it with trust and risk to explain financial technology adoption (Dwivedi et al., 2020; Boateng et al., 2022). For MSMEs, beliefs about sales benefits, ease of use, peer influence, and infrastructure shape adoption.

2.2.3 Resource-Based View (RBV)

Barney's (1991) RBV highlights competitive advantage through valuable, rare, inimitable, and non-substitutable resources. In the digital era, fintech capabilities—payment integration, data-driven lending, and platform partnerships—can be strategic resources (Ferreira et al., 2020). Yet, critiques note RBV's difficulty in capturing dynamic environments (Kozlenkova et al., 2021;

Wilden & Teece, 2023). For MSMEs, leveraging digital tools requires embedding them into operations such as invoicing, collections, and online marketplaces to drive sales growth.

Together, DOI and UTAUT2 explain adoption, while RBV clarifies how digital tools translate into sustained performance. This supports a pathway from access → adoption → capability → sales growth, moderated by infrastructure and skills.

2.3 Empirical Review

Evidence from Africa shows digital finance enhances SME performance, though outcomes vary. In Cameroon, mobile money improved cash flow and resilience but did not directly measure sales growth (Talom&Tengeh, 2020; Amoah &Korankye, 2024). In Nigeria, fintech adoption in Oyo State was linked to SME growth, particularly sales, though the study was region-specific (Akanbi, 2022; Osho & Ibrahim, 2025). Research on women-owned firms in Lagos found mobile banking, mobile money, and fintech boosted revenues, but results were limited to urban, female-led businesses (Konte& Tetteh, 2022). Given Niger State's rural and peri-urban context, weaker infrastructure, and security constraints, further study is necessary. Overall, evidence supports digital finance as a driver of MSME sales growth while highlighting contextual gaps.

3. Materials and Methods

This study adopts a quantitative survey design to test the relationships between digital financial inclusion and MSME sales growth in Niger State. The population comprises 454,000 registered MSMEs across the state's 25 LGAs (Compendium, 2021). Using Yamane's (1967) formula at a 5% precision level produced a target sample of 400 respondents, proportionally allocated across the three senatorial zones (Zone A = 82; Zone B = 251; Zone C = 67) and selected by multistage sampling (stratification by zone/urbanicity, random selection of markets/clusters within strata, and systematic selection of enterprises within clusters). Primary data are collected with a structured questionnaire administered to owners/managers; items use a 5-point Likert scale (Strongly Disagree = 1 to Strongly Agree = 5). Instrument validity was checked through a pilot (10% of sample = 40 respondents) and expert review, and reliability was confirmed by Cronbach's alpha coefficients for key scales (all $\alpha > 0.70$), indicating acceptable internal consistency for use in analysis.

Data analysis proceeds from descriptive statistics to inferential testing using SPSS. Reliability and construct validity are assessed via Cronbach's alpha and exploratory/confirmatory factor analysis for multi-item constructs. While hypothesis testing uses linear regression with the model specification:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y = Sales growth of MSMEs

X1 = Access to mobile banking

X2 = Access to mobile money services

X3 = Access to fintech platforms

β_0 = Intercept

$\beta_1, \beta_2, \beta_3$ = Regression coefficients

ϵ = Error term

The null hypothesis tested is: Ho1: Access to mobile banking, mobile money services, and fintech platforms has no combined significant effect on the sales growth of MSMEs in Niger State.

5. Results and Discussions

5.1 Data Presentation

In this section, we present data collated, analysed and interpreted and also results reported with coefficient estimates, standard errors, significance levels, R^2 , and substantive interpretations (marginal effects) to show if and how access to digital financial services relates to MSME sales growth in Niger State.

Table 4.1: Rate of Response by the respondents

S/NO	Response	Respondents	Percentage (%)
1	Returned	378	94.5
2	Not Returned	22	5.5
	Total Distributed	400	100

Source: Field Survey, 2025

Out of the 400 questionnaires distributed to MSME owners/managers in Niger State, 378 were successfully returned, representing a 94.5% response rate. Only 22 questionnaires (5.5%) were not returned. A response rate of 94.5% is exceptionally high for survey research, far above the commonly acceptable threshold of 60–70% in social science studies. This indicates that the respondents showed strong willingness to participate, and the study was able to gather sufficient primary data for reliable statistical analysis.

Table 4.2: Consent & Background Information

Item	Category	Frequency (n=378)	Percentage (%)
A1. Consent	Yes	378	100.0

	No	0	0.0
A4. LGA (Senatorial Zone)	Zone A (82 targeted)	76	20.1
	Zone B (251 targeted)	240	63.5
	Zone C (67 targeted)	62	16.4
A7. Role of Respondent	Owner	285	75.4
	Manager	72	19.0
	Other (e.g., Supervisor, Sales Rep.)	21	5.6

Source: Field Survey, 2025

The results in Table 4.2 indicate that all 378 respondents consented to participate in the study, representing 100% of valid questionnaires returned. This demonstrates full compliance with ethical standards, as participation was voluntary and based on informed consent. The high response rate also reflects the participants' interest in the study on digital financial inclusion and MSME growth, a subject directly linked to their business survival and expansion.

Respondents were drawn from the three senatorial zones of Niger State. Zone A contributed 76 respondents (20.1%), Zone B 240 respondents (63.5%), and Zone C 62 respondents (16.4%). This distribution mirrors the proportional sample allocation to the MSME population across the zones. Zone B had the highest share due to its urban and commercial concentration, while Zones A and C, being less urbanized, accounted for smaller proportions. The pattern suggests that the sampling plan was effectively executed, ensuring fair representation of MSMEs across the state.

Regarding roles, 285 respondents (75.4%) were business owners, 72 (19.0%) were managers, and 21 (5.6%) were supervisors or sales staff. The predominance of owners is significant since they directly make financial decisions and drive sales growth, providing reliable insights into the impact of digital financial services on MSME performance.

Table 4.3: Micro Small and Medium Enterprises Profile

Item	Category	Frequency	Percentage (%)
B1. Year established	Before 2000	42	11.1
	2000–2009	76	20.1
	2010–2019	164	43.4
	2020 & after	96	25.4
B2. Legal status	Sole proprietor	228	60.3
	Partnership	54	14.3
	Limited liability	38	10.1
	Cooperative	44	11.6
	Other	14	3.7
B3. Sector	Trade (retail/wholesale)	210	55.6
	Services	94	24.9
	Manufacturing	42	11.1
	Agriculture	26	6.9
	Other	6	1.6
B4. Employment size	1–4	206	54.5

	5–9	88	23.3
	10–19	52	13.8
	20–49	24	6.3
	50+	8	2.1
B5. Education of owner/manager	No formal	32	8.5
	Primary	44	11.6
	Secondary	112	29.6
	Diploma/OND	76	20.1
	HND/BSc	84	22.2
	Postgraduate	30	7.9
B6. Monthly gross revenue	<₦20,000	36	9.5
	₦20,000–49,999	58	15.3
	₦50,000–149,999	116	30.7
	₦150,000–499,999	118	31.2
	₦500,000+	50	13.2
B7. Revenue change (last 12 months)	Decreased >20%	66	17.5
	–20% to –1%	80	21.2
	No change	56	14.8
	+1% to +20%	102	27.0
	+21% to +50%	52	13.8
	+51%+	22	5.8
B8. Market reach	Within town/LGA only	244	64.6
	Outside town/LGA	134	35.4
B9. Online sales	Yes	118	31.2
	No	260	68.8

Source: Field Survey, 2025

The profile data indicates that most MSMEs in Niger State are relatively new. A large share (164; 43.4%) were founded between 2010 and 2019, while 96 (25.4%) emerged after 2020. Only 42 firms (11.1%) existed before 2000, reflecting recent entrepreneurial growth.

In terms of legal status, sole proprietorships dominate (228; 60.3%), showing the prevalence of informal operations. Partnerships (54; 14.3%) and cooperatives (44; 11.6%) were less common, while limited liability companies were few (38; 10.1%), indicating limited formalization.

Sectoral distribution shows a concentration in trade (210; 55.6%), followed by services (94; 24.9%). Fewer businesses engaged in manufacturing (42; 11.1%) and agriculture (26; 6.9%), suggesting commerce remains the core of MSME activity.

Employment patterns reveal that most are microenterprises: 206 firms (54.5%) employed just 1–4 workers. Only 8 firms (2.1%) had 50 or more staff, highlighting restricted job creation.

Owner/manager education levels are relatively strong, with most having secondary education (112; 29.6%). Postsecondary attainment was also notable: diploma/OND (76; 20.1%) and HND/BSc (84; 22.2%). Only 32 (8.5%) lacked formal education, suggesting literacy supports financial and business practices.

Revenue performance shows varied outcomes. The majority earned ₦50,000–149,999 (116; 30.7%) or ₦150,000–499,999 (118; 31.2%) monthly. Higher revenues above ₦500,000 were reported by 50 firms (13.2%), while 36 (9.5%) survived on less than ₦20,000. In the past year, 176 firms (46.6%) recorded growth, mostly moderate (+1–20%), while 146 (38.7%) experienced declines, including 66 (17.5%) with steep losses. A smaller group (22; 5.8%) achieved strong growth above 50%, reflecting resilience.

Market reach remains local, with most firms (244; 64.6%) selling only within their towns or LGAs. Though 134 (35.4%) extended beyond, digital adoption was limited—only 118 (31.2%) sold online, leaving 260 (68.8%) dependents on face-to-face trade.

Table 4.4: Responses on Digital Financial Inclusion

Item	Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Total
X1.1	I frequently use mobile banking applications to conduct business transactions for my enterprise.	25 (6.6%)	40 (10.6%)	55 (14.6%)	150 (39.7%)	108 (28.6%)	378 (100%)
X1.2	Mobile banking has improved the speed and convenience of payments in my business.	18 (4.8%)	32 (8.5%)	40 (10.6%)	160 (42.3%)	128 (33.9%)	378 (100%)
X1.3	Access to mobile banking services reduces the cost and risk of handling cash in my business.	22 (5.8%)	28 (7.4%)	46 (12.2%)	142 (37.6%)	140 (37.0%)	378 (100%)
X2.1	I regularly use mobile money services (e.g., USSD, wallet transfers) for customer and supplier payments.	30 (7.9%)	36 (9.5%)	62 (16.4%)	135 (35.7%)	115 (30.4%)	378 (100%)
X2.2	Mobile money services have increased customer patronage in my business.	27 (7.1%)	34 (9.0%)	56 (14.8%)	144 (38.1%)	117 (31.0%)	378 (100%)
X2.3	Mobile money services provide reliable cash-in and cash-out options that support my business operations.	20 (5.3%)	30 (7.9%)	44 (11.6%)	150 (39.7%)	134 (35.4%)	378 (100%)
X3.1	I use fintech platforms (e.g., POS agents, digital lending apps, e-wallets) to support business operations.	35 (9.3%)	40 (10.6%)	60 (15.9%)	135 (35.7%)	108 (28.6%)	378 (100%)

X3.2	Fintech platforms have improved access to credit or short-term financing for my enterprise.	42 (11.1%)	45 (11.9%)	65 (17.2%)	126 (33.3%)	100 (26.5%)	378 (100%)
X3.3	Fintech platforms provide innovative solutions (e.g., QR payments, online invoicing) that enhance customer satisfaction.	28 (7.4%)	34 (9.0%)	54 (14.3%)	132 (34.9%)	130 (34.4%)	378 (100%)

Source: Field Survey, 2025

Most respondents (68.3%) reported frequent use of mobile banking (X1.1), with higher agreement on its speed and convenience (76.2%, X1.2) and reduced cash-handling risks (74.6%, X1.3). This underscores mobile banking as a vital tool for efficient, secure transactions. Similarly, mobile money services are widely adopted: 66.1% use them regularly (X2.1), 69.1% noted increased customer patronage (X2.2), and 75.1% confirmed reliable cash-in/cash-out support (X2.3), showing its role in liquidity and network expansion. Though slightly lower, fintech adoption remains notable—64.3% use platforms for business (X3.1), 59.8% access credit/financing (X3.2), and 69.3% reported improved customer satisfaction (X3.3). These findings highlight fintech's growing role in alternative financing and innovative customer engagement.

Table 4.5: Responses on Sales Growth of MSMEs

Item	Statement	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)	Total (N=378)
Y1.1	My business has experienced steady growth in sales revenue over the past two years.	18 (4.8%)	26 (6.9%)	45 (11.9%)	162 (42.9%)	127 (33.6%)	378 (100%)
Y1.2	The use of digital financial services has increased the number of customers patronizing my business.	12 (3.2%)	22 (5.8%)	36 (9.5%)	158 (41.8%)	150 (39.7%)	378 (100%)
Y1.3	My business records higher repeat purchases due to the convenience of digital payment options.	15 (4.0%)	30 (7.9%)	42 (11.1%)	160 (42.3%)	131 (34.7%)	378 (100%)
Y1.4	Sales transactions are completed faster, leading to more daily sales volumes.	10 (2.6%)	20 (5.3%)	38 (10.1%)	166 (43.9%)	144 (38.1%)	378 (100%)

Y1.5	My business has been able to expand into new markets or customer segments.	19 (5.0%)	34 (9.0%)	47 (12.4%)	150 (39.7%)	128 (33.9%)	378 (100%)
Y1.6	The adoption of digital financial services has reduced delays in customer payments.	14 (3.7%)	28 (7.4%)	40 (10.6%)	152 (40.2%)	144 (38.1%)	378 (100%)
Y1.7	My overall monthly sales turnover has improved since adopting digital financial services.	16 (4.2%)	25 (6.6%)	46 (12.2%)	148 (39.2%)	143 (37.8%)	378 (100%)
Y1.8	Seasonal fluctuations in sales have reduced due to reliable digital payment systems.	21 (5.6%)	32 (8.5%)	55 (14.6%)	144 (38.1%)	126 (33.3%)	378 (100%)
Y1.9	Digital financial services have contributed to achieving my business's sales targets.	12 (3.2%)	24 (6.3%)	41 (10.8%)	156 (41.3%)	145 (38.4%)	378 (100%)

A combined 76.5% of respondents reported steady sales growth over the past two years, reflecting a positive trajectory for MSMEs likely tied to improved financial access and shifting customer preferences. About 81.5% agreed that digital financial services boosted customer patronage, showing that convenience and accessibility attract more buyers. Similarly, 77% confirmed higher repeat purchases due to digital payments, indicating that seamless transactions strengthen customer loyalty.

Additionally, 82% reported faster sales transactions, directly increasing daily sales volumes and efficiency. Around 73.6% agreed that digital platforms enabled business expansion into new markets, enhancing competitiveness. Likewise, 78.3% noted reduced payment delays, improving liquidity and cashflow stability. A strong 77% also linked digital services to improved monthly turnover, while 71.4% observed reduced seasonal fluctuations, suggesting digital adoption helps stabilize income streams. Finally, 79.7% affirmed that digital tools support meeting sales targets, underscoring their strategic role in MSME growth and performance.

5.2 Test of hypothesis

Model Summary^b

Model R R Square Adjusted R Square Std. Error of the Estimate Durbin-Watson

1 .765a .585 .582 3.112 1.945

a. Predictors: (Constant), Mobile Banking (X1), Mobile Money Services (X2), Fintech Platforms (X3)

b. Dependent Variable: Sales Growth (Y)

ANOVAa

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	3248.532	3	1082.844	111.756	.000b
Residual	2302.467	374	6.155		
Total	5551.000	377			

a. Dependent Variable: Sales Growth (Y)

b. Predictors: (Constant), Mobile Banking (X1), Mobile Money Services (X2), Fintech Platforms (X3)

Coefficientsa

Model	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
(Constant)	2.154	0.578	—	3.727	.000
Mobile Banking (X1)	0.412	0.064	.385	6.438	.000
Mobile Money Services (X2)	0.365	0.071	.324	5.141	.000
Fintech Platforms (X3)	0.298	0.059	.276	5.051	.000

a. Dependent Variable: Sales Growth (Y)

The regression model ($R^2 = 0.585$) shows that 58.5% of the variation in MSME sales growth is explained by access to mobile banking, mobile money services, and fintech platforms. The Durbin-Watson statistic (1.945) indicates no autocorrelation problem, while the regression result ($F = 111.756$, $p < 0.001$) confirms a significant effect. Thus, access to digital financial services jointly influences MSME sales growth in Niger State, with mobile banking exerting the strongest effect ($\beta = 0.412$), followed by mobile money services ($\beta = 0.365$) and fintech platforms ($\beta = 0.298$).

5.3 Discussions

The profile data reveal that most MSMEs in Niger State are relatively young. A majority were founded between 2010 and 2019 (164; 43.4%), followed by those established after 2020 (96; 25.4%). Only 42 firms (11.1%) existed before 2000. This pattern reflects a surge in entrepreneurship over the past decade, consistent with trends across Sub-Saharan Africa where new firm creation has accelerated due to youth unemployment, digital innovation, and post-crisis recovery (Agyapong & Obeng, 2020; World Bank, 2022).

In terms of ownership structure, sole proprietorships dominate the landscape (228; 60.3%). This reflects the broader reality that informality remains the dominant mode of enterprise registration in many developing economies (AfDB, 2021). Partnerships (54; 14.3%) and cooperatives (44; 11.6%) show moderate participation, while limited liability companies remain a minority (38; 10.1%), suggesting limited institutionalization and low access to formal finance (OECD, 2020).

Sectorally, MSMEs are concentrated in trade and commerce (210; 55.6%), followed by services (94; 24.9%), while manufacturing (42; 11.1%) and agriculture (26; 6.9%) are underrepresented. This mirrors national data showing that Nigerian MSMEs are largely engaged in low-value retail and distributive sectors (SMEDAN & NBS, 2021). Scholars have linked this skew to low industrial capacity, infrastructural gaps, and high entry barriers into manufacturing (Eze et al., 2023).

Most MSMEs remain micro in scale, with 206 (54.5%) employing only 1–4 workers. Only 8 firms (2.1%) employed 50 or more staff. This limited employment footprint is common across emerging economies where MSMEs are numerous but often unable to scale (UNCTAD, 2021). Factors such as weak credit access, poor infrastructure, and market informality constrain growth (Ibrahim et al., 2020).

Educational attainment among owners was relatively encouraging: 112 (29.6%) completed secondary education, while a combined 160 (42.3%) held diploma, HND, or BSc degrees. Only 32 (8.5%) had no formal education. This suggests a moderate level of human capital, which is crucial for adopting digital tools and managing modern enterprises (Kaleem & Ahmed, 2022). Recent studies emphasize that entrepreneurial education significantly improves innovation adoption, especially in fintech and e-commerce (Boateng & Ntim, 2021).

Revenue levels were modest for most firms. A majority earned between ₦50,000–₦499,999 monthly, while only 13.2% reported revenues above ₦500,000. Low earnings reflect subsistence-level operations and vulnerability to market shocks (ILO, 2021). Revenue trends were mixed: 38.7% of firms reported declines, while 46.6% saw growth, mostly between 1–20%. A few (5.8%) experienced high growth above 50%. Similar mixed performance patterns have been reported in post-pandemic recovery studies, especially among digitally enabled MSMEs (Oyelaran-Oyeyinka & Lal, 2020).

Market reach was predominantly local, as 64.6% of firms operated only within their town or LGA. Only 35.4% had broader outreach. Digital commerce adoption was also limited: just 31.2% of respondents used online platforms, while 68.8% relied solely on physical transactions. This low level of digital integration is a major constraint, considering that recent research shows that MSMEs using digital platforms achieve higher sales resilience, broader market access, and faster recovery from shocks (G20, 2022; Nwokolo & Eze, 2023). Scholars recommend greater investment in digital literacy, infrastructure, and inclusive fintech services to close the gap (Adegbite et al., 2021).

Nevertheless, the demographic profile suggests that Niger State's MSMEs are young, predominantly informal, micro-scale, commerce-focused, and locally oriented. While human capital levels are improving, revenue capacity and digital integration remain weak. These findings highlight the urgent need for integrated policy interventions to enhance formalization, digital inclusion, and sectoral diversification in line with global MSME development goals (UNDP, 2023).

5.4 Conclusion, and Recommendations

The study demonstrates that integrated digital finance ecosystems are vital to MSME resilience, liquidity, and expansion. Putting it differently, digital financial inclusion—encompassing mobile banking, mobile money, and fintech platforms—significantly enhances MSME sales growth in Niger State, explaining 58.5% of performance variance. Nevertheless, this study recommends that banks and telecom policy providers should double their efforts to strengthen mobile banking infrastructure, enhance mobile money usability, and promote fintech adoption alongside financial literacy and consumer protection measures.

References

Adegbite, O., Ilori, M. O., & Adeniran, O. (2021). Digital adoption and resilience of micro and small enterprises in Africa. *Journal of Small Business and Enterprise Development*, 28(6), 945–963.

Afolabi, A., Aderemi, T., & Lawal, F. (2021). Financial inclusion and firm growth in emerging economies: Evidence from Nigeria. *International Journal of Economics and Financial Issues*, 11(3), 53–61.

African Development Bank [AfDB]. (2021). *African economic outlook 2021: From debt resolution to growth*. AfDB.

Agyapong, D., & Obeng, B. (2020). Entrepreneurial growth of SMEs in Sub-Saharan Africa: The role of youth unemployment and innovation. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 6(1), 23–39.

Akanbi, S. (2022). Digital finance adoption and SME growth in Oyo State, Nigeria. *Nigerian Journal of Management Sciences*, 14(1), 77–95.

Alshahrani, A., Alharbi, F., & Alzahrani, S. (2022). Revisiting diffusion of innovation theory in digital finance adoption. *International Journal of Information Systems and Social Change*, 13(1), 1–12.

Amoah, S., & Korankye, T. (2024). Mobile money use and SME financial performance: Evidence from Cameroon. *African Journal of Accounting, Auditing and Finance*, 13(1), 37–54.

Asiimwe, P., & Lwanga, S. (2021). Mobile banking and financial performance of SMEs in Uganda. *International Journal of Bank Marketing*, 39(6), 862–880.

Boateng, H., & Ntim, C. (2021). Entrepreneurial education, digital skills, and MSME competitiveness in Sub-Saharan Africa. *Education + Training*, 63(7/8), 1031–1047.

Boateng, R., Adam, I., & Ofori, K. (2022). Extending UTAUT2 in digital financial adoption: Evidence from SMEs in Ghana. *Information Technology for Development*, 28(2), 389–408.

Central Bank of Nigeria [CBN]. (2023). *Operational guidelines for open banking in Nigeria*. Abuja: CBN.

Chironga, M., De Grandis, H., & Zouaoui, Y. (2020). Mobile money in Africa: Lessons from Kenya and Tanzania. *McKinsey Quarterly*, 56(3), 45–61.

Compendium. (2021). *Compendium of Nigerian MSMEs statistics*. Abuja: Federal Government of Nigeria.

Dwivedi, Y. K., Rana, N. P., Tamilmani, K., & Raman, R. (2020). A meta-analysis of UTAUT2 constructs in digital adoption. *Information Systems Frontiers*, 22(6), 1221–1241.

European Investment Bank [EIB]. (2024). *Fintech in Africa: State of play 2024*. Luxembourg: EIB.

Eze, B., Ogbu, C., & Anigbogu, T. (2023). Structural constraints and sectoral concentration of Nigerian MSMEs. *Journal of African Business*, 24(2), 255–273.

Ferreira, J., Serra, F., & Reis, N. (2020). Resource-based view theory and digital innovation in SMEs: A review. *Management Research*, 18(3), 253–269.

G20. (2022). *MSMEs and digital financial inclusion report*. G20 Digital Economy Task Force.

GSMA. (2024). *State of the industry report on mobile money 2024*. London: GSMA.

Ibrahim, A., Yusuf, H., & Bello, M. (2020). Credit constraints and growth of SMEs in Northern Nigeria. *Journal of Development and Agricultural Economics*, 12(3), 149–160.

International Labour Organization [ILO]. (2021). *MSMEs and employment in developing countries*. Geneva: ILO.

Kaleem, M., & Ahmed, S. (2022). Human capital and technology adoption in SMEs: Evidence from developing economies. *Journal of Small Business Strategy*, 32(1), 65–78.

Klapper, L., Miller, M., & Hess, J. (2025). Expanding financial inclusion through mobile banking in Africa. *World Bank Research Observer*, 40(1), 1–25.

Konte, M., & Tetteh, E. (2022). Digital finance and growth of women-owned MSMEs in Lagos, Nigeria. *Journal of African Business*, 23(4), 455–472.

Kozlenkova, I., Samaha, S., & Palmatier, R. (2021). Resource-based theory in marketing: Review and future research. *Journal of the Academy of Marketing Science*, 49(3), 679–702.

Nguyen, T., & Dang, V. (2020). Mobile banking adoption in emerging markets: Evidence from Vietnam. *Journal of Asian Business and Economic Studies*, 27(3), 251–267.

Nigerian Communications Commission [NCC]. (2024). *Industry statistics: Broadband penetration report Q1 2024*. Abuja: NCC.

Nwokolo, C., & Eze, P. (2023). Digital platforms and MSME resilience in Nigeria's post-pandemic economy. *Small Enterprise Research*, 30(2), 185–202.

Organisation for Economic Co-operation and Development [OECD]. (2020). *Financing SMEs and entrepreneurs 2020: An OECD scoreboard*. Paris: OECD.

Osho, G., & Ibrahim, S. (2025). Fintech adoption and SME growth in Nigeria: A post-pandemic analysis. *African Journal of Economic Policy*, 32(1), 99–118.

Oyelaran-Oyeyinka, B., & Lal, K. (2020). The impact of digital technologies on MSME performance in Africa. *Innovation and Development*, 10(3), 345–362.

Paystack. (2022). *The state of payments in Nigeria 2022*. Lagos: Paystack.

PricewaterhouseCoopers, Nigeria. (2024). *Nigeria SME Survey Report 2024*. Lagos: PwC.

Smart Cash Payment Service Bank. (2024). *Annual report*. Lagos: SmartCash.

SMEDAN & National Bureau of Statistics [NBS]. (2021). *MSME survey report 2021*. Abuja: SMEDAN/NBS.

Song, M., Guo, X., & Zhao, Y. (2023). Fintech platforms and SME financing: Evidence from emerging markets. *Technological Forecasting and Social Change*, 187(1), 122–134.

Talom, F., & Tengeh, R. (2020). The impact of mobile money on SMEs' financial performance in Cameroon. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 6(2), 173–186.

Turinawe, D. (2023). Mobile money and enterprise growth: Evidence from rural Uganda. *Journal of Development Effectiveness*, 15(1), 72–89.

United Nations Conference on Trade and Development [UNCTAD]. (2021). *The role of MSMEs in achieving the SDGs*. Geneva: UNCTAD.

United Nations Development Programme [UNDP]. (2023). *Human development report 2023: Advancing sustainable development*. New York: UNDP.

Venkatesh, V., Thong, J., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending UTAUT. *MIS Quarterly*, 36(1), 157–178.

Wilden, R., & Teece, D. (2023). Dynamic capabilities and the resource-based view: Integration and future directions. *Journal of Management Studies*, 60(5), 1123–1148.

World Bank. (2022). *Doing business and entrepreneurship in Sub-Saharan Africa*. Washington, DC: World Bank.

World Bank. (2023). *Global financial development report 2023: Financial inclusion*. Washington, DC: World Bank.

World Bank. (2024). *Digital finance for inclusive growth 2024*. Washington, DC: World Bank.