

International Journal Research Publication Analysis

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AGENT BANKING TECHNOLOGY AND ENTREPRENEURIAL PRACTICES OF FINANCIAL TECHNOLOGY FIRMS IN ONDO STATE, NIGERIA

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Article Received: 13 September 2026

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Article Revised: 03 October 2026

Department of Business Administration Faculty of Administration and
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Published on: 23 October 2026

DOI: <https://doi.org/10.1555/ijrpa.3495>

ABSTRACT

Agent banking technology has become an important channel for extending financial services beyond conventional banking outlets and supporting digitally enabled business activities. Still, empirical evidence linking agent banking technology specifically to entrepreneurial practices among financial technology (FinTech) operators in Nigeria remains limited. This study examined the relationship between agent banking technology and entrepreneurial practices of financial technology firms in Ondo State, Nigeria. The study adopted a quantitative cross-sectional survey design. Data were obtained from 388 FinTech operators across selected Local Government Areas in Ondo State using a structured questionnaire. Agent Banking Technology was operationalised as the independent variable, while Entrepreneurial Practices constituted the dependent variable. Data were analysed using simple linear regression with the Statistical Package for the Social Sciences (SPSS). The results revealed a very strong positive relationship between agent banking technology and entrepreneurial practices ($R = .945$). Agent banking technology explained 89.3% of the variation in entrepreneurial practices ($R^2 = .893$; Adjusted $R^2 = .892$). The regression model was statistically significant ($F(1,386) = 3205.392$, $p < .001$). Agent Banking Technology also had a positive and statistically significant effect on Entrepreneurial Practices ($B = .992$, $\beta = .945$, $t = 56.616$, $p < .001$). The study concludes that agent banking technology is strongly associated with entrepreneurial practices among FinTech operators in Ondo State. The findings highlight the importance of reliable agent-banking infrastructure, operational capacity, digital connectivity,

training and supportive regulatory arrangements for digitally enabled entrepreneurial activities.

KEYWORDS: Agent Banking Technology, Entrepreneurial Practices, FinTech, Digital Finance, Financial Inclusion, Ondo State, Nigeria.

1. INTRODUCTION

The rapid development of financial technology has transformed the manner in which financial services are delivered to individuals and businesses. Digital financial services increasingly rely on technology-enabled channels that reduce geographical barriers, improve transaction convenience and provide access to financial services outside conventional bank branches. Among these channels, agent banking has become particularly important in emerging economies because it allows third-party agents to provide selected financial services on behalf of licensed financial institutions.

In Nigeria, agent banking has developed into an important component of the financial services ecosystem. The Central Bank of Nigeria (CBN) defines agent banking as the provision of financial services by a third party to customers on behalf of a licensed deposit-taking financial institution. The CBN's revised 2025 guidelines were introduced partly because technological developments had substantially changed the agent-banking ecosystem. The guidelines specifically seek to enhance agent banking as a channel for financial inclusion, improve service quality and promote responsible market conduct.

The expansion of agent banking is also relevant to entrepreneurship. Entrepreneurs require accessible payment channels, transaction facilities, customer contact points and reliable financial infrastructure to conduct business. For FinTech operators, agent banking technology can provide an operational platform through which customers can perform deposits, withdrawals, transfers, payments and other financial transactions. Such technology may influence how entrepreneurs identify opportunities, manage financial resources, acquire and retain customers and develop innovative products and services.

Evidence from Nigeria indicates that agent banking has expanded considerably. The International Monetary Fund reported that Nigeria's agent network had reached approximately 1.375 million agents by September 2022, exceeding the earlier target of 500,000 agents. The same report noted that agent banking and related networks have been important components of Nigeria's financial-inclusion strategy.

Recent Nigerian research has also demonstrated the importance of technology and operational conditions in agent banking. Ayadi et al. (2023), using evidence from Lagos State, found that customers valued proximity, convenience and responsiveness, while agents identified transaction failures, delayed reversals, network failures and fraud among major operational challenges. Bello et al. (2024) further reported that perceived usefulness, trust and perceived risk significantly influenced agency-banking adoption in Nigeria.

Despite these developments, much of the existing Nigerian literature has concentrated on financial inclusion, customer adoption and banking performance, rather than examining the relationship between agent banking technology and entrepreneurial practices among FinTech operators. This creates an important empirical gap, particularly at the subnational level.

Consequently, this study examines the relationship between agent banking technology and entrepreneurial practices among financial technology firms in Ondo State, Nigeria, using survey evidence from 388 respondents.

2. Statement of the Problem

The growth of digital financial services has created new opportunities for financial technology operators. Nevertheless, FinTech operators continue to operate within an environment characterised by technological, infrastructural, regulatory and operational challenges. Agent banking activities can be affected by network failures, transaction reversals, liquidity constraints, fraud, inadequate technical support and service interruptions. These challenges may affect the ability of operators to provide reliable services and pursue entrepreneurial opportunities.

Previous studies have established the relevance of agent banking to financial inclusion and customer access. For example, Ayadi et al. (2023) identified transaction failures, network problems, delayed reversals and fraud as significant challenges affecting agency banking in Nigeria. Similarly, Agbor et al. found that agent banking brought financial services closer to rural populations but that the effectiveness of the policy depended on how agent-banking services were implemented and used.

The question of whether the technological capabilities associated with agent banking are related to the entrepreneurial practices of FinTech operators remains insufficiently examined. This is particularly relevant in Ondo State, where FinTech operators serve customers across urban, semi-urban and rural communities.

The present study addresses this gap by empirically examining the relationship between agent banking technology and entrepreneurial practices among FinTech operators in Ondo State.

3. Objective of the Study

The specific objective of the study is to:

Examine the relationship between Agent Banking Technology and Entrepreneurial Practices of financial technology firms in Ondo State, Nigeria.

4. Research Question

The study was guided by the following research question:

What is the relationship between Agent Banking Technology and Entrepreneurial Practices of financial technology firms in Ondo State, Nigeria?

5. Research Hypothesis

The following null hypothesis was tested:

H₀: Agent Banking Technology has no significant relationship with Entrepreneurial Practices of financial technology firms in Ondo State, Nigeria.

6. Literature Review

6.1 Agent Banking Technology

Agent banking technology refers to technology-enabled systems through which authorised third-party agents provide selected financial services to customers on behalf of licensed financial institutions. The technology may include point-of-sale terminals, mobile devices, electronic transaction platforms, biometric identification, USSD interfaces and other digital channels.

The significance of agent banking lies partly in its ability to extend financial services beyond traditional bank branches. In Nigeria, the model has been incorporated into national efforts to improve financial inclusion. The CBN's 2025 guidelines specifically recognise agent banking as a delivery channel for financial services and emphasise minimum standards, responsible market conduct and service quality.

Agent banking can also create entrepreneurial opportunities because individuals and small businesses can operate as financial-service agents while serving customers within their communities. This creates an intersection between financial inclusion and entrepreneurship.

6.2 Agent Banking and Digital Financial Services

The development of agent banking is closely associated with the broader digital transformation of financial services. Digital platforms allow transactions to be processed electronically, thereby reducing dependence on physical bank branches.

The IMF's analysis of Nigeria's digital financial-services ecosystem identified agent banking and networks as important components of the country's financial-inclusion efforts. It also highlighted the continuing need for improved digital infrastructure and financial literacy.

Bello et al. (2024) found that perceived usefulness, trust and perceived risk were significant determinants of agency-banking adoption in Nigeria. Their findings suggest that the usefulness and reliability of agent-banking technology are important considerations in its adoption.

6.3 Agent Banking Technology and Entrepreneurship

Entrepreneurial practices involve activities through which entrepreneurs identify opportunities, mobilise and manage financial resources, develop products and services, acquire customers and establish business relationships.

Digital financial technologies can facilitate such activities by improving the speed and accessibility of transactions. Recent international evidence supports the broader connection between digital finance and entrepreneurship. Sun and Xie (2024), for example, found that digital finance provided by banks and BigTech firms can promote entrepreneurial activity by improving access to financing, with effects extending to formal and informal entrepreneurship.

Recent evidence on African economies indicates that FinTech development and digital finance can positively influence entrepreneurship, particularly during the nascent and transitional stages of entrepreneurial development.

Guo et al. (2025) also reported that FinTech development can foster SME entrepreneurship through improvements in productivity and reductions in information uncertainty.

These findings provide a basis for examining whether agent banking technology, as a specific component of digital financial infrastructure, is associated with entrepreneurial practices among FinTech operators.

7. Theoretical Framework

Technology Acceptance Model

The study is principally anchored on the Technology Acceptance Model (TAM). The model proposes that perceived usefulness and perceived ease of use influence an individual's acceptance and use of technology.

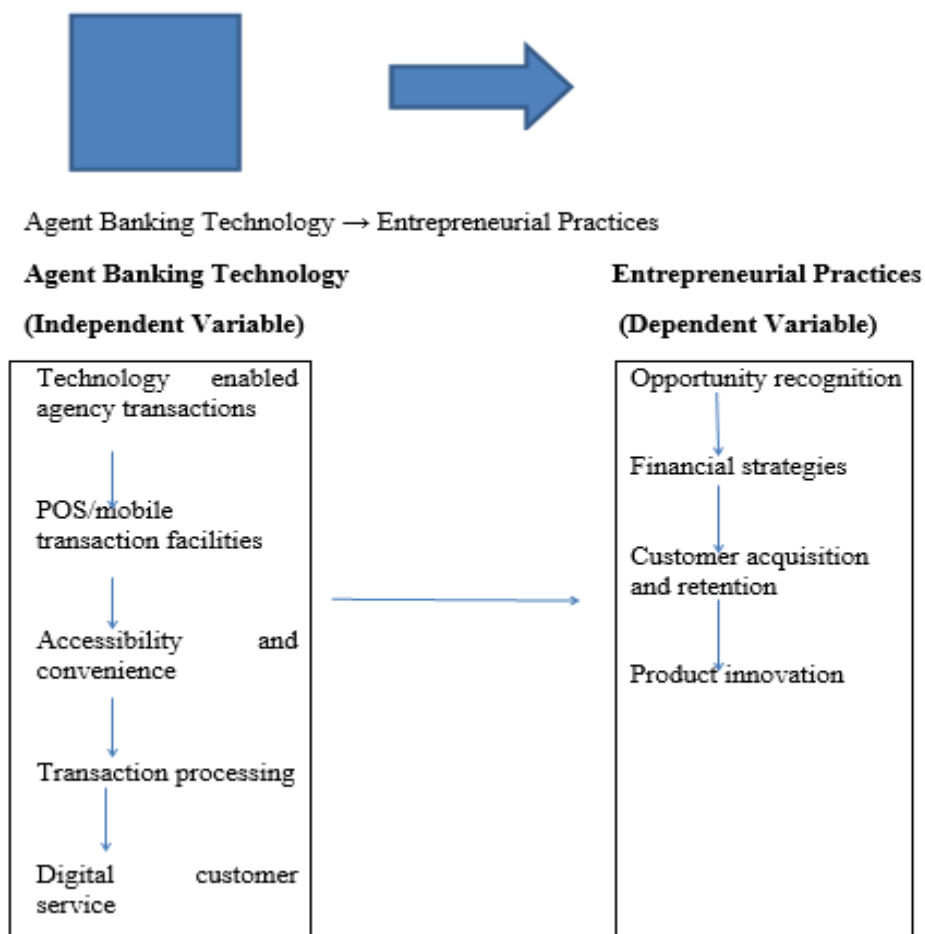
TAM provides a useful theoretical foundation for agent banking technology because the effectiveness of agent banking depends partly on whether agents and users perceive the technology as useful, accessible and reliable.

Bello et al. (2024) applied an extended TAM to agency-banking adoption in Nigeria and reported significant relationships involving perceived usefulness, trust and perceived risk.

In the context of the present study, when agent banking technology provides convenient, reliable and useful transaction facilities, it can support the day-to-day activities through which FinTech operators conduct and develop their businesses.

8. Conceptual Framework

The study proposes a direct relationship between the independent and dependent variables:



Source: field work (2026)

Conceptual frame work

The framework proposes that increased utilisation and effectiveness of agent banking technology are associated with stronger entrepreneurial practices among FinTech operators.

9. METHODOLOGY

9.1 Research Design

The study adopted a quantitative cross-sectional survey research design. The design was appropriate because data were collected from respondents at a particular period to examine the statistical relationship between Agent Banking Technology and Entrepreneurial Practices.

9.2 Study Area

The study was conducted in Ondo State, Nigeria. The state contains 18 Local Government Areas and has a mixture of urban, semi-urban and rural communities. These characteristics make the state suitable for examining technology-enabled financial services and entrepreneurship.

9.3 Population and Sample

The study utilised 388 valid respondents comprising FinTech operators/agents within the geographical coverage of the study.

The 388 respondents constitute the same respondent pool used in the wider empirical study from which this focused journal article was developed.

9.4 Instrument for Data Collection

Data were collected using a structured questionnaire. The instrument contained items measuring Agent Banking Technology and Entrepreneurial Practices using a Likert-type response scale.

Agent Banking Technology was treated as the independent variable, while Entrepreneurial Practices was treated as the dependent variable.

9.5 Method of Data Analysis

The data were analysed using SPSS. Descriptive and inferential statistical procedures were employed. Simple linear regression was used to determine the extent to which Agent Banking Technology statistically predicted Entrepreneurial Practices.

The regression model was specified as:

$$EP = \beta_0 + \beta_1 ABT + \varepsilon$$

Where:

EP = Entrepreneurial Practices

ABT = Agent Banking Technology

β_0 = Constant

β_1 = Regression coefficient

ε = Error term

10. RESULTS

10.1 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.945 ^a	.893	.892	.088

Predictor: Agent Banking Technology

Dependent Variable: Entrepreneurial Practices

The model produced an R value of .945, indicating a very strong positive relationship between Agent Banking Technology and Entrepreneurial Practices.

The R² value of .893 indicates that Agent Banking Technology statistically explains 89.3% of the variation in Entrepreneurial Practices among the respondents. The adjusted R² of .892 indicates that approximately 89.2% of the variation remains explained after adjustment for the model.

The standard error of the estimate was .088, indicating relatively small unexplained prediction error within the fitted model.

10.2 Analysis of Variance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.705	1	24.705	3205.392	.000 ^b
	Residual	2.975	386	.008		
	Total	27.680	387			
a. Dependent Variable: Entrepreneurial Practices						
b. Predictors: (Constant), Agent Banking Technology						

The ANOVA results show that the regression model was statistically significant, $F(1, 386) = 3205.392$, $p < .001$.

The null hypothesis that Agent Banking Technology has no significant relationship with Entrepreneurial Practices is rejected.

10.3 Regression Coefficients

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	.033	.086		.384
	Agent Banking Technology	.992	.018	.945	.000
a. Dependent Variable: Entrepreneurial Practices					

The coefficient for Agent Banking Technology was positive and statistically significant ($B = .992$, $\beta = .945$, $t = 56.616$, $p < .001$).

The unstandardised coefficient indicates that a one-unit increase in Agent Banking Technology is associated with an estimated 0.992-unit increase in Entrepreneurial Practices, holding the model specification constant.

The standardised beta coefficient of .945 indicates a very strong positive statistical association between Agent Banking Technology and Entrepreneurial Practices.

The constant was not statistically significant ($B = .033$, $p = .701$), although the significance of the constant is not central to testing the study hypothesis.

11. DISCUSSION OF FINDINGS

The study found a very strong positive relationship between Agent Banking Technology and Entrepreneurial Practices among FinTech operators in Ondo State. The correlation coefficient represented by the regression model was $R = .945$, while Agent Banking Technology explained 89.3% of the variance in Entrepreneurial Practices ($R^2 = .893$).

The finding suggests that variations in agent banking technology are strongly associated with variations in entrepreneurial practices among the respondents. In practical terms, agent banking technology provides a technological infrastructure through which FinTech operators can conduct transactions, serve customers, expand their service reach and manage digitally enabled financial activities.

The finding is consistent with the broader evidence that digital finance can support entrepreneurial activity. Sun and Xie (2024) reported that digital finance provided by traditional financial institutions and BigTech firms can promote entrepreneurship by addressing financing constraints and improving access to financial services.

The finding is also broadly consistent with evidence from African economies indicating that FinTech development and digital finance can positively influence entrepreneurship. This supports the argument that technology-enabled financial infrastructure can become an important component of entrepreneurial ecosystems.

The result is particularly relevant to the Nigerian context because agent banking has been integrated into the country's financial-inclusion strategy. The IMF reported that Nigeria had approximately 1.375 million agents by September 2022 and identified agent banking as an important component of efforts to expand access to financial services.

The finding also complements Ayadi et al. (2023), who found that convenience, proximity and responsiveness were important factors associated with agency banking in Nigeria, while

network failures, transaction failures, delayed reversals and fraud represented important operational challenges. Thus, the positive relationship observed in the present study should not be interpreted as meaning that agent banking is without operational limitations. Rather, it indicates that the technological dimension of agent banking is strongly associated with entrepreneurial practices within the studied sample.

Bello et al. (2024) found that perceived usefulness, trust and perceived risk significantly influenced agency-banking adoption in Nigeria. This provides additional support for the importance of technology characteristics in shaping the utilisation of agent banking.

The finding is also consistent with the recent regulatory direction of the CBN. The revised 2025 Agent Banking Guidelines seek to strengthen agent banking as a financial-service delivery channel, improve service quality and promote responsible market conduct.

12. Hypothesis Testing

Hypothesis

H_0 : Agent Banking Technology has no significant relationship with Entrepreneurial Practices of financial technology firms in Ondo State, Nigeria.

The regression results produced $\beta = .945$, $t = 56.616$ and $p < .001$. Since the probability value is below the 0.05 significance level, the null hypothesis is rejected.

Decision

The study establishes a statistically significant positive relationship between Agent Banking Technology and Entrepreneurial Practices among the sampled FinTech operators in Ondo State.

13. CONCLUSION

This study examined Agent Banking Technology and Entrepreneurial Practices among FinTech operators in Ondo State, Nigeria. Based on data obtained from 388 respondents, the analysis revealed a very strong positive statistical relationship between the two variables.

Agent Banking Technology recorded an R value of .945 and an R^2 of .893, indicating that the variable accounted statistically for 89.3% of the variation in Entrepreneurial Practices in the sample. The overall regression model was statistically significant, $F(1,386) = 3205.392$, $p < .001$, while Agent Banking Technology had a statistically significant positive coefficient ($B = .992$, $\beta = .945$, $t = 56.616$, $p < .001$).

The evidence indicates that agent banking technology is an important component of the technological environment within which FinTech operators undertake entrepreneurial activities in Ondo State.

The study employed a cross-sectional survey and regression analysis, the result should be interpreted as a strong statistical association/predictive relationship rather than definitive proof of causation.

14. Recommendations

Based on the findings, the study recommends that:

FinTech operators should strengthen agent-banking infrastructure. Investment in reliable POS devices, transaction platforms and digital connectivity can support consistent service delivery. Network reliability should be improved. Telecommunications providers, financial institutions and relevant stakeholders should work toward reducing network-related transaction failures.

Agent training should be strengthened. Continuous training should cover transaction procedures, customer service, cybersecurity, fraud prevention and dispute resolution.

Financial institutions should improve technical support. Prompt resolution of failed transactions and technical problems can improve the operational environment of agents.

Regulatory implementation should remain technology-sensitive. The implementation of the CBN's revised agent-banking framework should balance financial-system security with accessibility and innovation.

FinTech operators should use agent networks strategically. Agent networks can be incorporated into customer acquisition, customer retention and service expansion strategies.

Further empirical research should examine the mechanisms involved. Future studies could investigate whether customer acquisition, financial access, transaction efficiency or product innovation mediates the relationship between agent banking technology and entrepreneurial practices.

15. Contribution to Knowledge

The study contributes to the literature in three principal ways.

First, it provides subnational Nigerian evidence on the relationship between Agent Banking Technology and Entrepreneurial Practices, focusing specifically on Ondo State.

Second, unlike studies that primarily examine agent banking in relation to financial inclusion or technology adoption, this study connects agent banking technology directly with entrepreneurial practices of FinTech operators.

Third, the study provides empirical evidence showing a particularly strong statistical association in the sampled population, with Agent Banking Technology accounting for 89.3% of the observed variation in Entrepreneurial Practices.

16. Limitations of the Study

First, the research relied on questionnaire responses, which may be affected by respondents' perceptions and reporting behaviour

Second, the cross-sectional design limits the ability to establish temporal causality.

Third, the study focused on FinTech operators in Ondo State, meaning that the findings should not automatically be generalised to all Nigerian FinTech operators without considering differences in geographical and institutional environments.

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