

THE EFFECTS OF ISLAMIC BANKING PRODUCTS' ADOPTION ON FINANCIAL INCLUSION AMONG SMALL-SCALE ENTERPRISES IN NORTH CENTRAL NIGERIA

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Abstract

This paper examines how awareness, relative advantage, compatibility, observability, simplicity, and trialability influence the adoption of Islamic banking products and their impacts on financial inclusion among Small-Scale Enterprises (SSEs). The research work employs a quantitative research design through cross-sectional survey method. The population comprises 2,587 SSE owners and/or managers across Kwara, Nasarawa, and Niger States. The sample size of the study is 503. Proportionate stratified random sampling ensured fair representation across the three states. Data were analysed using multiple linear regression analysis. Findings reveal that awareness, compatibility, observability, simplicity, and trialability are significant predictors of Islamic banking product adoption, which in turn enhances financial inclusion among SSEs in North Central Nigeria. However, relative advantage was found not to have a significant effect. The study recommends that Islamic banks should focus on demonstrating product compatibility with community values and making benefits observable through publicizing local business success stories. To build trust and encourage adoption, they should design low-risk products for a tangible trialability experience. Given the counter-intuitive finding on simplicity, communication must emphasize a product's legitimacy and security, not just its ease of use. Policymakers and religious leaders should create a supportive framework and serve as key advocates to enhance credibility.

Keywords: Awareness, Compatibility, Observability, Simplicity, Trialability, Financial Inclusion

1.1 Introduction

Financial inclusion remains a persistent challenge in Nigeria, particularly in the northern region. A large segment of the population, including both individuals and businesses, continues to face exclusion from affordable and relevant financial products and services such as savings, credit, insurance, and mortgages (Abdullahi et al., 2024). This exclusion is often attributed to several factors, including limited awareness, religious and cultural beliefs, and inadequate conventional banking infrastructure (Umar et al., 2020).

In this context, Islamic banking, which operates in accordance with Shariah principles, emerges as a viable alternative. It resonates with the values and needs of many Nigerians, especially those in North-Central Nigeria. Islamic financial products such as Mudarabah (profit-sharing), Musharakah (joint venture), Murabaha (cost-plus markup), and Ijarah (leasing) offer ethical and interest-free financial solutions that are more acceptable to a predominantly Muslim population. The adoption of these products is often influenced by factors such as the level of awareness, their perceived relative advantage, and their compatibility with users' beliefs and financial behaviors (Ait et al., 2021).

Small-scale enterprises (SSEs) in Nigeria, like their counterparts in other regions, face limited access to credit, especially when compared to larger firms. Thaker et al. (2020) assert that traditional financial institutions, including commercial and microfinance banks, tend to prioritize larger firms due to their lower risk profile and better collateral capacity. The study further posits that SSEs struggle with high administrative costs, stringent collateral requirements, and inadequate financial literacy, all of which hinder their ability to access the capital necessary for growth and sustainability (PwC Nigeria, 2024).

Despite numerous government interventions aimed at promoting financial inclusion—such as TraderMoni and Conditional Cash Transfers during the Muhammadu Buhari administration—the desired outcomes remain elusive. SSEs continue to grapple with poor cash flow, limited credit access, and inadequate risk management, raising questions about the effectiveness of existing financial inclusion strategies.

Given the crucial role of SSEs in poverty reduction, employment generation, and economic development (Sigah, 2025), enhancing their access to appropriate finance is imperative. Islamic banking offers a promising alternative for financial inclusion, particularly when the adoption process is supported by key innovation adoption constructs. These include: relative advantage (perceived benefits over conventional banking, such as ethical alignment and reduced risk of interest-based debt) and

compatibility (the extent to which Islamic banking aligns with users' cultural, religious, and financial values). These factors, among others, collectively shape the likelihood of adoption and sustained usage (Nurudeen et al., 2022).

The global financial crisis of 2008 further spotlighted Islamic banking as a resilient and reliable financing model (Hilmi, 2023). Its resilience was largely due to its asset-backed structure, prudent risk-sharing mechanisms, and prohibition of speculative practices, all of which are rooted in Shariah compliance (Sonko, 2020).

Despite ongoing policy interventions and institutional reforms aimed at deepening financial inclusion in Nigeria, a substantial proportion of the adult population remains financially excluded (Enhancing Financial Innovation and Access (EFInA), 2024; & Central Bank of Nigeria, 2022). As of 2023, only 64% of Nigeria's adults had access to formal financial services, falling short of the 80% target set for the year (Nwokedi, 2024). This implies that over 36% of adults are still excluded from essential financial services - such as savings, credit, insurance, and payment systems - that have the potential to alleviate poverty, reduce unemployment, and stimulate economic development (EFInA, 2024; & Global Findex Database, 2021).

In North-Central Nigeria (which comprises Benue, Kogi, Kwara, Nasarawa, Niger, Plateau, and the Federal Capital Territory), according to the Central Bank of Nigeria's National Financial Inclusion Strategy (NFIS), the region recorded only 50% formal financial inclusion as of 2018, with 31% of the adult population excluded from the financial system. This appears to not to have witnessed much improvement, because, with Northern Nigeria's, North-West and North-East exclusion rates of 47% and 38%, respectively (EFInA, 2023), North-Central being "in between" (in the absence of specific rate for the zone in that study), it may be plausible to estimate the financial exclusion in the zone, conservatively at 33%.

A growing body of literature has recognized Islamic banking as a promising mechanism for promoting financial inclusion, particularly in Muslim-majority regions. Massab and Ahmed (2024), through a meta-analysis of studies from Southeast Asia, the Middle East, and North Africa, highlighted the role of Shariah-compliant banking in enhancing financial access by offering interest-free, risk-sharing financial products. However, their study was limited to regions outside Sub-Saharan Africa and primarily focused on macro-level outcomes, leaving contextual and micro-level insights for Nigeria, particularly North-Central Nigeria, underexplored. Furthermore, Musa, *et al.*, (2024) extended the Theory of Planned Behaviour (TPB) by introducing Islamic finance product (IFP) adoption as a mediating variable in Nigeria's Muslim-majority regions. Although their

findings confirmed the relevance of traditional TPB constructs and identified IFP adoption and government support as significant influencers of financial inclusion, the study reported that awareness and access to digital banking channels were not significant. However, the study was restricted to Muslim-majority regions and did not sufficiently address regional diversity in financial behaviours, nor the unique challenges facing small-scale enterprises (SSEs).

Musa (2024) further reinforced these findings using data from Northwestern Nigeria. Again, while Islamic finance product adoption was found to mediate several key relationships, the study focused only on individual-level participation and excluded business entities such as SSEs, which are vital to Nigeria's economic fabric. The recommendation for future research to explore North-Central Nigeria and consider additional variables underscores a critical gap in geographical and sectoral coverage. In a related context, Haruna, *et al.* (2024) studied the adoption of Islamic finance products among SMEs in Cameroon, revealing that religious adherence, awareness, and intention significantly drive usage. However, their study, conducted in a non-Islamic Sub-Saharan country, cannot be generalized to Nigeria, where the socio-religious and regulatory environments differ significantly. Moreover, their research focused more on product bundling and usage patterns than on the structural barriers to inclusion. Meanwhile, Salaudeen and Zakariyah (2022) identified regulatory constraints, lack of awareness, and misconceptions as major barriers to financial inclusion in Nigeria's microfinance sector. Their qualitative study, though insightful, was limited by a small sample size and did not account for the broader population of SSEs or the role Islamic finance could play in bridging the gap.

Additionally, the economic vulnerability of SSEs, which constitute 96% of businesses and 84% of employment in Nigeria - further amplifies the financial inclusion challenge. These enterprises have seen a decline from 41 million in 2017 to 40 million in 2020, contributing only 6.2% to Nigeria's gross exports (Moniepoint, 2023; Olabiyi, 2021). Alarmingly, 95% of SSEs fail within their first year, a statistic partly attributed to their limited access to suitable financing options (Ikharo & Igwebuikpe, 2022; Salaudeen & Zakariya, 2022).

In light of these gaps, there is a critical need for empirical research that focuses on North-Central Nigeria, a region underrepresented in previous studies; Examines Islamic finance product adoption specifically among SSEs, not just individuals. Therefore, this study seeks to bridge these identified gaps by investigating the role of Islamic banking product adoption in promoting financial inclusion among small-scale enterprises in North-Central

Nigeria. The study focuses on key drivers such as awareness, relative advantage, compatibility, observability, simplicity, and trialability of Islamic banking products, with the aim of offering context-specific policy and practical recommendations for enhancing inclusive financial participation and enterprise sustainability in North-Central Nigeria.

1.2 Objectives of the Study

The main objectives of the study are:

- i. To examine the effect of awareness of Islamic banking products on financial inclusiveness among small-scale enterprises in North-central, Nigeria.
- ii. To examine the effect of the relative advantage of Islamic banking products on financial inclusiveness among small-scale enterprises in North-central, Nigeria.
- iii. To examine the effect of compatibility of Islamic banking products on financial inclusiveness among small-scale enterprises in North-central, Nigeria.
- iv. To examine the effect of observability of Islamic banking products on financial inclusiveness among small-scale enterprises in North-central, Nigeria.
- v. To examine the effect of simplicity of Islamic banking products on financial inclusiveness among small scale enterprises in North-central, Nigeria.
- vi. To examine the effect of trialability of Islamic banking products on financial inclusiveness among small-scale enterprises in North-central, Nigeria.

2.1 Concept of Financial Inclusion

Financial inclusion refers to the process of ensuring access to appropriate, affordable, and timely financial products and services for all individuals and businesses, particularly the underserved (Massab & Ahmed, 2024). It encompasses not only access to banking services but also usage and quality of those services in ways that contribute to personal and economic well-being (Musa, *et al.*, 2024). According to Musa (2024), financial inclusion implies active participation in formal financial systems enabled by behavioural factors such as attitude, perceived control, and the availability of Sharia-compliant alternatives. Haruna, *et al.*, (2024) describe financial inclusion as the adoption of diverse financial instruments like murabaha, mudarabah, and ijara tailored to clients' cultural and religious preferences. Salaudeen and Zakariyah (2022) frame it as the sustainable integration of marginalized populations, particularly through microfinance institutions, into the financial ecosystem by eliminating barriers such as regulatory bottlenecks and lack of awareness.

While the definitions above offer useful insights, they each reflect narrow perspectives tied to the methodological or regional scope of the respective studies. Massab and Ahmed

(2024) focus on access but underemphasize the importance of actual usage and quality of financial services, which are key dimensions of inclusive finance. Musa, *et al.*, (2024) and Musa (2024) improve on this by integrating behavioural components and the role of Sharia-compliant products, yet they limit the scope to individual inclusion and overlook enterprise-level needs. Haruna *et al.*, (2024) offer a product-focused view, which is useful for adoption studies but insufficient for understanding structural barriers like infrastructure and literacy. Salaudeen and Zakariyah (2022), while addressing systemic issues, rely heavily on qualitative insights from a limited sample, which weakens the generalizability of their definition. Overall, the definitions lack a unified framework that captures financial inclusion as a multi-dimensional, faith-sensitive, and enterprise-inclusive phenomenon.

For this study, financial inclusion is defined as the availability, awareness, and effective usage of Islamic banking products and services by small-scale enterprises (SSEs) in North-Central Nigeria to access credit, savings, and payment solutions that align with their religious and financial values, thereby enhancing their business sustainability and economic participation.

2.2 Islamic Banking Product Adoption

According to Abdulkadir *et al.*, (2024), factors such as awareness, relative advantage, reliability, perceived compatibility, and subjective norms significantly influence the adoption of innovations. However, this study adopts awareness, relative advantage, compatibility, observability, simplicity, and trialability as key proxies for Islamic Banking Product Adoption (IBA), based on their foundational role in the decision-making process of small-scale enterprises (SSEs).

Awareness refers to the extent to which small-scale enterprise (SSE) owners and managers are knowledgeable about the existence, principles, and specific products of Islamic banking. It is the crucial first step in the adoption process, as individuals cannot consider using a product or service they are unaware of. Low awareness levels often serve as a significant barrier to financial inclusion, regardless of the product's benefits. According to Sonko (2020), a lack of public awareness is a primary reason for the low adoption rates of Islamic banking services in many markets.

Relative advantage is the perception that Islamic banking products are superior to conventional banking products. This can include benefits such as ethical, interest-free operations, profit-and-loss sharing, and alignment with Shariah principles. The perceived value and benefits, whether economic, social, or ethical, are key drivers of adoption. The

decision to adopt is heavily influenced by a business's perception that the new service offers a better alternative to what is currently available (Ait, *et al.*, 2021).

Compatibility measures the degree to which Islamic banking products align with the existing religious beliefs, cultural norms, and business practices of SSE owners. For a product to be adopted, it must be perceived as consistent with the user's values and needs. The cultural and religious fit of Islamic banking is particularly important in predominantly Muslim communities, where a high degree of compatibility can significantly increase the likelihood of adoption (Ait, *et al.*, 2021).

Observability is the extent to which the positive results and benefits of Islamic banking adoption are visible to others in the community. When SSEs can see their peers, competitors, or community members successfully using Islamic banking products, it acts as a form of social proof. This visibility reduces uncertainty and encourages new users to try the service, as its benefits are tangible and confirmed by others (Ait, *et al.*, 2021).

Simplicity refers to the perceived ease of understanding and using Islamic banking products. A product that is seen as easy to use, with straightforward procedures and clear terms, is generally more likely to be adopted. However, some studies have found a counter-intuitive negative relationship, where products perceived as overly simple are viewed with suspicion or lack of credibility by business owners who expect a certain level of procedural complexity for formal financial services (Biswapriyo & Bagrecha, 2024).

Trialability is the ability for potential adopters to experiment with an innovation on a limited, low-risk basis before making a full commitment. For SSEs, this could involve access to simple savings accounts or small-scale, short-term financing. Offering a trial period allows businesses to experience the product's benefits firsthand, reducing the perceived risk of adoption and increasing their confidence in the service (David-West, *et al.*, 2022).

2.3 Empirical Review

Musa (2024) further investigated the role of Islamic finance product adoption in mediating financial inclusion participation among adults in Nigeria's predominantly Muslim Northwest. Using a positivist and quantitative research approach, data were purposively collected from 500 individuals, out of which 324 valid responses were analysed using Structural Equation Modelling with PLS. The findings confirmed that all core TPB variables, attitudes, subjective norms, perceived behavioural control, and behavioural intentions, positively influenced financial inclusion participation.

Government support also emerged as a significant factor, while awareness and access to banking and digital services showed no significant effect. Additionally, Islamic finance product adoption played a key mediating role between several variables and financial inclusion, except in the cases of subjective norms, perceived behavioral control, and awareness. The study recommends future research to cover other regions like the Northeast and Northcentral Nigeria, and to include more variables for a broader understanding of financial inclusion behaviour.

Haruna, *et al.*, (2024) examined the use of various Islamic finance products (in this context, banking products), such as *Murabaha* (*cost plus profit product*), *musharakah* (*joint venture product*), *Mudarabah* (*profit sharing*), *salam* (*advance payment product*), *ijara* (*leasing product*), *istisna*, (*forward contract for production*) and *Qard Al- Hassan* (*benevolent loan product*) among SMEs in Cameroon, a non-Islamic Sub-Saharan African country. Using data from 1,358 SMEs across eight regions, collected through structured questionnaires, the researchers grouped the products into four categories based on their features. They employed a multivariate probit model to analyse the interrelationships among the products. The study found that adherence to Shariah law, awareness, attitude, and intention significantly influenced adoption, while factors like perceived behavioural control, subjective norms, enterprise characteristics, and entrepreneur demographics were less influential. Predicted probabilities from the model revealed that SMEs often adopt multiple Islamic finance products simultaneously, particularly combining partnership-based (*Musharakah*, *Mudarabah*) and manufacturing/rental-based (*Istisna*, *Ijara*) products to meet their specific financial needs.

Ait, *et al.* (2021) explored the determinants of FinTech services adoption among informal workers, using the Diffusion of Innovation theory as an analytical framework. The study's objective was to understand how the perceived characteristics of innovation—specifically relative advantage, compatibility, complexity, trialability, and observability—fluence an informal worker's intention to adopt these new financial services. A quantitative approach was used, with data collected from a sample of 367 unbanked individuals. The findings revealed that relative advantage, compatibility, perceived complexity, and observability all played a significant role in the intention to adopt, while trialability did not have a significant impact. The study concluded with recommendations to promote financial inclusion through FinTech, suggesting initiatives such as awareness campaigns, simplifying services, and improving digital literacy to help integrate informal workers into the formal financial system.

2.4 Theoretical Framework

This study is anchored on Everett Rogers' Diffusion of Innovation (DOI) Theory (1962; 2003), which provides a useful lens for understanding how innovations are introduced, adopted, and spread within a social system. The theory postulates that the adoption of an innovation is influenced by specific characteristics of the innovation itself, including relative advantage, compatibility, complexity (simplicity), trialability, and observability. In the context of this study, Islamic banking products are regarded as financial innovations whose adoption among small-scale enterprises in North Central Nigeria can be explained through these constructs.

The DOI theory informs the role of *awareness* and *relative advantage* in shaping adoption decisions. Awareness creates the initial knowledge necessary for entrepreneurs to consider Islamic banking products, while relative advantage reflects the perceived benefits of using such products compared to conventional financial services. When small-scale enterprises perceive that Islamic banking offers clear advantages, such as interest-free financing or ethical compliance, they are more likely to adopt these services, thereby enhancing financial inclusion.

Furthermore, the theory emphasizes *compatibility* and *simplicity* (the inverse of complexity) as key determinants of adoption. Compatibility relates to how well Islamic banking products fit into the values, needs, and financial practices of small-scale enterprises. If these products align with the socio-cultural and religious beliefs of entrepreneurs in North Central Nigeria, adoption is likely to increase. Simplicity, on the other hand, reduces barriers to understanding and using Islamic financial services, making them more accessible to small-scale business owners with varying levels of financial literacy.

Lastly, DOI highlights *trialability* and *observability* as accelerators of adoption. Trialability allows small-scale enterprises to experiment with Islamic banking products on a limited scale before committing fully, reducing uncertainty. Observability ensures that entrepreneurs can see tangible results of adoption through peers who have successfully used these products. Together, these constructs explain how the adoption process can drive financial inclusiveness, as more enterprises integrate Islamic banking into their operations. Thus, DOI directly informs the study variables by providing a theoretical justification for examining awareness, relative advantage, compatibility, simplicity, trialability, and observability as predictors of financial inclusion.

3.0 Methodology

This study employed a quantitative research design through cross-sectional survey research method, which aligns with its objectives focused on measuring and analysing relationships between variables using statistical techniques. The population consists of 2,587 owners and/or managers of Small-Scale Enterprises (SSEs) operating in Kwara, Nasarawa, and Niger States. These SSEs are registered members of the Chambers of Commerce, Industry, Mines, and Agriculture as of December 2024, based on data obtained from the respective state headquarters.

Table 1: Population of the Study

State	Population
Kwara	467
Nasarawa	1,816
Niger	304
Total	2,587

Source: Kwara, Nasarawa & Niger NCCIMA, 2024

The three states of Kwara, Nasarawa, and Niger were chosen to provide a representative sample of SSEs within Nigeria's North-Central geopolitical zone. These states offer a good mix of characteristics: they are all located in the same geographic region, but they differ in terms of population density, economic activities, and socio-cultural dynamics. This approach ensures a diverse dataset, allowing for a more robust analysis of how business owners' and managers' behaviors and characteristics vary across the region.

To mitigate the risk of non-responses and incomplete data, the calculated sample size was increased by 50%, resulting in a new target of 503 participants. This adjustment was based on the recommendation of Osman and Abdul Aziz (2020) and served as a safeguard to ensure a sufficient number of valid responses for the study. Ultimately, 447 responses were retrieved, with 415 deemed valid for analysis. This robust number exceeded the initial minimum requirement of 335 (using Taro Yamane's formula), thereby improving both the volume and adequacy of the data for the study.

The study used a structured and closed-ended questionnaire to collect data from a group of respondents. The questionnaire was hand-delivered to respondents. The scale contains six variable-measurement scales (Islamic Banking Adoption and Small-Scale Enterprises financial inclusion) seven-point Likert scale statement ranging from Strongly Disagree = 1 to Strongly Agree = 7.

The scales for measuring the independent variable (Islamic banking products' adoption and its indicators) are sourced and adapted from the works of Abdulkadir *et al.* (2024), Sudarso, *et al.* (2021), Kaabachi and Obeid (2016), and Nancy (2007). The 'financial inclusion' and its determinants' scales (access to transaction accounts, loans and advances, mortgage services, insurance, bank branches, point of sales availability and socio-economic factors) are adapted from the work of Demirguc-Kunt and Klapper (2012).

This study used descriptive statistics (mean, standard deviation) and inferential statistics (ANOVA, correlation and multiple linear regressions) at 5% level of significance. Any p - p-value above 0.05 means the null hypothesis is accepted or the alternate hypothesis is rejected, and vice versa.

The data analysis in this study shall be aided through the use of Statistical Packages for Social Sciences (SPSS 27). The regression model to be used is mathematically expressed, as hereunder;

$$FI = \beta_0 + \beta_1 A_i + \beta_2 RA_i + \beta_3 C_i + \beta_4 OB_i + \beta_5 S_i + \beta_6 T_i + e$$

Where:

FI = Financial Inclusion;

β_0 = constant;

$\beta_1 A_i$ = Awareness coefficients;

$\beta_2 RA_i$ = Relative Advantage coefficients;

$\beta_3 C_i$ = Compatibility coefficients;

$\beta_4 OB_i$ = Observability coefficients;

$\beta_5 S_i$ = Simplicity coefficients;

$\beta_6 T_i$ = Trialability coefficients;

e = Error term.

3.1 Reliability of the Instrument

The study used Cronbach's alpha to test the reliability of the instrument. Table 1 depicts the results of the study Cronbach's alpha output.

Table 1: Reliability Test Result

Variable coefficient	Number of items	Scale reliability
Awareness	8	.957
Relative Advantage	8	.967
Compatibility	5	.959
Observability	4	.981
Simplicity	4	.956
Trialability	4	.948
Financial Inclusion	5	.951

Source: SPSS Output

Based on the Cronbach's alpha coefficients presented in Table 1, the reliability of the research instrument was assessed. The results show that all seven variables - Awareness (.957), Relative Advantage (.967), Compatibility (.959), Observability (.981), Simplicity (.956), Trialability (.948), and Financial Inclusion (.951) - exhibited excellent internal consistency. All of these coefficients are well above the conventional acceptable threshold of .70, with most values exceeding .90. This indicates a high level of stability and dependability among the items within each scale, confirming that the instrument is a reliable tool for measuring the intended variables.

4.0 Data Analysis and Discussion

4.1 Normality Test

The study employed Skewness and Kurtosis measures to evaluate the normality of the data distribution across the variables. Following Hair, Black, Babin, and Anderson (2010), Skewness values between -2 and +2 and Kurtosis values ranging from -7 to +7 are considered acceptable indicators of normality. Table 2 summarizes the normality test results for each variable, providing descriptive statistics including the mean, standard deviation, Skewness, and Kurtosis along with their standard errors. The results confirm that the data distributions for all variables fall within the acceptable range, thereby supporting the assumption of normality required for subsequent regression and inferential analyses.

Table 2: Normality Test

	N	Skewness		Kurtosis	
		Statistic	Statistic	Std. Error	Statistic
Awareness	415	-.712	.120	-.278	.239
Compatibility	415	-.948	.120	-.238	.239
Relative Advantage	415	-.641	.120	-.961	.239
Observability	415	-.749	.120	-.352	.239
Simplicity	415	-.473	.120	-1.390	.239
Trialability	415	-.535	.120	-.928	.239
Financial Inclusion	415	-.609	.120	-.865	.239
Valid N (listwise)	415				

Based on the normality test results in Table 2, the data for all study variables are normally distributed. The table shows that for a sample size of 415, all variables - Awareness, Compatibility, Relative Advantage, Observability, Simplicity, Trialability, and Financial Inclusion, have skewness and kurtosis statistics within the acceptable range. Specifically, all skewness values range from -.948 to -.473, and all kurtosis values range from -1.390 to -.238. Given that the absolute values of the skewness and kurtosis statistics are less than twice their respective standard errors, the data can be considered free from significant normality violations. This favorable outcome justifies the use of parametric statistical tests for the subsequent data analysis.

4.2 Collinearity Test

Table 3 displays the outcomes of the collinearity diagnostics performed as part of the study's regression analysis. Collinearity, or multicollinearity, refers to a situation where independent variables in a regression model are strongly correlated with each other, potentially resulting in inflated standard errors and misleading coefficient estimates. The table reports both the Tolerance and Variance Inflation Factor (VIF) values for the independent variables - Awareness, Compatibility, Relative Advantage, Observability, Simplicity, and Trialability - while the dependent variable is financial inclusion. Tolerance values approaching 1 suggest minimal collinearity, indicating that each variable offers distinct explanatory power to the model. Conversely, values approaching

0 may signal a high degree of overlap among predictors. Likewise, VIF values greater than 5 or 10 are typically interpreted as evidence of problematic multicollinearity.

Table 3: Collinearity Statistics

		Tolerance	VIF
1	(Constant)		
	Awareness	.272	3.677
	Compatibility	.180	5.571
	Relative Advantage	.223	4.487
	Observability	.240	4.173
	Simplicity	.226	4.432
	Trialability	.290	3.449

a. Dependent Variable: Financial Inclusion

Table 3 presents the collinearity statistics for the independent variables to assess for multicollinearity. As shown, all variables - Awareness, Compatibility, Relative Advantage, Observability, Simplicity, and Trialability - have Tolerance values ranging from .180 to .290. These values are all above the commonly accepted threshold of .10, indicating no multicollinearity concerns. Similarly, the corresponding Variance Inflation Factor (VIF) values, which range from 3.449 to 5.571, are all well below the critical threshold of 10. These results confirm that the independent variables are not highly correlated with each other and can therefore be reliably used together in the regression analysis without distorting the results.

4.3 Model Fit

Table 4 presents the model summary for the regression analysis conducted in the study.

Table 4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.870 ^a	.757	.753	2.119	2.274

a. Predictors: (Constant), Trialability, Relative Advantage, Observability, Awareness, Simplicity, Compatibility

b. Dependent Variable: Financial Inclusion

Based on the results in Table 4, the model summary of the regression analysis shows a strong fit for the data. The model, which includes all six predictors - Trialability, Relative Advantage, Observability, Awareness, Simplicity, and Compatibility - in explaining

Financial Inclusion, produced a high correlation coefficient (R) of .870. This indicates a very strong positive relationship between the collective predictors and the dependent variable. The R Square value of .757 shows that approximately 75.7% of the variance in Financial Inclusion can be explained by the independent variables included in the model. The Adjusted R Square of .753 confirms this strong explanatory power, while accounting for the number of predictors. The Standard Error of the Estimate is 2.119, and the Durbin-Watson statistic is 2.274, which is close to the ideal value of 2, indicating that there are no significant issues with autocorrelation in the model's residuals.

4.4 Analysis of Variance (ANOVA)

Table 5 presents the results of the analysis of variance (ANOVA) for the regression model with financial inclusion as the dependent variable, Awareness, Compatibility, Relative Advantage, Observability, Simplicity, and Trialability as predictors of Islamic Banking product adoption (independent variable).

Table 5: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	5708.263	6	951.377	211.867	.000 ^b
	Residual	1832.099	408	4.490		
	Total	7540.361	414			

a. Dependent Variable: Financial Inclusion

b. Predictors: (Constant), Trialability, Relative Advantage, Observability, Awareness, Simplicity, Compatibility

Based on the results in Table 5, the ANOVA test confirms the statistical significance of the overall regression model. The table shows a Sum of Squares for the regression of 5708.263 with 6 degrees of freedom (df), and a Residual Sum of Squares of 1832.099 with 408 df. This leads to a total Sum of Squares of 7540.361. The model's Mean Square for the regression is 951.377, while the Mean Square for the residuals is 4.490. The F-statistic is 211.867, and the corresponding p-value (Sig.) is .000. Because this p-value is less than the standard significance level of .05, the model is statistically significant, meaning that the six predictors - Awareness, Relative Advantage, Compatibility, Observability, Simplicity, and Trialability - jointly have a significant effect on Financial Inclusion.

4.5 Test of Hypothesis

Table 6 displays the coefficients obtained from testing the study's hypotheses through a regression model. These coefficients offer valuable insights into the relationships between the predictor variables and the dependent variable.

Table 6: Coefficients^a

Model	Unstandardized Coefficients			Standardized Coefficients	
	B	Std. Error	Beta	t	Sig.
1	(Constant)	1.092	.480	2.276	.023
	Awareness	.114	.030	.176	.000
	Compatibility	.097	.058	.097	.094
	Relative Advantage	.076	.037	.107	.040
	Observability	.398	.061	.325	.000
	Simplicity	-.314	.081	-.200	.000
	Trialability	.526	.053	.449	.000

a. Dependent Variable: Financial Inclusion

Based on the Coefficients table 6, the regression analysis shows the individual effects of each predictor on Financial Inclusion. The constant (intercept) of 1.092 is statistically significant ($p=.023$). Among the six independent variables, Awareness ($\beta=.176$, $p=.000$), Relative Advantage ($\beta=.107$, $p=.040$), Observability ($\beta=.325$, $p=.000$), Simplicity ($\beta=-.200$, $p=.000$), and Trialability ($\beta=.449$, $p=.000$) all have a statistically significant effect on Financial Inclusion. The results show that Trialability has the strongest positive effect on financial inclusion ($\beta=.449$), while Simplicity has a significant negative effect ($\beta=-.200$). In contrast, Compatibility ($\beta=.097$, $p=.094$) was found to have no significant effect, as its p-value is greater than the .05 significance level. These findings indicate that most of the proposed factors are significant determinants of financial inclusion.

4.6 Discussion of Findings

The research found that awareness of Islamic banking products has a significant and positive effect on the financial inclusion among SSEs in North-Central Nigeria. This finding challenges the initial hypothesis, indicating that simply knowing about these products is enough to drive participation and foster greater access to formal financial services in this region. This suggests a latent demand for Shariah-compliant services that can be activated through basic information dissemination. Although Musa et al. (2024), find awareness to be a necessary but not sufficient condition, this study's results highlight that in the unique cultural and religious context of North-Central Nigeria, awareness acts as a powerful catalyst on its own.

The study found that the relative advantage of Islamic banking products has a significant effect on the financial inclusiveness of SSEs in North-Central Nigeria. This finding, which does not support the study's hypothesis, suggests that SSE owners do not perceive the theoretical benefits of Islamic banking (e.g., interest-free principles) as compelling enough to influence their financial inclusion decisions. This result aligns with findings from David-West, et al. (2022) regarding mobile money, indicating a broader disconnect in the Nigerian financial landscape between perceived benefits and actual adoption. However, it contradicts Ait, et al. (2021), highlighting that the impact of relative advantage is highly dependent on the specific context and market maturity.

The research revealed that the compatibility of Islamic banking products has no significant effect on the financial inclusiveness of SSEs in the region. This outcome demonstrates that the perceived alignment of these products with the existing values, beliefs, and business practices of SSE owners is not a crucial driver of adoption. This finding is not consistent with Ait, et al. (2021), which found compatibility to be a significant determinant of FinTech adoption. It contrasts with David-West, et al. (2022), suggesting that the compatibility of Islamic banking, rooted in strong religious and ethical principles, is a more powerful motivator for this specific demographic than the purely practical compatibility of other financial services.

The study found that the observability of Islamic banking products has a significant and positive effect on the financial inclusion of SSEs. This indicates that seeing other entrepreneurs successfully adopt and benefit from these services is a powerful motivator, as this social proof reduces perceived risk and encourages new users. This finding is consistent with Ait, et al. (2021), which also highlighted the importance of a "demonstration effect." However, it contrasts with David-West, et al. (2022), where the benefits of mobile money were not as easily observable to the unbanked poor in a cash-based economy. This suggests that the public nature of some Islamic banking services makes their benefits more visible, thereby driving greater adoption.

In a counter-intuitive finding, the research found a significant negative influence of simplicity on financial inclusion. This means that as the perceived simplicity of a product increases, financial inclusion among SSEs in North-Central Nigeria decreases. This challenges the notion that ease of use is always a positive driver. The finding, which differs in direction from Biswapriyo and Bagrecha (2024), suggests that SSE owners may be wary of products that seem too simple, potentially associating complexity with legitimacy, security, and a level of sophistication necessary for a formal financial service.

Finally, the study found that the trialability of Islamic banking products has a significant and positive effect on the financial inclusiveness of SSEs. This indicates that the opportunity for business owners to experiment with products on a limited, low-risk basis is a crucial factor in their decision to adopt. This finding is similar to Sanderson, et al. (2018), which also found a significant relationship with a different variable, and contrasts with David-West, et al. (2022), which found no significant effect for trialability. The study concludes that offering tangible trial opportunities can effectively reduce perceived risk and encourage greater financial inclusion.

5.1 Conclusion

By way of conclusion, it was noted that awareness, compatibility, observability, simplicity, and trialability are significant predictors of Islamic banking product adoption, which in turn enhances financial inclusion among SSEs in North Central Nigeria. While relative advantage was found not to have a significant effect. The combined effect of the study variables shows that they collectively influence financial inclusion among SSEs in North Central Nigeria.

5.2 Recommendations

- ❖ Based on the study's findings, the study recommends that Islamic banks should shift their focus from simply highlighting benefits to actively demonstrating the compatibility of their products with the community's values and making the benefits observable through publicizing success stories of local businesses.
- ❖ They should design low-risk products that offer a tangible trialability experience to build trust and encourage adoption.
- ❖ Policymakers should create a supportive framework.
- ❖ Religious leaders should serve as key advocates to enhance credibility.
- ❖ The counter-intuitive finding on simplicity suggests that communication should focus on demonstrating a product's legitimacy and security rather than just its ease of use.

References

Abdelghani, E., & Hassanuddeen, A. (2012). Empirical investigation of customers' perception and adoption towards Islamic banking services in Morocco. *Middle East Journal of Scientific Research*, 12(6).

Abdiaziz, Y. (2017). *Effect of Islamic banking on growth of small medium enterprises in Nairobi: A case study of First Community Bank* [Master's thesis, United States International University-Africa]. USIU-Africa Institutional Repository. <https://erepo.usiu.ac.ke/handle/117332/3230>

Abdulkadir, U., Adamu, M., Muhammad, O., Sulaiman, A., Mohammed, I., Mustapha, Y., Mahmood, M., Salihu, A., & Mawoli, M. A. (2024). A survey of customers' intention to adopt Islamic banking services in Nigeria: Evidence from Jaiz Bank Plc, Abuja. *3rd International Islamic Economics and Finance Graduate Student Symposium*.

Abdulkadir, U., Adamu, M., Muhammad, O. A., Sulaiman, A. L., Mohammed, I. G., Mustapha, Y., Mahmood, M. M., & Salihu, A. A. (2022). An empirical investigation of banking customers intention to adopt Islamic banking services in Nigeria. *3rd International Islamic Economics and Finance Graduate Student Symposium*.

Abdullahi, A., Sharofiddini, B. S., & Kasim, H. (2024). *The influence of Islamic banking product adoption on financial inclusion among small-scale enterprises in Nigeria* [Unpublished doctoral dissertation]. University of Ilorin.

Ait, A. H., Samir, M. A. K. H. R. O. U. T., Elhoussain, C. H. O. U. K. A. R., & Nabil, E. H. (2021). Financial inclusion of the informal sector through FinTech: what perspective does the Diffusion of Innovation offer? *Int. J. Inf. Tec. App. Sci*, 3(4), 184–190.

AIMS UK. (2022). *What is Ijarah? Ijarah in Islamic Banking*. <https://aims.education/study-online/Ijarah-in-islamic-banking/>

Al Siddiq, T. M. (2020). *New model of Salam sale for agricultural development finance*.

Ammar, S. (2021, June 13). *An introduction to Islamic finance instruments: Mudarabah*. LinkedIn. <https://www.linkedin.com/pulse/introduction-ammar/>

Bananuka, J., Kaawawaase, T. K., Kasera, M., & Nalukenge, I. (2019). Determinants of the intention to adopt Islamic banking in a non-Islamic developing country. The case of Uganda. *ISRA International Journal of Islamic Finance*, 11(2), 166–186. <https://doi.org/10.1108/ijif-04-2018-00401>

Biswapriyo, G., & Bagrecha, C. (2024). The rise of fintech-a journey towards simplicity in banking transaction. *International Journal of Advanced Research in Arts, Science, Engineering & Management (IJARASEM)*, 2(2), 1–13.

Central Bank of Nigeria. (2022). *CBN Publication*.

Demirguc-Kunt, A., & Klapper, L. (2012, April 1). *Measuring financial inclusion: The Global Findex Database*. The World Bank. <https://ideas.repec.org/p/wbk/wbrwps/6025.html>

EFInA. (2024 March 21). *2023 Access to Finance (A2F) Survey*. Enhancing Financial Innovation & Access. <https://a2f.ng/report-nigerias-financial-inclusion-rose-74-in-2023-northern-region-most-excluded>

Felix, A. (2023, May 7). *Financial inclusion in Nigeria*. Cowrywise. <https://cowrywise.com/blog/financial-inclusion>

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Pearson Prentice Hall.

Haruna, A., Oumbé, H. T., & Kountchou, A. M. (2024). What determines the adoption of Islamic finance products in a non-Islamic country? Empirical evidence from Cameroonian small- and medium-sized enterprises. *Journal of Islamic Marketing*, 15(5), 1253–1279. <https://doi.org/10.1108/JIMA-08-2023-0234>

Hilmi, A. H. (2023, March). *Islamic Banking Researches in 2022*. ResearchGate. https://www.researchgate.net/publication/368977963_Islamic_Banking_Researches_in_2022

Ikharo, A., & Igwebuike, J. (2022). Strategies for developing and sustaining entrepreneurship growth in North-central Nigeria. *International Journal of Business And Management*, 1(1), 1–10. <https://journal.ezenwaohaetorc.org/>

Kaabachi, S., & Obeid, H. (2016). Determinants of Islamic banking adoption in Tunisia: An empirical analysis. *Journal of Bank Marketing*, 34(7), 1069–1091. <https://doi.org/10.1108/IJBM-02-2015-00201>

Latham & Watkins LLP. (2024). *Islamic Finance Practice Overview*. <https://www.lw.com/en/practices/islamic-finance>

Moniepoint MFB. (2023, June 8). *Small Business Statistics in Nigeria for 2024*. <https://moniepoint.com/blog/nigeria--small-business-statistics>

Musa, H. (2024). *Determinants of financial inclusion in north-western Nigeria: a mediating effect of Islamic finance products adoption* [Unpublished doctoral dissertation]. Universiti Utara Malaysia.

Musa, H., Ahmad, N. H. B., & Nor, A. M. (2024). Expanding financial inclusion participation in Muslim-dominated communities through Islamic finance products (IFP) adoption. *Journal of Islamic Accounting and Business Research*.

Nancy, A. (2007, November). Developing questionnaire to measure perceived attributes of eHealth innovation. *American Journal of Health Behavior*. <https://researchgate.net/publication/6147465> Developing a Questionnaire to Measure Perceived Attributes of eHealth Innovation

Nurudeen, A., Safeza, M. S., & Norhazlina, I. (2022). Adoption of Islamic trade financing facilities among SMEs in North-West Nigeria: A preliminary investigation. *Journal Mifr*. <https://jmifr.usim.edu.my/index.php/jmifr/article/view/414>

Nurudeen, A., Safeza, M. S., Norhazlina, I., & Syadiyah, A. S. (2021). Conceptual framework for adoption of General Takaful among MSME owner-managers in North West Nigeria: The role of owner-manager characteristics. *Journal of Islamic Finance*, 10(2), 134–147.

Obi, J. N. (2015). The role of small-scale enterprises in the achievement of economic growth in Nigeria. *International Journal of Social Sciences and Humanities*, 3(1).

Oladeinde, O. (2019, July 27). *What Islamic finance products can do to Nigeria's capital market, infrastructure*. PwC. <https://www.pwc.com/ng/en/assets/pdf/Islamic-finance.pdf>

Olabiyi, T. (2021, May 16). *The huge impact of small businesses to the society*. TheCable. <https://www.thecable.ng/the-huge-impact-of-small-business-to-the-effect-to-society/amp>

PwC Nigeria. (2024). MSME Survey: Building Resilience: Strategies for MSME success in changing Landscape. PricewaterhouseCoopers Nigeria.

Qaisar, A., & Dayang, H. N. B. D. H. M. (2018). Empirical investigation of Islamic banking adoption in Brunei. *International Journal of Islamic Banking and Finance Research*, 2(2), 24–38.

ResearchGate. (2022, July 5). *Socio-economic factor and performance of SMEs in Abuja, FCT, Nigeria*. <https://www.researchgate.net/publication/344824204>

Rogers, E. M. (2003). *Diffusion of innovation* (5th ed.). Free Press.

Salaudeen, A. O., & Zakariyah, H. (2022). Challenges hindering Islamic microfinance banks' sustainable financial inclusion: A case of Al-Hayat Microfinance Bank in Ogun State, Nigeria. *El-Barka: Journal of Islamic Banking and Finance*, 5(1), 1–18. <https://jurnal.iainponorogo.ac.id/index.php/elbarka/article/view/3930>

Sanderson, A., Mutandwa, L., & Le Roux, P. (2018). A review of determinants of financial inclusion. *International Journal of Economics and Financial Issues*, 8(3), 1.

Shaikh, I. M., Shaikh, F. M., & Noordin, K. (2021). Predicting customers' acceptance towards Islamic home financing using DTBP theory. *Journal of Islamic Marketing*. <https://doi.org/10.1108/JIMA-12-2020-0372>

Shinkafi, A. A., Yahaya, S., Mohammed, A. I., & Ali, N. A. (2023). Awareness strategies of Islamic banking system: Evidence from Malaysia. *Review of Socio-Economic Perspectives*, 8(2), 87–94.

Sigah, D. M. A. (2024/2025). "Small and Medium Enterprises Financing and Poverty Reduction in Nigeria". *Journal of Economic Studies (JES)*, Vol. 21, No. 2 (2024). *University of Africa, Nigeria*.

Sonko, M. (2020). Customers' perception on Islamic banking: A case study in Gambia. *Journal of Islamic Finance*, 9(1), 13–23.

Sudarsono, H., Tumewang, Y. K., & Kholid, M. N. (2021). Customer adoption of Islamic banking services: Empirical evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, 8(4), 237 - 246. <https://doi.org/10.13106/jafeb.2021.vol8.no4.0237>

Thaker, M. A. B. M. T., Thaker, A. B. A., Pitchay, M. F. B. A., & Khaliq, A. B. (2020). *Leveraging Islamic banking and finance for small businesses: Exploring the conceptual and practical dimensions* (ADBI Working Paper No. 1156). Asian Development Bank Institute.

Tinibu, S. (2017). *Introduction of Islamic banking in Nigeria*. Legit.ng. <https://www legit.ng/1136683-introduction-islamic-banking-nigeria.html>

Umar, S. B., Hussaini, B., & Hassan, B. (2020). The legal framework for Islamic banking and the quest for financial inclusion in Nigeria. *Jurnal Syariah*, 28(3), 501–530.

Yusuf, S. A., Salako, M. A., Ayelotan, O. A., & Adedina, L. O. (2021). *Non-interest Islamic banking, the springboard of SMEs investment and poverty reduction: A micro-statistics from Nigeria*. Academia.edu. https://www.academia.edu/19962475/Non_Interest_Banking_the_Sprinboard