FINANCIAL LITERACY AND FINANCIAL INCLUSION: EVIDENCE FROM UNBANKED AND UNDER-BANKED SMES IN KWARA STATE, NIGERIA.

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Abstract

Financial inclusion as a concept of sustainability in Nigeria has been a controversial concept due to the fact that equal access to formal financial services remains limited. Although the concerned stakeholders have put efforts in entrenching SMEs penetration into the formal financial system, but most SMEs in Kwara State still remain unbanked or under-banked due to unawareness of financial product, poor record-keeping and lack of trust in the banking system. Therefore, this paper analyses the interconnection of financial literacy, as well as financial inclusion among the unbanked and under-banked Small and Medium Enterprises (SMEs) in Kwara State, Nigeria. The primary data gathering was done through purposive non-probability sampling technique on 384 SME owners in the three (3) local government areas that were selected in Kwara state. Despite the fact that the characteristics of data obtained were assessed with descriptive statistics, the model of binary choice with marginal effects was the inferential statistics. The significant level of 5% result showed that there is possibility that the level of financial inclusion is dependent on financial knowledge, financial skills and financial attitude and behaviour. The study concluded that financial inclusion affinity of the unbanked and underbanked SMEs in Kwara state is the most sensitive to the financial literacy of the same in the aspects of their financial knowledge, financial skill and financial attitude behaviour. Therefore, as a recommendation, it is advisable that a branded financial literacy programmes and initiatives should be launched on the owners of the SMEs in Kwara State in order to enlighten them on good financial skills, attitude and behaviours as they optimum utilize financial technologies to promote financial inclusions.

Keywords: Financial inclusion, Financial Knowledge, Financial Skills, Financial Attitude and behaviour, Unbanked SMEs, Underbanked SMEs

1.0 Introduction

Globally, financial inclusion has become a central pillar of the economic development agenda as it aims at ensuring that formal and affordable financial services are available to all segments of the population. Its pivotal role towards sustainable development, inclusive economic growth and poverty alleviation has made it a critical policy focus among growth-oriented nations to further achieve income equality, formalization of the informal sector, resilience to economic shocks, as well as social cohesion among the citizenry (IMF, 2023; Cardoso, 2024). Following this global trend and, as one of the responses to the fact that 53-percent of the adult population of Nigeria had been financially excluded by 2008, the Central Bank of Nigeria (CBN) initiated a national financial inclusion campaign that resulted in the development of National Financial Inclusion Strategy (NFIS), launched in 2012, which is based on agent banking, mobile money, digital platforms, and regulatory reforms with the aim of achieving 95 percent financial inclusion by 2024 (CBN, 2023). To further enhance the effectiveness and outreach of the financial inclusion initiative, the CBN chose a multi-stakeholder approach that involves state governments as strategic partners, thereby leading to the establishment of State Financial Inclusion Committees (SFICs), integration of state governments into the Revised National Financial Inclusion Strategy, financial literacy and awareness campaigns, etc. (EFInA, 2023; Ibitoye, et al., 2025).

Different tools have been identified in the quest towards financial inclusion in Nigeria and they include the agent banking, tiered knowledge-your-customer requirements, financial literacy, consumer protection, linkage banking, application of MSME development fund, credit enhancement programmes, and others. (CBN, 2023; Sadıq, 2025; Musa, et al., 2025). Financial literacy is considered a foundational pillar, and its interaction with financial inclusion is considered complementary and reinforcing due to its role in making good financial choices that pave way for financial growth and sustainability for individuals and SMEs (Iriobe, et al., 2017). While improving financial inclusion among Nigerian SMEs by means of enhanced access and use of formal financial services depend much on financial literacy, overconfidence can result in bad decisions, which emphasizes the importance of balanced financial education that helps SMEs owners to develop reasonable and flexible financial attitudes (Abdullahi, et al., 2025; Odeh, et al., 2025). Financial literacy helps SMEs to interact with officials of financial institutions and digital financial services, thus aiding them to overcome obstacles such as limited access to finance and financial infrastructure (Olatunji, et al., 2025).

Imperatively, the Federal government of Nigeria's efforts in reducing financial exclusion have recorded significant progress as the exclusion rate has declined from 46.3% in 2010 to 26% in 2023, reflecting improvement in expanding financial services (Cardoso, 2024; Adam & Shaba, 2025). However, Nigeria is still grappling with significant issues surrounding financial inclusion, especially among women, youths, rural populations, and individuals with low literacy rates as they majorly constitute SME operators. The financial inclusion gap continues to be significant, as rural areas and marginalized groups face continuous challenges in accessing formal banking services. Financial inclusion among SME owners is exacerbated due to low educational attainment and financial illiteracy, cultural and behavioural constraints, digital literacy gap in financial technology adoption, language and communication barriers, weak policy enforcement and institutional fragmentation among others (Olawale, et al., 2024; Okhakhu, 2024; Abasiekong, 2025; Adeyiga, 2025)

The human capital and planned behavior theories emphasize the importance of education, training, experience and perceived behavior of people in determining informed choices of the financial services such as access to finance. The significantly high financial exclusion rates in Kwara State, particularly among the unbanked and underbanked owners of SMEs, which could be attributed to the lack of financial skills and knowledge, poor financial attitude and behaviour, ineffective financial education programmes, limited access to financial services and the excessive dependence on informal financial systems (Oke, 2018; Oyasor, 2024). Most operators of SMEs do not have much financial training and usually consult their peers rather than seeking financial knowledge (OECD, 2017). This has created credit accessibility gaps, restricted SMEs' ability to improve their financial capabilities and hampered their confidence in using formal financial products. In addition, many SMEs prefer to remain unbanked/underbanked as they turned to unofficial financial sources like moneylenders and rotational savings groups because of cultural preferences and mistrust of formal institutions. This dependence could diminish the potential advantages of financial inclusion programs and lowered the incentive to raise formal banking-related financial literacy (Falola, et al., 2023; Kayode, et al., 2025). The studies of financial literacy and financial inclusion by SMEs in emerging economies including Nigeria are replete (Chibesa & Mwange, 2025; Zumalia et al., 2025), nevertheless, study on the unbanked and underbanked SMEs is quite rare with regards to particular interests of the unbanked and underbanked SMEs in Kwara State, Nigeria. Following the above, there is a need to study the impact of financial literacy (financial knowledge, financial skills, and financial attitude and behavior) on financial inclusion of the unbanked and underbanked SMEs in Kwara State, Nigeria. To test this research objective, the following hypotheses are put to test:

H_{01}: Financial knowledge does not significantly influence financial inclusion among unbanked and underbanked SMEs in Kwara State, Nigeria.

H_{02}: Financial skills do not play a significant role in determining financial inclusion among unbanked and underbanked SMEs in Kwara State, Nigeria.

H_{03}: Financial attitude and behaviour do not significantly affect financial inclusion among the unbanked and underbanked SMEs in Kwara State, Nigeria.

2.0 Literature Review

2.1 Conceptual Review

Financial Inclusion

According to World Bank (2023), financial inclusion is defined as the process of ensuring that every individual and business, and more so the underprivileged and low income earners have continued to access appropriate, affordable and timely financial products and services offered by official financial institutions, including credit, insurance, savings and payment systems. Musa, et al., (2025) affirmed that the extension of financial services to individuals and companies that are not part of the formal financial system is referred to as financial inclusion since it aids in the realization of economic growth and reduction in poverty since it allows the people to be part of the economy, managing uncertainties and planning their future. It is a very crucial concept as financial inclusion can be used to alleviate poverty and sustainable development because individuals and companies living in poverty or in vulnerable situations can access financial services and products (e.g. transactions, payments, savings, credit and insurance) in a responsible and sustainable manner (Ibitoye, et al., 2025).

Financial inclusion can be viewed from different dimensions, among which are access, usage, quality, digital financial inclusion, affordability and appropriateness, and empowerment, among others (Totolo & Goronja, 2024). Access dimension takes cognizance of the affordability and regulatory constraints that may hinder people from obtaining financial products or opening accounts. Thus, ensuring the proximity of financial services in terms of bank branches, ATMs, and digital channels, to those needing them becomes imperative (NFIS, 2018). Usage quantifies the degree to which individuals engage with financial services and products, and it extends beyond simple access to evaluate actual transactions, usage frequency, and the variety of financial products employed, including payments, savings, credit, insurance, and pensions. (Uzoka, 2025). Quality relates to the suitability, cost, dependability of financial products and services and it covers consumer protection, openness, financial literacy, whether products are catered to the needs of

many segments, including underprivileged groups (NFIS, 2018).

Financial Literacy

Financial literacy can be defined as the capability to comprehend and utilize different financial skills such as personal financial management, budgeting, saving, investing, and debt management among others (Business Standard, 2025). It involves the knowledge, skills and behaviors required such that the individuals make good financial decisions about their money hence giving them financial stabilityand security. Fernando (2024) defines financial literacy as a set of skills concerning the personal financial management, budgeting activities, and investment decisions. as A second argument by the National Financial Educators Council is that financial literacy means possessing skills and knowledge on financial problems to be able to take effective action that will meet the objectives of an individual, family or world community in the most optimal manner.

While clarifying financial literacy, key elements are of importance among which are knowledge, skills, attitudes and behaviour. Loza, et al.(2024) described financial knowledge is the awareness of financial ideas like numeracy, interest computation, inflation, risk-return trade-offs, savings, investing, and budgeting and it provides the cognitive basis enabling people to understand financial decisions' consequences and how money operates. Financial skills are the useful capacity to apply financial information in daily life, including budget management, use of financial goods, expense planning, and navigating of financial services (Mittal, 2023). The psychological tendencies and attitudes towards money management, including one's inclination to save, spend, plan, and take financial risks are reflected in financial attitudes; while the real way one manages money including budgeting, saving, borrowing, investing, and timely bill payment is known as financial behaviour (Dewi, et al., 2020).

Unbanked SMEs

Unbanked Small and Medium Enterprises (SMEs) implies enterprises that miss out on financial services such as bank accounts, credits and payments through formal financial institutions as many of these businesses fund themselves with money from personal savings, loans from relatives or from moneylenders. World Bank (2023) defines unbanked SMEs as those enterprises that neither have business bank accounts nor use credit or other services from approved institutions. IFC (2023) asserted that SMEs do not get access to formal finance services because of difficulties related to frequent applications, requiring collateral, insufficient credit history, increased fees or business managed informally. This issue greatly limits their chances for growth and positive impact on the economy. SMEs that do not use banks are a key group of financially underserved businesses and especially affect developing nations, where it is not easy for them to work with formal banks (OECD, 2023). Unbanked SMEs have the features of: no formal bank accounts for business operations; rely on informal financing sources, limited or no credit history, often operate in the informal sector, face regulatory, documentation, and collateral barriers, among others (Dewantoko, 2025).

Underbanked SMEs

Underbanked SMEs are firms that have a bank account but are not well-supported by the various types of financial products such as credit, insurance and digital payments, needed for their growth. Underbanked SMEs are businesses that interact little with financial institutions, transacting only through accounts and cannot obtain credit or other services due to problems like inadequate collateral or expense (Liberto, 2025). World Bank (2023) considers underbanked SMEs to be those that do use banking but still lack important financial tools for expanding their business. The institution believes that the lack of sufficient credit among SMEs is caused by unfairness in the financial sector, rather than being due to low demand. Ford (2023) characterized underbanked SMEs as having to maintain a basic bank account or use payment services; has limited or no access to formal credit or long-term financing; rely heavily on informal finance to supplement formal services; face systemic lending constraints (e.g., lack of collateral, financial documentation, or credit scoring).

2.2 Theoretical Review

This work is anchored on human capital theory and theory of planned behavior. On one hand, Human capital theory as propounded by Adam Smith in 1776 and later formalized by Becker (1964) underscore the significance of investment in education, training and experience in increasing individual’s knowledge and skills for productivity and economic value. It posits that individual’s productivity and decision-making capacity is usually enhanced by continued investment in education and knowledge. Financial literacy is considered a combination of both financial knowledge and financial skills that individual owners of SMEs possess that enables them to make informed financial decisions. Increased financial literacy and skills enhances the knowledge of the SME owners on financial products thus making them more available and utilized- the spirit of financial inclusion. Conversely, the theories of planned behaviour postulated by Ajzen (1991) attribute how attitudes, subjective norms and perceived behavioural control are informing the intentions and the eventual action of individuals. In particular, it has a place that a person will tend to do something when he/she has a positive attitude towards the behavior, a belief that

other people accept it, and a strong belief that he/she has the ability to do it. Financial literacy forms attitudes and increases a sense of control over financial choices. This enhances the likelihood of the involvement of people in the formal financial services and consequently facilitate the financial inclusion.

2.3. Empirical Review

Bojuwon, et al. (2023) provided a robust empirical examination of SMEs in South-West Nigeria. Using a quantitative approach and Structural Equation Modelling (SEM), the study establishes that financial inclusion significantly improves the financial condition of SMEs, both directly and indirectly through financial literacy and financial self-efficacy. The findings indicate that financial literacy acts as a mediating variable, enhancing the ability of SME operators to effectively utilize financial services. Specifically, improved literacy increases financial capability, thereby strengthening the impact of inclusion on firm performance. The study concludes that policies aimed at expanding financial inclusion must simultaneously incorporate financial education to yield optimal outcomes.

Ibitomi, et al. (2024) examines SMEs in Abuja with a focus on financial literacy and enterprise performance. Using survey data and regression analysis, the study finds that deficiencies in financial knowledge such as poor budgeting, inadequate record-keeping, and weak understanding of financial products limit SMEs' ability to engage effectively with formal financial systems. This indirectly constrains financial inclusion, as financially illiterate entrepreneurs are less likely to utilize banking services, credit facilities, and investment opportunities. The study concludes that enhancing financial literacy is critical for improving both SME performance and their integration into the formal financial sector.

Zumalia et al. (2025) investigated the impact of financial literacy on financial inclusion, taking into account the mediating roles of infrastructural facility and policy and regulation. The research was performed on MSMEs in Pangkalpinang, involving 224 respondents. Data collection was executed through the online distribution of questionnaires using Google Forms. The analysis results indicate that financial literacy significantly influences financial inclusion, both directly and via the infrastructural facility. Mediation via policy and regulation is insignificant, suggesting that political regulation has not effectively contributed to enhancing financial inclusion. These findings underscore the necessity of promoting investment in enhancing infrastructure, including fintech networks and financial services in remote regions, as a viable method to facilitate broader access to finance.

Tulcanaza-Prieto et al. (2025) address the variables that influence financial literacy and how financial literacy, financial inclusion, and financial well-being are related and depend on digital literacy as an intermediate factor in the Ecuadorian banking sector. The research was conducted with the help of a developed internet questionnaire and a structural equation model which demonstrated the correlation between variables. Out of the 321 data points collected, only 294 records of the valid dataset were made. The primary findings implied that financial behaviour, attitudes, and skills positively influence financial literacy significantly; financial literacy influences financial inclusion and well-being significantly; financial inclusion is related to financial well-being significantly; and the digital literacy does not mediate the relationships between the variables due to dependencies on the socio-economic factors, in particular, the aspects of education, and the technology and innovation levels among the digital banking clients.

Chibesa and Mwange (2025) examined how digital financial literacy can be used to foster financial inclusion of informal firms in Lusaka, Zambia. To collect the data with 350 informal vendors in different markets, the mixed-methods approach was used. Studies have shown that digital financial literacy is an important determinant of financial inclusion with digital knowledge (0.52, $p < 0.05$), mobile banking (0.44, $p < 0.05$) use, and confidence in online platforms (0.39, $p < 0.05$) identified as decisive variables. The study encourages specific financial literacy education, better online infrastructure, and regulation assistance to further practice digital financial inclusion.

Sutrisno and Sunarko (2025) note the drivers that influence investment decision-making process like financial literacy, financial self-efficacy, and risk perception. The study aimed at establishing the impact of the financial literacy, financial self-efficacy and financial technological literacy and the risk perception of the stock investment among the millennial population within the Yogyakarta Special Region. The study population was the millennial stock investors in the D.I. Yogyakarta province. There were 115 individuals whose age bracket was 28-43 years and the sample size was 115. The data obtained was gathered by the survey method and finally analysed by SEM-PLS methodology. Based on the research findings, financial literacy is a major enhancement to stock investment acquisition among millennials in Yogyakarta. Financial self-efficacy, on the other hand, affects the stock investment decisions negatively to a significant level. In addition, financial technology literacy also has positive and significant impacts to stock investment choices.

Sam-Abugu, et al. (2025) extends the discourse by integrating financial technology (FinTech) into the financial literacy i.e. inclusion nexus in Nigeria. Employing empirical modelling techniques, the study finds that financial literacy significantly enhances the adoption and effective use of FinTech platforms, which in turn promotes

sustainable financial inclusion. The authors highlight that low literacy levels, particularly in rural areas, remain a major barrier to accessing digital financial services. Their findings underscore that financial literacy not only directly influences inclusion but also amplifies the effectiveness of technological innovations in deepening financial access across underserved populations.

Collectively, these studies demonstrate that financial literacy is not merely a complementary factor but a foundational driver of financial inclusion in Nigeria. Empirical evidence consistently shows that without adequate financial knowledge and skills, access to financial services does not translate into meaningful economic outcomes. Thus, recent Nigerian literature strongly advocates for integrated policy frameworks that combine financial inclusion initiatives with targeted financial literacy programmes, particularly for SMEs and rural populations.

3.0 Methodology

The study took the positivist approach with cross sectional survey design. This method is often adhered to in cases where the researcher does not want to manipulate any of the samples employed in carrying out the research (Asika, 2006). The interest of the researchers in this study however is to find the perceptions of both the unbanked and the underbanked business owners by administering self-administered questionnaires on cross-sectional basis with a view of extracting answers on the issue of financial literacy and financial inclusion with a view of making a suitable deduction therewith. The population of interest of the study, therefore, comprises of all the unbanked and underbanked SME owners within Kwara State. Since the population of study is infinite, the sample of 384 SME owners was picked in accordance with Cochran (1977) based on purposive non-probability sampling method. This was chosen in three (3) Local Government Areas within Kwara State, which was mainly characterized by rural areas as exhibited in the prior research (Kayode et al. 2019; Adefalu et al. 2023; Olaoluwa et al. 2024). These are Asa, Baruten and Ifelodun local government areas. These areas of the study are selected because they cover all the senatorial districts in the state, and there is a preconception that the unbanked and underbanked SMEs are concentrated in the rural regions. The necessary data that was required in the study was obtained using questionnaire drawn upon the World Bank Enterprise Survey (2015) and the OECD Financial literacy survey (2015) survey instruments. The descriptive and inferential statistics were used to analyze data. Table, frequency distributions and percentages, mean of central tendency and standard deviation were used to conduct descriptive statistics. The inferential statistical analysis was performed based on binary choice model on a marginal effects basis.

3.1 Model Specification

To achieve the objective of this study, the model of Mishi, Vacu and Chipote (2012) and Oke (2018) were adapted and the regression model is specified as follows: :

$SMEFinI_i = f(Finacial\ Literacy,)$ ……(1)

Where financial literacy is broken down into Financial Knowledge (FnK), Financial Skills (FnS) and Financial Attitude and Behaviour (FnAB), then the functional relationship is transformed to:

$SMEFnI_i = \beta_0 + \beta_1 Fnk_i + \beta_2 FnS_i + \beta_3 FnAB_i + \varepsilon_i$ ……(2)

Where SMEFnI = SME owner Financial Inclusion
FnK = Financial Knowledge
FnS = Financial Skill
FnAB = Financial Attitude and Behaviour
β0, β1β2β3 = Regression Coefficients
ε = error term

The a-priori expectation of the model is a positive relationship between the dependent variable and all the independent variables. That is β_1>0; β_2>0; β_3>0. The analysis is conducted using STATA.

4.0 Results and Discussion

4.1 Data Presentation

While the sample size of 384 SME owners were initially determined as the threshold, a total of three hundred and ninety-nine (399) copies of the questionnaire were distributed to take care of errors and research apathy from the respondents. Table 1 presents how the three hundred and ninety-nine (399) copies of the questionnaire were distributed among the identified classes of SME owners or managers across the selected local government areas. One hundred and thirty three (133) copies of the questionnaire had been administered to the SME owners in each of the selected local governments using purposive sampling technique. Of the distributed questionnaire, one hundred and twenty-eight (128) (representing 96.2 percent), one hundred and twenty-seven (representing 95.5 percent) and one hundred and thirty (representing 97.7 percent) were returned usable from Asa, Baruten and Ifelodun local government areas respectively. Overall, 385 questionnaires (96.5 percent) were returned usable while the remaining fourteen (14), that is 3.5 percent, out of the returned questionnaires were found to be unusable for the analysis due to errors made by respondents while completing them. The response rate of 385 SME owners was therefore adequate to constitute the sample size for the entire study population.

Table 1: Presentation of Distributed Questionnaire

Local government	Total distributed	Total returned usable	Total returnedu nsuable	Returned usable as percent of total (%)
Asa	133	128	5	96.2
Baruten	133	127	6	95.5
Ifelodun	133	130	3	97.7
Total	**399**	**385**	**14**	**96.5**

Source: Author's Survey, 2025

4.2 Demographic and Socio-economic Characteristics of the Respondents

Demographic Characteristics

This section focuses on the demography and socio-economic characteristics of the selected respondents. The descriptive analysis as contained in the Table 2.

Table 2: Characteristics of Respondents

		Frequency	Percent	Cum. Percent
Age				
	Less than 21years	33	8.57	8.57
	21-30 years	33	8.57	17.14
	31-40 years	18	4.65	21.79
	41-50 years	84	21.81	43.60
	51-60 years	167	43.38	86.98
	61years and above	50	13.12	100
Gender				
	Male	172	44.68	44.68
	Female	213	55.32	100
Marital Status				
	Single	60	15.58	-
	Married	220	57.14	65.22
	Divorced	50	12.99	73.92
	Widow	55	14.29	100
Education				
	No formal education	182	47.27	47.27
	Primary	105	27.27	74.54
	Secondary/Technical	59	15.33	89.87
	OND/NCE	39	10.13	100
	BSC/HND	-	-	
	Others	-	-	100
Experience in Business				
	Less than 10 years	102	26.49	26.49
	10-20 years	193	50.13	76.62
	Over 20 years	90	23.38	100
Monthly Income in Naira				
	Less than 200,000	170	44.16	44.16
	200,000-500,000	140	36.36	80.52
	Above 500,000	75	19.48	100

Source: Author's Survey, 2025.

As for the participants' age, results show that majority falls within the age group of 51 – 60 years (43.38%) and 41-50 years (21.81%). 17.14% fall within age-range of less than 21 years and 30 years. 13.12% fall within the age range of 61years and above. Only 4.65% fall within age range of 61 years and above. As for gender, 55.32% majority of the SME owners in the study areas are female while the remaining 44.68% are male. Regarding marital status of the respondents, 15.58% are single, 57.14% are

married, 12.99% are divorced and 14.29% are widow. Regarding their level of educational, majority of the participants representing 74.54% either have no formal education or only primary education. With regard to experience in business, 26.49% have been operating their business for less than 10 years and 21.74% have over 20 years' experience in business while majority of them 50.13% have experience ranging from 10 to 20 years. As for the monthly income, the monthly income for most of the SME owners reported is less than 200,000 naira. Overall, the demographic and socio-economic portrayals accurately captured the trait and business operations unique to SMEs.

4.3 Regression Results

In the study model, the dependent variable that is financial inclusion is binary, taking values of 1 if the respondent answers "yes" to statements on financial access, usage, availability and quality, 0 if the respondent answers otherwise. The explanatory variables comprise of a set of decomposed financial literacy variables namely, financial knowledge, financial skills and financial attitude and behaviour of the SME owners.

Table 3: Binary Logit Results

VARIABLES	Coefficients	p-value
FinK	0.213**	0.028
	(0.603)	
FinS	1.022	0.041
	(0.623)	
FinAB	0.81**	0.012
	(0.312)	
Constant	-6.55***	0.004
	(1.104)	
Observations	385	
Pseudo R-squared	0.5024	
Wald (Financial Literacy)	1.21**	

Jackknife Robust Standard errors in parentheses
*** significant at 1%, ** significant at 5%,
Source: Authors' Computation, 2025.

To consider the likely issue of heteroscedasticity, jackknife robust estimates of standard errors were used to estimate the model. The model provides statistically significant explanation as indicated in Table 3 of the probability of SME owners being financially included due to F-statistic value of 1.03. The pseudo R-squared (0.5024) goes further to demonstrate the extent to which the independent variables would explain the dependent variable. In particular, the findings demonstrate that the financial knowledge, financial skill and financial attitude and behavior are significant predictors of a likelihood of financial inclusion of SME owners. The Wald test of joint significance of all the explanatory factors shows the value of 1.21 which is statistically significant at the level of 5%. Consequently, all the elements of financial literacy operate collaboratively in a bid to greatly influence the likelihood of the unbanked and underbanked SME owners to be financially included in the study regions.

Nonetheless, marginal effects regression is performed in order to determine the critical impact of the explanatory variables (financial knowledge, financial skills, and financial attitude and behaviour) on the dependent variable (financial inclusion). The Table 4 contains the results of the marginal effects.

Table 4: Marginal Effects

VARIABLES	coefficients	p-value
FinK	0.121**	0.024
	(0.067)	
FinS	1.567**	0.015
	(0.561)	
FinAB	0.837**	0.009
	(0.227)	

Jackknife Robust Standard errors in parentheses
** significant at 5%
Source: Authors' Computations, 2025.

Table 4 shows the rise in the probability of financial inclusion with the change in each of the factors in question. The table indicates the marginal impacts of the financial literacy variables on the likelihood of financial inclusion. As financial knowledge, financial skills, and financial attitude and behaviour are positive significant variables, the marginal effectively of the variables reveal that one unit change in financial knowledge, financial skills, and financial attitude and behaviour will render the probability of financial inclusion as 0.121, 1.567, and 0.837 respectively.

4.4. Diagnostic Tests

The test for financial inclusion model specification is depicted in Table 5 in order to determine whether or not the model used for the study is accurate i.e. the test is essential for determining whether the model is free of specification errors.

Table 5: linktest (hat/hatsq) test for model specification

	_hat	_hatsq	Constant
Coefficient	1.129	0.201	0.412
p-value	0.006	0.074	0.243

Source: Authors' Computation, 2025

In the analysis, linktest specification test is done. The test forecasts a good model with the help of linear predicted value (hat) and squared value of the linear predicted value (hatsq). Variable hatsq is not supposed to have a significant predictive power beyond chance, in other words, it cannot be statistically significant at 0.05 and variable hat must be significant to ensure that the model is well specified. The outcome of the p-value of 0.006 demonstrates that variable hat is significant in the model even at the 1% level of significance whereas variable hatsq is not significant at the 5% level of significance. The p-value of 0.074 indicates weak importance of the significance of hatsq with the 10% level of significance. Thus, it will be correct to ensure that the model is well-specified.

Table 6: Correlation Analysis

Variables	$SMEFinI$	FinK	FinS	FinAB
$SMEFinI$	1			
FinK	0.531**	1		
FinS	0.626**	0.434**	1	
FinAB	0.235**	0.077	0.175**	1

**, indicates Significant at 1%
Source: Authors' computation, 2025

The correlation analysis represented in Table 6 dealt with the multicollinearity issues between independent variables. It indicates that all the independent variables' correlation coefficients i.e. financial knowledge and financial skills, financial knowledge and financial attitude and behavior, and financial skills and financial attitude and behavior are below 0.7, as the coefficients are 0.434, 0.077, and 0.175, respectively. Thus, the finding implies that the multicollinearity issue is either not serious or non-existent (Field, 2005; Kenedy, 2008).

Table 7: Variance Inflation Factor – Owner Characteristics

Variable	VIF	1/VIF
FinK	6.23	0.16051
FinS	5.72	0.17483
FinAB	2.19	0.45662
Mean VIF	4.71	

Source: Author's Computation, 2025.

The variance inflation factor, as shown in Table 7, indicate that he multicollinearity issue is not present in the model. The average VIF result, which fall short of 10-point criterion, is an indication of this. Average VIF values of threshold of 10 or above indicate a severe multicollinearity issue among the explanatory variables in a model (Asteriou and Hall, 2016). This is typically the case when the model's R-squared value is greater than 0.9.

Discussions of Findings

The ordered logit analysis observes that the financial knowledge variable can exert its power at 5% level of significance to determine the outcomes of the financial inclusion and the impact the hypothesis is the rejection of the null hypothesis. What is obtained is a reflection that financial expertise of unbanked/underbanked SME owners in the regions of the study is directly related to their financial inclusion level. Such users of financial services, such as the opening of savings and current accounts, depositing or borrowing, have the comprehension of these services already, it becomes necessary, and even the right thing to say, to make such decisions over them. Most of the underbanked and unbanked SMEs have insufficient knowledge on financial matters and are voluntarily or involuntarily locked out. The finding therefore agrees with human capital theory that the financial expertise of the SME owners does not only enhance their capability to understand the financial products but also by clearing the access and usage barrier, which results in their incorporation into the financial realm. This finding aligns with Andoh and Nunoo (2011), Mishi, Vacu and Chipote (2012) and Oke (2018) that predefined financial knowledge as a requirement in the mechanism of financial exclusion to inclusion.

The correlation analysis on the relationship between financial skills and financial inclusion has revealed that the statistically significant impact of financial skills on financial inclusion is present ($p<0.05$). Thus the null hypothesis gets rejected and the alternative hypothesis accepted. The result confirms the initial assumption of a positive relationship between the two variables, that is, the financial skills of SME owners which have been enhanced through continuous education, training and experience can impact financial inclusion in the areas covered by the study. Financial skills have the potential of giving the SME owners the ability to apply financial information in their everyday activities, including financial services, and these capabilities turn knowledge into action, that is, financial inclusion. This finding is in conformity with the finding in Mittal (2023) and Tulcanaza-Prieto et al. (2025); also it aligns with the with human capital theory which underscores the relevance of skill acquisition via education, training and experience for informed decisions.

With regards to financial attitude and behavior, at 5% level of significance, there is probability that financial attitudes and behaviours would exert significant influence on financial inclusion. This validates the two variables' positive a priori expectation and thus the rejection of the null hypothesis. The result is an indication that the financial attitudes and behaviours of unbanked and underbanked SME owner in the study areas has direct linkage with their level of financial inclusion. Atkinson and Messy (2012) suggest that risk-averse individuals who prefer short term consumption will have lesser financial solutions needs over the long run, therefore their adoption of such products will be affected. One of the factors that contribute to financial inclusion is a favorable perception towards the long-term financial products. Furthermore, Annim et al. (2012) found an equally strong positive correlation in South Africa between people's financial behavior and their access to and use of financial services. Also the study is in conformity with the theory of planned behavior which argued that financial inclusion is a function of positive attitude and behavior, and strong belief of individuals, including SME owners, towards the financial products.

Conclusion and Recommendations

In the setting of an ever-changing, sophisticated and complicated financial landscape, making financial decisions might require a good deal of financial knowledge, maybe even more than just a basic level. Thus, this study investigated impact of financial literacy on financial inclusion of the unbanked and underbanked small and medium enterprises (SMEs) in the selected local government areas of Kwara State, Nigeria Based on the results of the study, it is concluded that the financial inclusion of the unbanked and underbanked SMEs in Kwara state is greatly influenced by their financial literacy, which includes their financial knowledge, financial skills, and financial attitude and behavior. This is based on the notion that financially literate SMEs have a stronger capacity to develop their future

financial scenario, comprehend their current financial situation better, and make wise financial decisions, which, in turn, causes an increase in their level of financial inclusion.

Hence, the study recommends that the introduction of customized financial literacy programs and schemes for SMEs should be carried out, which not only will provide technical knowledge and skills but also will cultivate good financial attitudes and behaviors while relying on the technological advancements in finance with the aim of keeping the sector supported both technically and financially. Furthermore, financial institutions should deepen their outreach in the rural areas creating more individualized banking relationships, and establishing SME-focused microcredit channels given the number of unbanked and underbanked enterprises. Such outreach efforts should be accompanied by targeted financial training initiative to boost and instill confidence and better utilization of financial services.

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