# EFFECT OF FINANCIAL TECHNOLOGY ON THE GROWTH OF SMALL AND MEDIUM SCALE ENTERPRISES IN DELTA STATE, NIGERIA

**By**

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*Abstract*

*Small and medium enterprises are the backbone of Nigeria's economy, accounting for over 50% of total employment and over 80% of employment growth over the past few decades. The survey indicates that, despite their involvement, historical statistics show that out of five SMEs, three of them do not see their first year of activity while 80% of those that continue fail before the fifth year. The overall objective of the study is to determine the significant effect of financial technology on the growth of small and medium enterprises in Delta State. The general objectives that guided this study were to determine how mobile money and digital lending impacted the growth of small and medium enterprises in Delta State. The study used a descriptive research design method. Stratified random sampling was applied and a sample size of 105 SMEs was arrived at. The study used primary data obtained through a self-administered questionnaire. The data collected were analyzed using version 25 of the Social Science Statistical Package software. Regression result established a positive significance of the effect of financial technology on small and medium enterprises growth. The study attributed 16 percent of small and medium enterprises growth to mobile money and digital loans banking. The study recommends that financial institutions take advantage of the increased use of mobile and online services to form partnerships with mobile phone service providers and provide flexible financial services to operators.*

*Keywords: Financial technology; SMEs growth; Digital lending; Mobile money; Online banking; Nigeria*

## 1. INTRODUCTION

Financial technology also known as fintech refers to the intersection of finance and technology. It involves the use of technology to improve and automate financial services, making them more accessible, efficient, and cost-effective. At its core, fintech is used to help companies, business owners and consumers better manage their financial operations, processes, and lives by utilizing specialized software and algorithms that are used on computers and, increasingly, smartphones. The word fintech is a combination of "financial" and "technology".

When fintech emerged in the 21st Century, they initially applied the term to the technology employed at the back-end systems of established financial institutions. Since then, however, there has been a shift to more consumer-oriented services and therefore a more consumer- oriented definition.

Fintech now includes different sectors and industries such as education, retail banking, fundraising and non-profit, and investment management to name a few (kifordu 2024).

Fintech also includes the development and use of cryptocurrencies such as bitcoin. While part of the financial market may haveseen the most headlines, the big money still lies in the traditional global banking industry and its multi-trillion-dollar market capitalization. According to McKinsey & Company (2020), banking in Nigeria remains an attractive sector, with over $9 billion in value pools, despite high levels of competition, the vast majority of consumers are underserved. Lack of access to services, especially in rural areas, issues of affordability, and poor user experience all contribute to the frustration consumers experience right across the customer spectrum; this has created an opening that fintech has been quick to take advantage of, with many stepping up to develop enhanced propositions across the value

chain to address pain points in affordable payments, quick loans, and flexible savings and investments, among others.

A youthful population with increasing smartphone penetration, and a focused regulatory drive to increase financial inclusion and cashless payments, are combining to create the perfect recipe for a thriving fintech sector. Nigeria is now home to over 200 fintech standalone companies, plus several fintech solutions offered by banks and mobile network operators as part of their product portfolio. Between 2014 and 2019, Nigeria's bustling fintech scene raised more than $600 million in funding, attracting 25 percent ($122 million) of the $491.6 million raised by African tech startups in 2019 alone—second only to Nigeria, which attracted $149 million according to Africa Tech Startups Funding Report, Disrupt Africa (2019).

However, the latest and speedy emergence of financial technology in Nigeria's financial system and small and medium-sized businesses has sparked a persevering hobby amongst stakeholders to impeach the appropriateness of the technology adopted. Some stakeholders are obsessed with the adoption given the innumerable blessings got, which includes the convenience and pace of provider transport operations, even as others are not, fear approximately the dangers involved. This chance is linked to the susceptible infrastructure and technical understanding of those techniques. Also, Nigerians lack financial education, which might inspire users/clients to just accept revolutionary services and products derived from technology.

According to Udoyin et al (2024), reported that SMEs have continued to play a vital role in employment creation, poverty reduction, thus, being considered as contributing factors of economic development in both developed and developing nations. Hence SMEs have to adapt innovative ways as well as new financial systems in carrying out their business to maintain their sustainability and continued existence. Small business development in Nigeria is largely based on social, monetary systems, economic and administrative skills, which prevent SMEs from increasing. Consequently, this formed the basis of this research study.

## 2. REVIEW OF RELATED LITERATURE

### 2.1. Fintech and SMEs Performance

Financial technology, commonly known as fintech, refers to the use of technology to deliver financial services and solutions. It encompasses a wide range of applications and innovations that aim to improve and automate the delivery and use of financial services. Key aspects of fintech include: mobile banking, lending platforms,cryptocurrency, mobile money, payment processing solutions.

On the other hand, SMEs are businesses whose personnel numbers fall below certain limits. They play a crucial role in the economy by providing employment, fostering innovation, and contributing to economic growth.Small enterprises are typically characterized by having a small number of employees (usually fewer than 50) and a limited amount of revenue, while medium enterprises are businesses which generally have a larger work force (between 50 to 250 employees) and a higher revenue than small enterprises.

### 2.2. Mobile Money and Digital Lending

The advent of mobile technology and its devices has made it possible to improve the efficiency of businesses (Tiwari and Buse, 2007; UNCTAD, 2007). One of these technologies is mobile telephony. Mobile telephony serves as a platform for launching innovative mobile telephony applications and services (UNCTAD, 2007). The use of mobile technologies for commercial activities initiates the concept of mobile commerce (m- commerce). The number of mobile phone subscribers has experienced a record increase in developed and developing countries (Boadi et al., 2007; UNCTAD, 2007). The mobile phone market is one of the fastest growing markets in the world (Gupta, 2005; UNCTAD, 2007). Financial institutions seized this opportunity to win markets advantage by offering a variety of value-added services to customers through the use of mobile banking services (Gupta, 2005).

Mobile banking (m-banking) is a mobile commerce application that enables customers to conduct banking transactions virtually anytime, anywhere (Suoranta, 2003). It is the provision of related banking and financial services such as savings, money transfer and stock market transactions, among others on mobile devices (Tiwari and Buse, 2007). The banking market has experienced unprecedented growth in many countries. For example, in the United States, about 30% of households use cell phones for banking transactions (MMA, 2009). This is also the case in European and Asian countries, where 80% of households use mobile banking services (Gupta, 2005). In Africa, mobile phones are the most widely used form of communication technology (ITU, 2007). This has enabled the mobile market industry in Africa to be the fastest growing in the world compared to other continents (ITU, 2007). Nigeria is a major player in the African banking applications market (UNCTAD, 2007).

Mobile money is a digital payment system that allows users to make financial transactions using their mobile devices. It enables people to send and receive money, pay bills and make purchases without needing a traditional bank account. Some key features of mobile money include: money transfers, bill payments, merchant payments, savings and loans, accessibility. Overall mobile money enhances financial inclusion and provides a flexible and efficient way to manage money. Some of the mobile money providers include: Flutterwave, Opay, Interswitch, Palmpay, MTN Mobile Money.

On the other hand, digital lending refers to the process of obtaining loans through online platforms or mobile applications. It leverages technology to streamline the borrowing process, making it faster and more accessible compared to traditional lending methods. Key features of digital lending include: convenience, speed, accessibility, variety of products, data-driven decisions. Digital lending has gained popularity, especially in regions where traditional

banking services are limited, providing a crucial financial lifeline for many individuals and businesses.

An individual or business wishing to embark on a digital lending business must obtain a money lending license in one of the 36 states of Nigeria and the Federal Capital Territory. A license obtained under a state's money lending law only authorizes money lending activities in that state. The process for obtaining a license in each state is similar. This usually involves submitting an application in the prescribed form with the applicant's letterhead to the designated authority within the state. The application will be supported by the required documents, such as the company's incorporation documents, which authorize them to operate as a money lender, a tax settlement certificate and proof of payment of the fees required for the application.

Once all regulatory requirements have been met, an annually renewable license will be granted to the company. Alternatively, a company wishing to carry on money lending business in Nigeria may be approved by the Central Bank of Nigeria as a holding company under the Revised Guidelines for Financial Companies in Nigeria ("the Guidelines"). This license is however more suitable for companies wishing to offer additional services in addition to lending money. The guidelines allow finance companies to make consumer loans; fund management; asset financing; financing of projects; local and international commercial financing; assignment of debt; debt securitization; Financial advice; loan syndication and issuance of vouchers, coupons, cards and stamps. It should be noted that money lenders and financial companies cannot receive deposits from the public unless they acquire a microfinance banking license.

### 2.3. Theoretical Framework
- **Fintech Business Models Theory**

Wambari and Mwaura (2009) argue that any mobile / branchless banking model that aims to attract low-income people depends on banking agents, that is, outlets that conduct financial transactions on the behavior of financial institutions. They argue that agent banking is an important part of the fintech business model, which tends to be the link between banks and their clients. New fintech business models tend to result in new market structures for the supply of existing financial services products (savings, loans, business transactions). The theory of banking business models divides branchless banking into three models; Bank-Focused model, bank-led model, non-bank-led model.

- **Bank–Focused Model**

This model arises when a traditional bank uses low-cost, non-traditional delivery channels to offer banking services to its existing customers (Infogile, 2007). In this model, the technological/physical infrastructure of a mobile operator / retailer is used to provide some basic banking services, such as account balance inquiry, transfer, payments for goods / services in business transactions through a bank account (via ATM / debit card / SMS phone). Most of these services are already provided by banks and are subject to existing regulations. Therefore, this model raises few specific regulatory questions (Infogile, 2007)

## 3. METHODOLOGY

In this study, cross-sectional survey research design method was adopted; this is important because it avails the researcher the opportunity to collect data from respondents with the aid of questionnaire as research instrument at one point in time (Olannye, 2017). The targeted population for this study comprises of 140 registered SMEs operating in Asaba the state capital. The study applied stratified sampling procedure to pick a sample size from the populace. Stratified sampling is a form of method of sampling in which the overall population is split into smaller groups or strata to complete the process of sampling.

Since the investigation searched for various homogeneous classifications of SMEs within Delta State, stratified sampling would be perfect for the study. It would enable the researcher to cluster the SMEs into various sectors which includes accommodation, storage, education, general trade, agricultural and transportation in Delta State then the actual sample size was drawn. Structured questionnaire was utilized to accumulate information from the respondent. Respondents were given a set of statements regarding the influence of fintech on growth of their businesses to rate them on a scale 1 to 5 where one stands for strongly disagree and 5 means strongly agree.

Data collected was analyzed by descriptive analysis where percentages, frequencies, mean and standard deviation will be derived. The Likert rating scale was used to analyse the mean, mode and median scores while standard deviation was calculated to determine the extent of the growth of SMEs in DeltaState as a result of M-banking. The data collected was analyzed by use of both descriptive and inferential statistics with the use of the Statistical Package for Social Sciences (SPSS) version 24. A multiple linear regression and correlation analysis was done on the three aspects of the fintech services to test the degree of the influence of predictor variables on the dependent variables. Multiple linear regression model adopted was as follows:

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

Where: $\gamma$ = Dependent Variable (SMEs Growth); $\beta_0$=represents Constant; $X_1$=represents Mobile money $X_2$=represents Digital lending $\varepsilon$ = represents Error Term; $\beta_1, \beta_2$, represent Regression coefficients of independent variables

## 4. RESULTS

**Table 1: Mobile Money and Growth of SMEs**

| Description | Option | Frequency | Percentage % | Mean & SD |
|---|---|---|---|---|
| I use my mobile phones to pay my suppliers | SA | 77 | 77 | |
| | A | 20 | 20 | 4.9 (0.614 ) |
| | U | 0 | 0 | |
| | D | 2 | 2 | |

| Description | Option | Frequency | Percentage | Mean & SD |
|---|---|---|---|---|
| | SD | 1 | 1 | |
| I place my orders through use of mobile phones with my suppliers | SA | 60 | 60 | 4.76(0.76) |
| | A | 32 | 32 | |
| | U | 4 | 4 | |
| | D | 2 | 2 | |
| | SD | 2 | 2 | |
| I also accept payments through mobile money from my clients | SA | 80 | 80 | 4.90 (0.61) |
| | A | 3 | 3 | |
| | U | 5 | 5 | |
| | D | 10 | 10 | |
| | SD | 2 | 2 | |
| I don't receive cash from my clients since I have fully adopted fintech services | SA | 90 | 90 | 4.49 (0.22) |
| | A | 5 | 5 | |
| | U | 0 | 0 | |
| | D | 2 | 2 | |
| | SD | 3 | 3 | |
| Mobile money has enhanced the efficiency of conducting business | SA | 88 | 88 | 4.82 (0.77) |
| | A | 2 | 2 | |
| | U | 0 | 0 | |
| | D | 0 | 0 | |
| | SD | 2 | 2 | |

| Description | Option | Frequency | Percentage | Mean & SD |
|---|---|---|---|---|
| Through use of digital lending, am able to obtain credit from the financial Institutions | SA | 36 | 36 | 4.71 (0.94) |
| | A | 45 | 45 | |
| | U | 5 | 5 | |
| | D | 11 | 11 | |
| | SD | 3 | 3 | |
| Digital Lending has enabled me gain enough finances to grow my Business | SA | 65 | 65 | 4.11 (0.92) |
| | A | 20 | 20 | |
| | U | 5 | 5 | |
| | D | 6 | 6 | |
| | SD | 4 | 4 | |
| Through mobile finance, am able to save money from my business proceedings | SA | 80 | 80 | 4.87 (0.68) |
| | A | 10 | 10 | |
| | U | 5 | 5 | |
| | D | - | - | |
| | SD | 5 | 5 | |

| Description | Option | Frequency | Percentage | Mean & SD |
|---|---|---|---|---|
| The presence of digital lending relieves me the problem of having to open a bank account | SA | 80 | 80 | 4.32 (1.09) |
| | A | 10 | 10 | |
| | U | 5 | 5 | |
| | D | - | - | |
| | SD | 5 | 5 | |
| Access to digital finance enables my quick response to customers' needs | SA | 75 | 75 | 4.21 (0.90) |
| | A | 5 | 5 | |
| | U | - | - | |
| | D | 5 | 5 | |
| | SD | 15 | 15 | |

Source; Field Survey 2025

The respondents agreed with all mobile finance registration attributes that mean greater than 3.5 and less than 1.0.0. The respondents' opinions weren't very dispersed either. According to the results above, 75% of respondents agreed (M=4.71, SD=.945) that they can receive credit from financial institutions by using mobile finance. The findings indicate that mobile finance has enabled small and medium-sized business owners to obtain substantial funding to grow their businesses (M=4.11, SD=0.92), with 85% of respondents agreeing or strongly agreeing with the assumption. Additionally, 90% of respondents agreed or strongly agreed that using cell phones to conduct business can save money.

Additionally, 90% of respondents agreed or strongly agreed that the availability of mobile finance alleviates the burden of opening a bank account. Eighty percent of those surveyed agreed or strongly agreed that having access to digital finance makes it possible to respond quickly to client needs. The results clearly show that the majority of SMEs have or use mobile banking since it is convenient and eliminates the need to physically visit the bank. Furthermore, the majority of SMEs have used their mobile phones to apply for loans for a variety of purposes because they don't require collateral and other regulations that prevent them from doing so. The study's findings aligned with Udell's (2012) conclusion that technology are best suited to streamline the intricacies involved in financial access and engagement levels. communication between SMEs and banking institutions.

**Table 3: Descriptive Statistics Results**

| Variables | Mean | Std. Deviation | N |
|---|---|---|---|
| Mobile Money | 4.8 | 0.611 | 140 |
| Digital Lending | 4.58 | 0.631 | 140 |
| Growth of SMEs | 3.89 | 1.02 | 140 |

Source; Field Survey 2025

In Table 3, since the mean and standard deviation of the variables were almost identical, the researcher was able to conclude that the data was regularly distributed.

**Table 4: Pearson Correlation**

| Variables | | Mobile mon | Digital Lending | Growth of SMEs |
|---|---|---|---|---|
| Mobile Money | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) N | 140 | | |
| Digital Lending | Pearson Correlation | .774** | 1 | |
| | Sig. (2-tailed) N | .000 140 | 140 | |
| Growth of SMEs | Pearson Correlation | .295** | .280** | 1 |
| | Sig. (2-tailed) N | .000 140 | .000 140 | |

Source; Field Survey 2025

The association between the independent variables (mobile money and digital lending) and the dependent variable (growth of SMEs) was of particular interest in table 4. The analysis finds a mild correlation (r=0.295) at the 0.01 level in a two-tailed test and a significant link (Sig0.000) between the growth of SMEs and mobile money. Second, the two-tailed test revealed a moderate correlation (r=0.28) at the 0.01 level between the growth of SMEs and digital lending, but a significant link (Sig0.000). We may infer from the result that there is significant positive correlation between the dependent and independent variables of the study, even though the correlation was weak.

**Table 5: Regression Summary**

| Model | R | R Square | Adjusted R Square | Std Error of the Estimate | R Square Change | Change Statistics F Change | df1 | df2 | Sig. F Change |
|---|---|---|---|---|---|---|---|---|---|
| 1 | .413a | .171 | .163 | .933 | .171 | 21.413 | 3 | 312 | .000 |

Source; Field Survey 2025

**Table 6: Analysis of Variance (ANOVA)**

| Model | | Sum of Square | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 55.924 | 3 | 18.641 | 21.413 | .000b |
| | Residual | 271.614 | 137 | .871 | | |
| | Total | 327.539 | 137 | | | |

Source; Field Survey 2025

The p-value and alpha-value are compared to assess the model's significance. The model is considered inconsequential if the p value is higher than the alpha value, and significant if it is lower than the alpha. The alpha value is 0.05 since the regression analysis is measured at 95 degrees of freedom. The value of P is displayed as 0.000 in the preceding table, indicating that it is less than the alpha value. We therefore came to the conclusion that there is a substantial correlation between the expansion of small and medium-sized businesses in Delta State and the impact of financial technology (F (3, 312)=21.413, p=0.000).

Additionally, we compare the calculated value of F, which is shown in Table 6, with F-statistics to determine whether to reject or accept the null hypothesis. The study's subject claims that the growth of SMEs in Delta State is unaffected. According to the F-statistic at an alpha of 0.05 and 312 degrees of freedom, which is 1.637, the calculated value of F is 21.413. We draw the conclusion that there is a positive and noteworthy influence on the establishment and growth of SMEs in Delta State because the calculated value is greater than the F-statistic.

The result indicates that the regression model, which uses fintech predictors to forecast the growth of SMEs, was significant (F(3,312)=21.413, p=0.000). However, we find that only mobile banking have a significant (r=0.314, p=0.000) impact on the dependent variable (SMEs' growth), whereas digital lending did not have a significant (p>0.05) impact.

Regression study revealed a favourable association between mobile money and the growth of SMEs (r=0.295, p<0.001). Additionally, the study found that mobile money was not a significant (p>0.05) predictor of SMEs' growth. The study supported the conclusions of Goviletal et al. (2014) and Asomann & Ehrl (2021) that there was a favourable correlation between mobile financing and corporate economic growth. On the other hand, the study disagreed with the conclusions of Lombela (2020), which found that the convenience of sending and receiving money via mobile phones has been one of the factors driving the acceptance of fintech in developing nations. This was demonstrated by the limited association between mobile money and the expansion of SMEs, which may have been caused by the fact that the majority of financial institutions have developed more creative methods of sending and receiving money in bulk, such as RealTime Gross Settlement (RTGS).

Although not statistically significant (p=0.778), digital lending was shown to have a favourable link (r=0.28,

p<0.001) with the growth of SMEs and to have an impact on the development of small and medium-sized businesses in Delta State. The study supported the findings of (Wanjohi, 2010; Birundu, 2015; Berger et al., 2019; Harappa, 2021) that the growth of SMEs is catalysed by the availability of financing and loans at various levels of product and service development. However, the study presented a different view from that of Must and Ludewig (2010), which came to the conclusion that savings are a vital component of SMEs' access to credit.

## 5. CONCLUSION AND RECOMMENDATIONS

The foundation of Nigeria's economy is made up of small and medium-sized businesses, which have contributed more than 50% of all jobs and more than 80% of job growth in recent decades. According to the poll, despite their participation, historical data reveals that 80% of SMEs fail before the fifth year, and three out of five do not see their first year of operation. Determining the substantial impact of financial technology on the expansion of small and medium-sized businesses in Delta State is the study's main goal. This study's overarching goals were to ascertain the effects of digital lending and mobile money on the expansion of small and medium-sized businesses.

A descriptive research design method was employed in the investigation. A sample size of 105 SMEs was determined by using stratified random sampling. Primary data for the study came from a self-administered questionnaire. The results of the regression analysis showed that financial technology has a significant beneficial impact on the expansion of small and medium-sized businesses. According to the survey, digital loan banking and mobile money accounted for 16% of the development of small and medium-sized businesses. In order to establish relationships with mobile phone service providers and provide operators flexible financial services, the report advises financial institutions to capitalise on the growing usage of internet and mobile services. The study recommends that financial institutions should take advantage of the increased use of mobile and online services to form partnerships with mobile phone service providers and provide flexible financial services to operators.

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