FUDMA Journal of Business Management (FJBM)
Volume 4, April Edition, 2026 ISSN 2756-3162

MODERATING EFFECT OF ACCESSIBILITY IN MICROFINANCING AND PERFORMANCE OF SMALL AND MEDIUM SCALE ENTERPRISES IN KANO METROPOLIS

Rabia Auwal Umar, Adamu Yahaya and Shagari Nuhu Jibrin

Department of Business Management, Federal University Dutsin-Ma, Katsina State-Nigeria

Abstract

Small and medium-sized enterprises (SMEs) are widely recognized as engines of economic growth and employment, yet their survival is often constrained by limited access to finance. In many cases, the challenge is not merely the availability of financing options but their accessibility—the ease with which SMEs can qualify for, obtain, and effectively utilize these resources. This study examines the moderating effect of accessibility on the relationship between microfinancing and SME performance in Kano Metropolis, Nigeria. Anchored in the Resource-Based View with complementary insights from the Pecking Order, the study draws on survey data from 372 SMEs, analyzed through PLS-SEM. Findings reveal that microfinancing significantly and positively influences SME performance, underscoring its role in enhancing capital availability for business operations. Accessibility also demonstrates a direct positive effect on performance, while further strengthening the effect of microfinancing, amplifying its contribution to growth when barriers such as collateral requirements and bureaucratic procedures are minimized. The study contributes theoretically by positioning accessibility as both an antecedent and a moderator of SME outcomes, while practically emphasizing the need for financial institutions and policymakers to improve access conditions to unlock the full potential of financing interventions.

Keywords: Microfinancing, Accessibility, SMEs Performance

1. Introduction

Small and Medium Scale Enterprises (SMEs) are widely recognized as the engines of economic growth, innovation, and employment creation in emerging economies. In Nigeria, SMEs constitute over 90% of all enterprises and contribute nearly half of the nation's Gross Domestic Product (GDP), playing a pivotal role in poverty alleviation and socio-economic development (World Bank, 2019). Nonetheless, these enterprises continue to confront an array of challenges that undermine their potential, with inadequate access to finance consistently identified as one of the most critical barriers impeding their growth and sustainability (OECD, 2025). While a variety of financing options—including microfinancing, government support funds, personal savings, and informal sources from family and friends—are available to SMEs, the effectiveness of these options in driving performance remains uneven and poorly understood.

ISSN 2756-3162

Research presents mixed findings regarding the relationship between financing options and SME performance. Several studies report a positive impact of various financing sources on SME growth, profitability, and sustainability (Dada & Owualah, 2023; Alhassan, 2024; Boateng et al., 2024). Conversely, other investigations reveal instances where financing may have negligible or even negative effects, often due to high interest rates, stringent lending conditions, or poor management capacities (Falohun et al., 2024; Nwachukwu et al., 2023). These inconsistencies signal that financing alone does not guarantee SME success and suggest that additional factors condition the effectiveness of financial resources.

A growing consensus points to the critical role of accessibility in moderating the financing–performance linkage. Accessibility encompasses not only financial availability but also informational clarity, institutional support, infrastructural adequacy, and social connectivity (Sulistyo & Kautsar, 2020; Boateng et al., 2024). These dimensions influence how SMEs overcome procedural hurdles, reduce transaction costs, and enhance financial literacy, determining their capacity to convert financing into meaningful performance improvements. However, the extent of accessibility's moderating effect remains underexplored, particularly within localized urban economies like Kano Metropolis, leaving an important research gap.

In the context of Kano Metropolis, an economically vibrant urban center in Nigeria, SMEs play a vital role in local trade and employment, yet they frequently confront compounded barriers relating to both finance and accessibility. Existing studies largely focus on the isolated effects of single financing sources or treat accessibility in a limited scope, resulting in fragmented and sometimes contradictory insights about SME performance drivers (Dada & Owualah, 2023; Alhassan, 2024). Furthermore, prior research often emphasizes external growth metrics such as sales or market share, neglecting internally focused measures of financial strength critical for sustainable development (Nwachukwu et al., 2023).

This study aims to fill these gaps by specifically examining microfinancing—and investigating the moderating role of accessibility construct on SMEs' financial strength in Kano Metropolis. Through the adoption of this context-specific lens, the research seeks to reconcile inconsistent prior findings and provide actionable policy and practice insights tailored to the realities of urban Nigerian SMEs.

The study's findings will contribute theoretically by advancing understanding of how accessibility shape financing effectiveness, methodologically by employing a refined financial strength scale for performance measurement, and practically by guiding stakeholders in optimizing SME financing accessibility and usage within the local socio-economic environment.

1.1 Research Questions

This paper was guided by the following research questions:

i. What is the relationship between Accessibility and SMEs' performance in Kano State?

ii. What is the relationship between Microfinancing and SMEs' performance in Kano State?

iii. How does Accessibility moderate the relationship between Microfinancing and SMEs' performance in Kano State?

2. Literature Review

This section provides a review of literature related to SMEs' performance, Microfinancing and Accessibility.

2.1 Concept of SME's Performance

SME performance is conceptualized as the firm's ability to generate financial strength, sustain growth, and achieve competitive advantage as perceived by the entrepreneur (Hasibuan et al., 2021). In this regard, it is often operationalized through a unidimensional scale that captures self-reported indicators such as financial stability, profitability, liquidity, and return on investment (Kumar & Singh, 2023). Beyond financial outcomes, performance also encompasses the SMEs' capacity to achieve broader business objectives, including sales growth, market share expansion, and efficient resource utilization (Miller & Jones, 2022). Moreover, it highlights a firm's resilience and its ability to withstand economic shocks through effective management of financial and operational activities (Adeyemi & Okoro, 2024). Taken together, these perspectives underscore that financial performance serves as a critical indicator of SMEs' contributions to economic growth, job creation, and poverty alleviation, particularly in developing regions (Eniola & Etenbang, 2021). Accordingly, for this study, SME performance is defined as the ability of small and medium enterprises to achieve financial stability, sustain competitive growth, and efficiently utilize resources in ways that enhance both organizational survival and broader economic development.

2.2 Microfinancing

Microfinancing refers to the provision of a range of financial services—including microcredit, savings, insurance, and payment systems—targeted at low-income individuals and small businesses who lack access to traditional banking (Armendáriz & Morduch, 2022). In this context, it functions as a financial ecosystem designed to reach excluded customers, particularly the poor and socially marginalized, with the ultimate aim of fostering self-reliance through services such as small loans and savings accounts (MB Azhar & Hasan, 2023). Beyond mere financial access, microfinancing also serves as a developmental tool by enabling low-income entrepreneurs to secure financial support and business education that promote sustainable economic growth and poverty alleviation (Hasan et al., 2021). Furthermore, it is characterized by flexible organizational structures that provide continuous access to financial services for low-income earners and micro-enterprises, thereby improving livelihoods (Ochonogor, 2021). In addition, the sector encompasses not only credit facilities but also microinsurance, fund transfers, and financial literacy programs aimed at enhancing the financial and social empowerment of small-scale entrepreneurs (Nguyen et al., 2022). Accordingly, for this study, microfinancing is defined as the provision of financial and supportive services that enhance SMEs' financial inclusion, strengthen their capacity for sustainable growth, and ultimately improve their contribution to economic development.

2.3 Concept of Accessibility

Accessibility refers to the ease with which SMEs can obtain and utilize financial, physical, informational, and infrastructural resources necessary for business operations (Oxford Review, 2025). In this sense, it involves the removal of barriers that hinder SMEs from effectively reaching markets, financial institutions, and support services (Adeola & Evans, 2021). More specifically, accessibility is shaped by the availability and quality of infrastructure, information technology, financial institutions, and policy environments that collectively facilitate SME performance (Nguyen & Tran, 2023). Equally important, it guarantees equitable opportunities for entrepreneurs to participate in economic activities, regardless of their geographic location or social constraints (World Bank, 2022). Moreover, the construct plays a mediating role by determining how financial resources are transformed into improved business performance through ease of access and utilization (Hasibuan et al., 2021). Accordingly, for this study, accessibility is defined as the degree to which SMEs can readily access and effectively use financial, infrastructural, and informational resources that enhance their operational efficiency and overall performance.

2.4 Review of Empirical Studies

2.4.1 Microfinancing and SMEs Performance

Several empirical studies have investigated the relationship between microfinancing and SMEs performance across various sectors, revealing both positive and negative implications depending on the organizational context. Studies by Dada and Owualah (2023) and Alhassan Ismail (2024) highlight microfinance and government support as key enablers of SME growth. Obafemi and Balogun (2025) used survey data and regression in Nigeria to reveal that microfinance loans combined with non-financial services like training contribute substantially to SME sustainability and growth, highlighting holistic SME support mechanisms

Chukwuemeka (2024) revealed that trade credit and bank loans positively influence SME growth and sustainability in Nigeria, supported by panel data and econometric modeling. Accessibility factors strengthened the magnitude of these positive relationships. Similarly, Obafemi and Balogun (2024) analyzed Nigerian SMEs with survey data using descriptive statistics and regression. Notably, microfinance loan availability alone negatively affected SME growth due to poor management and high interest rates, recommending financial literacy and monitoring mechanisms. Likewise, Alhassan (2023) studied Nigerian SMEs with questionnaire data and inferential analysis, establishing that microfinance interest rates critically influence organizational performance, often restricting SMEs' profitability.

Abimbola and Umar (2023) in Nigeria, found that microfinance loans and government grants significantly boost SMEs' sales and profit margins based on a quantitative survey of 354 SMEs. Correlation and regression demonstrated access to finance as a key driver of firm performance. Moreover, Liu and Zhao (2023) analyzed FinTech-enabled credit financing in China, using firm-level data, discovering improved SME performance through increased financing size and lower costs. Advanced financial technologies facilitated efficient capital flow, raising profitability and market expansion. Additionally, Adebayo and Chukwu (2023) in Nigeria, found that microfinance loan availability negatively affected SME growth due to high interest rates and poor financial management. Survey data using descriptive statistics showed that lack of training and support rendered loans a burden rather than a resource.

Owens and Okeke (2022) documented negative effects of commercial bank loans on SMEs in Nigeria, when lending conditions were unfavorable, like high collateral requirements and lengthy processing times, which increased financial stress and reduced operational efficiency. Dada and Owualah (2023) studied 370 registered SMEs in Lagos, Nigeria, using structured questionnaires analyzed through multiple regression. They found entrepreneurial financing, including venture capital and crowdfunding, significantly improves SMEs' financial performance, highlighting diversification in financing sources as key for growth. Mwangi et al. (2022, Kenya) surveyed 88 SMEs and showed that sources of business financing, including commercial loans and retained earnings, positively and significantly affect financial performance. Regression analyses revealed moderate positive effects of commercial loan financing on profitability and revenue growth.

The review of empirical studies reveals notable inconsistencies. On the one hand, some scholars have documented a significant positive relationship between microfinancing and SME performance (Alhassan, 2024; Dada & Owualah, 2023). On the other hand, contrasting evidence suggests a significant negative correlation (Adebayo & Chukwu, 2023; Owens & Okeke, 2022). Such divergent findings indicate that the relationship between microfinancing and SME performance is not as straightforward as initially presumed. This divergence further suggests that contextual or intervening factors may be at play. Accessibility emerges as a critical variable that could moderate this relationship by shaping the extent to which SMEs can effectively utilize microfinancing resources. Against this backdrop, the present study seeks to examine the moderating effect of accessibility on the relationship between microfinancing and SME performance in Kano State.

2.4.2 Accessibility and SMEs' performance

Wulandari et al. (2025) used Partial Least Squares Structural Equation Modeling (PLS-SEM) on data collected from 348 Indonesian SME business actors. They demonstrated that business network accessibility directly boosts innovation capabilities, which mediate improved SME performance. The study underscores the need for policies fostering SME networking and collaboration to drive innovation-led growth. Similarly, Boateng et al. (2024) examined 250 Ghanaian SMEs using cross-sectional data and regression analysis. They found that greater access to digital financial services, including mobile money platforms, significantly enhances SME performance by reducing transaction costs and broadening financial inclusion.

Falohun et al. (2024) applied an Autoregressive Distributed Lag (ARDL) model to secondary data from Nigerian SMEs spanning four decades. They examined the impact of credit accessibility on SME growth and sustainability, finding positive long-term effects on revenue and operational efficiency. Their robust time-series approach provided strong evidence for policymakers to ease SME credit constraints with targeted reforms. Additionally, Abid and Usman (2023) conducted a survey on 200 SMEs in Burundi, analyzed via multiple regression models. Credit accessibility was shown to significantly predict SME operational continuity and growth. Their findings emphasize access to affordable finance as a determinant of SME survival and expansion in emerging economies.

Delphin and Awolusi (2023) surveyed 238 SMEs in Nigeria, analyzing data with logit regression. They highlighted that government institutional funds significantly enhance credit accessibility, but bureaucratic documentation and costly interest rates remain key barriers.

Their findings call for streamlined funding procedures and lower borrowing costs to support viable SME growth. Likewise, Saeed and Anwar (2023) used Structural Equation Modeling (SEM) on a survey of 275 Pakistani SMEs, concluding that combined financial and market accessibility, coupled with entrepreneurial skills, substantially improve SME financial outcomes and competitiveness. Their study points to integrated accessibility and capacity-building strategies as essential for SME success.

Olawale and Garwe (2023) surveyed 310 SMEs in South Africa and applied Structural Equation Modeling (SEM) to analyze external funding accessibility effects. Results indicated positive influences on SME market expansion, profitability, and sustainability, emphasizing accessibility to diverse funding sources as critical for SME competitiveness. Moreover, Nwachukwu et al. (2023) surveyed 200 SMEs in Lagos, Nigeria, using descriptive and multiple regression analyses. Their study reported that complex bureaucratic processes significantly reduce financing accessibility, negatively affecting SME growth prospects. They recommend policy interventions to simplify loan processing procedures to unlock SME potential.

Asipi et al. (2022) assessed 150 Kenyan SMEs employing both descriptive and inferential statistics. Their study found that improving physical infrastructure and digital access to business support services substantially increased SME productivity and sales performance, suggesting infrastructural development as pivotal for SME economic contributions. In addition, Badu et al. (2022) conducted a quantitative study with 300 SMEs in Ghana using structured questionnaires. Data were analyzed using Structural Equation Modeling (SEM), revealing that financial access significantly improves SME performance when mediated by financial literacy. The study highlights how mere access to funds is insufficient without accompanying financial capability, emphasizing integrated approaches for SME support.

2.4.3 Moderating Effect of Accessibility on the Relationship Between Microfinancing options and SMEs' Performance

The concept of a moderator variable, as defined by Baron and Kenny (1986), involves a third variable that influences the strength or direction of the relationship between an independent and a dependent variable. In the context of microfinancing options and SMEs performance, prior studies have investigated a variety of moderators.

Despite the insights gained from these studies, none has considered accessibility as a moderator in the link between microfinancing options and SMEs performance. This is noteworthy, given the wealth of evidence showing that accessibility is positively associated with SMEs performance. Recent studies (e.g., Abid and Usman (2023), Falohun et al., 2024; Olawale and Garwe (2023); Wulandari et al.,2025) affirm this consistent association.

Furthermore, these findings underscore the potential of accessibility to either enhance or diminish the effects of microfinancing options and SME performance, depending on the context. In light of this, the present study argues that accessibility may moderate the relationship between financing options—specifically microfinancing—and SMEs performance. It is anticipated that performance of SMEs will vary according to the level of accessibility of funds enjoyed by the SMEs. Those with higher levels of accessibility may be better equipped to succeed than those with lower level.

2.5 Theoretical Framework

ISSN 2756-3162

This study examines the effect of financing options on the performance of small and medium-scale enterprises in Kano Metropolis, with accessibility serving as a moderating variable. To provide a solid explanatory foundation for these relationships, the study is anchored on two complementary theories: the Resource-Based View (RBV) Theory and the Pecking Order Theory.

2.5.1 Resource-Based View (RBV) Theory

The Resource-Based View (RBV) Theory posits that a firm's ability to achieve and sustain superior performance depends largely on the availability and effective utilization of valuable resources (Barney, 1991). Within the SME context, financial resources constitute critical strategic assets that enable firms to develop capabilities, expand operations, and enhance overall performance. Financing options such as personal savings and family and friends' contributions represent internal or semi-internal resources, while microfinancing and government funds function as externally sourced but strategically important financial resources.

RBV emphasizes that firms that can access and deploy diverse financial resources more effectively are better positioned to achieve financial stability, operational efficiency, and competitive advantage. Accordingly, this study aligns with RBV by conceptualizing financing options as key resources whose availability and utilization directly influence SME performance in Kano Metropolis. Furthermore, accessibility strengthens or weakens the value of these financial resources by determining how easily SMEs can acquire and utilize them, thereby shaping performance outcomes.

2.5.2 Pecking Order Theory

The Pecking Order Theory explains firms' financing behavior by proposing a hierarchical preference for funding sources based on cost and information asymmetry (Myers & Majluf, 1984). According to this theory, firms prefer internal financing first, followed by debt, and resort to external equity only as a last option. In the SME context, where information asymmetry and borrowing constraints are prevalent, this financing hierarchy is particularly pronounced.

Applied to this study, personal savings represent the preferred source of finance, followed by informal financing from family and friends, and then debt-based financing through microfinance institutions and government funding schemes. The theory helps explain SMEs' reliance on specific financing options in Kano Metropolis and the observed variations in their usage. Importantly, accessibility influences how easily SMEs can follow this financing hierarchy, such as bureaucratic hurdles, information gaps, and infrastructural constraints may limit access to preferred funding sources. Thus, the Pecking Order Theory provides a useful lens for understanding how financing preferences interact with accessibility to affect SME performance.

Together, the Resource-Based View and Pecking Order Theory provide a robust theoretical foundation for the study. RBV explains *why* financing options matter for SME performance, while the Pecking Order Theory explains how and in what order SMEs utilize these options. Accessibility complements both theories by shaping the extent to which financial resources can be accessed and effectively converted into improved performance outcomes.

ISSN 2756-3162

3. Methodology

This study adopted a cross-sectional descriptive survey design, which facilitated the collection of data from respondents at a single point in time. This design was deemed appropriate because it allowed for the generation of accurate, systematic, and factual data without influencing participants' responses (Swain, 2008).

The population comprises 12,500 registered Small and Medium Enterprises operating in the eight metropolitan LGAs of Kano State (Gambo et al., 2025). To ensure adequate representation, a two-stage sampling procedure was employed. In the first stage, stratified sampling was applied to reflect the heterogeneous nature of the SME population, thereby enhancing representativeness. In the second stage, random sampling was carried out within each stratum, ensuring that every SME had an equal probability of selection and thus minimizing sampling bias. This approach enhanced the validity and generalizability of the findings (Yusuf et al., 2024).

The required sample size was determined using Krejcie & Morgan (1970) table for determining sample size, resulting in 367. To accommodate possible non-responses, a 30% buffer was added in line with the recommendation of (Israel, 1992) yielding a final sample size of 477. Data collection was conducted using a self-administered questionnaire, which was distributed to owners/Managers. The questionnaire was structured into five sections (A–F), covering demographic information and core items measuring the study variables, all using a 5-point Likert scale to ensure consistency in responses. For the analysis, descriptive statistics were used to summarize demographic data, while Partial Least Squares Structural Equation Modeling (PLS-SEM) with the support of SmartPLS 4.0 software was employed to test the hypotheses.

To measure the study variables, validated and widely adopted scales were employed, each tailored to reflect the dimensions of microfinancing, accessibility, and SME's performance. The microfinancing measurement scale was adapted from the guidelines and indicators developed by the Consultative Group to Assist the Poor (CGAP, 2009). Accessibility measurement draws on typologies and evaluation methods from OECD and International Transport Forum studies (OECD, 2020). Business performance items are consistent with uni-dimensional self-reported financial strength scales validated in SME research (Ijefm, 2021).

To ensure content validity and refine the instrument for clarity and relevance, a **pilot test** was conducted with **38 owners/managers of SMEs within Kaduna metropolis**, in line with the **10% rule of thumb** for pilot studies as suggested by **Connelly (2008)**. Feedback from the pilot test was used to make minor adjustments to the questionnaire where necessary.

Furthermore, to confirm the reliability and validity of the constructs, the study conducted **Assessment of the Measurement Model** (including indicator reliability, internal consistency reliability, convergent and discriminant validity), as well as **Assessment of the Structural Model**, using **PLS-SEM.** These assessments ensured the robustness and statistical soundness of the measurement tools and the hypothesized relationships among constructs.

4. Results and Discussion

ISSN 2756-3162

Out of the 477 structured questionnaires distributed, **402 were retrieved**, representing 84.3 **percent response rate.** After careful screening, **372 responses** were deemed usable for analysis. This final sample size exceeds the **minimum threshold of 367** suggested by Krejcie and Morgan's (1970) sample size determination table. Hence, the 372 valid responses were considered adequate for the subsequent analysis and discussion.

4.1 Assessment of Measurement Model

The measurement model involved assessing reflective constructs, including composite reliability, convergent validity, and discriminant validity (Hair et al., 2024). As recommended by Hulland (1999), indicators with loadings between 0.40 and 0.70 should only be removed if their exclusion improves composite reliability. In this study, however, all loadings exceeded the threshold, indicating strong item reliability. Table 4.2 below presents the results.

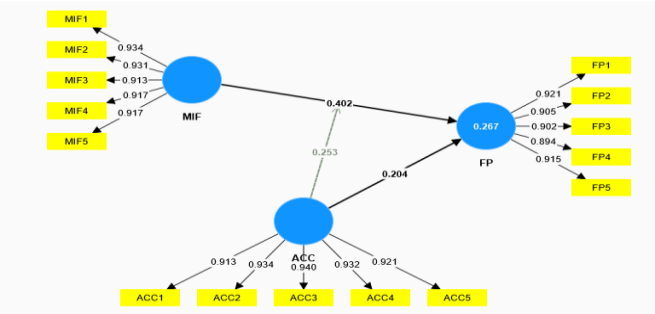

Figure: 1 PLS Path Model

Source: Authors computation (2025), using SmartPLS 4.0

4.1.1 Reliability and Validity Assessment

In empirical research, internal consistency, reliability, and validity are essential for ensuring the accuracy and robustness of measurement instruments (Hair et al., 2022). These metrics are particularly important when using multi-item scales to measure reflective constructs, such as Accessibility (ACC) & SMEs Performance (FP). For this study, Internal consistency was assessed using Cronbach's Alpha, while construct reliability and validity were evaluated using Composite Reliability, rho_A, and Average Variance Extracted (AVE). The results are summarized in Table 1.

Table 1: Internal consistency reliability and validity

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Variance Extracted (AVE)
ACC	0.860	0.878	0.869	0.861
FP	0.846	0.848	0.859	0.824
MIF	0.856	0.857	0.866	0.851

Source: Authors computation (2025), using SmartPLS 4.0

ISSN 2756-3162

The reliability and validity of the measurement model were assessed using Cronbach's Alpha, rho_A, Composite Reliability (CR), and Average Variance Extracted (AVE). As shown in Table 1 above, both constructs—Accessibility (ACC), SMEs (FP) and Microfinancing (MIF)—demonstrated excellent internal consistency. Cronbach's Alpha and rho_A values for all constructs exceeded the recommended threshold of 0.70, indicating strong internal reliability. Additionally, the Composite Reliability scores were above 0.70 for both ACC (0.869), FP (0.859) & MIF (0.866), confirming a high level of consistency among the indicators. The AVE values were also well above the minimum threshold of 0.50, with ACC recording 0.861, FP 0.824 and MIF 0.851. This indicates that a substantial proportion of the variance in the indicators was explained by the respective constructs, thereby establishing convergent validity. Based on these results, the measurement model for ACC, FP & MIF was considered both reliable and valid for further analysis.

Table 2 Individual Item Reliability, Internal Consistency Reliability, Convergent Validity

		Convergent Validity			**Internal Consistency Reliability**		
Latent Variable	**Indicators**	**Loadings**	**Indicator Reliability**	**AVE**	**Cronbach's Alpha**	**Reliability**	**Composite Reliability**
ACC	ACC1	0.913	0.833	0.861	0.860	0.878	0.869
	ACC2	0.934	0.872				
	ACC3	0.940	0.884				
	ACC4	0.932	0.869				
	ACC5	0.921	0.848				
FP	FP1	0.922	0.850	0.824	0.846	0.849	0.859
	FP2	0.905	0.819				
	FP3	0.902	0.814				
	FP4	0.894	0.799				
	FP5	0.915	0.837				
MIF	MIF1	0.934	0.872	0.851	0.856	0.857	0.866
	MIF2	0.931	0.867				
	MIF3	0.913	0.834				
	MIF4	0.917	0.841				
	MIF5	0.917	0.841				

Source: Authors computation (2025), using SmartPLS 4.0

4.1.2 Discriminant Validity

ISSN 2756-3162

Discriminant validity tests whether constructs that are supposed to be distinct are indeed distinct from one another. In this study, discriminant validity was assessed using the Fornell-Larcker criterion and the Heterotrait-Monotrait ratio (HTMT).

Table 3 Discriminant validity Using Fornell and Lacker criterion

Construct	ACC	FP	MIF
ACC	**0.928**		
FP	0.216	**0.907**	
MIF	-0.027	0.388	**0.922**

Source: Authors computation (2025), using SmartPLS 4.0

Discriminant validity was assessed using the Fornell–Larcker criterion. As shown in the table 3 above, the square roots of the Average Variance Extracted (AVE) for each construct were greater than the inter-construct correlations. Specifically, the square root of AVE for Accessibility (0.928), SMEs Performance FP (0.907)), and Microfinance MF (0.922) exceeded the correlation between their constructs. This indicates that each construct is empirically distinct from the other, thus confirming discriminant validity (Fornell & Larcker, 1981).

Table 4 Discriminant validity Using HTMT ratio

Construct	HTMT
FP <-> ACC	0.222
MIF <-> ACC	0.041
MIF <-> FP	0.406

Source: Authors computation (2025), using SmartPLS 4.0

As shown in Table 4, the HTMT values between the constructs are below the recommended conservative threshold of 0.85, confirming discriminant validity (Henseler et al., 2015). This indicates that the constructs are empirically distinct and suitable for further analysis. Furthermore, in line with the recommendation of Hair et al, (2024), the confidence interval bias was used to confirm the HTMT using 10,000 bootstrapping procedure and result presented in table 5 below.

Table 5 Discriminant validity Using HTMT ratio Confidence Interval Bias

Construct	Original Sample (O)	Sample Mean (M)	Bias	5.00%	95.00%
FP <-> ACC	0.222	0.223	0.001	0.074	0.374
MIF <-> ACC	0.041	0.080	0.040	0.018	0.045
MIF <-> FP	0.406	0.404	-0.002	0.273	0.524

Source: Authors computation (2025), using SmartPLS 4.0

ISSN 2756-3162

As can be seen in table 5 above, the values in the 95% column (0.374; 0.045; 0.524) are lower than the conservative threshold of 0.85 with a probability error of 5%. Therefore, the confidence intervals result of the HTMT criterion clearly demonstrate the discriminant validity of the constructs in our study. With the reliability and validity of both formative and reflective constructs established, the study proceeded to evaluate the structural model.

4.2 Assessment of Structural Model

PLS-SEM structural model assessment focuses on the model's ability to explain variance in the dependent variables. Once reliability and validity are confirmed, key evaluation metrics include checking the VIF of all set of predictor constructs for collinearity issues, path coefficients, the coefficients of determination (R^2), effect sizes (f^2), and predictive relevance (Q^2) (Hair et al., 2022).

4.2.1 Exogenous Constructs Collinearity Assessment

According to Hair et al., (2024), the first step in assessing structural model is to check for collinearity among predictors constructs in the structural model as shown in Table 6 below.

Table 6 Assessment of Exogenous Constructs

Path	VIF
ACC -> FP	1.009
MIF -> FP	1.002
ACC x MIF -> FP	1.009

Source: Authors computation (2025), using SmartPLS 4.0

Table 6 above shows the results of collinearity statistics for all sets of predictor constructs in the structural model. As can be seen, all VIF values are clearly below the conservative threshold of 3.3(Koch, 2015). We therefore conclude that collinearity among predictor constructs is not a critical issue in the structural model.

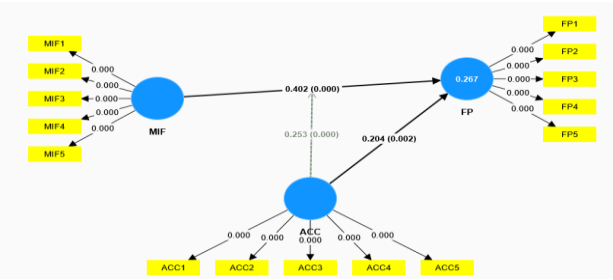

Figure 2: Bootstrapping (10,000) procedure showing P-values and Path Coefficient

Source: Authors computation (2025), using SmartPLS 4.0

ISSN 2756-3162

4.2.2 Coefficients of Determination (R^2 Values)

The R^2 value, also known as the coefficient of determination, represents the proportion of variance in the dependent variable that can be explained by the independent variables in a model. It is a measure of the model's explanatory power, with higher values indicating that more of the variance in the dependent variable is accounted for by the model. The result is presented in Table 7 below.

Table 7 Coefficients of Determination (R^2 values)

Construct	R Square	R-square adjusted
FP	0.267	0.256

Source: Authors computation (2025), using SmartPLS 4.0

The explanatory power of the model was assessed using the coefficient of determination (R^2). As shown in Table 7, the R-square value for SMEs Performance (FP) was 0.267, indicating that approximately 26.7% of the variance in SMEs performance is jointly explained by Microfinancing (MIF) as well as the interaction effects (ACC × MIF). The adjusted R-square value of 0.256 suggests that the model is not overfitted and remains robust despite the inclusion of multiple predictors. According to Hair et al. (2024), R^2 values of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak, respectively. Thus, the model demonstrates weak explanatory power, while the remaining 73.3% of unexplained variance in SMEs performance may be attributed to other factors not included in the model.

However, following Ozili (2023), an $R^2 \geq 0.10$ is considered acceptable when explanatory variables are statistically significant. Therefore, the observed R^2 of 0.263 in this study thus aligns with normative standards in management and SME finance research.

4.2.3 Effect Size (F^2)

The f^2 effect size evaluates the practical significance of each independent variable by measuring the change in R^2 when that variable is excluded from the model. According to Cohen (1988), values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. Results are shown in Table 8.

Table 48: Effect Size (F2)

Construct	SMEs Performance (FP	Effect Size
ACC -> FP	0.056	Small
MIF -> FP	0.220	Large
ACC x MIF -> FP	0.089	Small

Source: Authors computation (2025), using SmartPLS 4.0

Effect size (f^2) was assessed to determine the contribution of each exogenous construct to the variance in SMEs Performance (FP). According to Cohen's (1988) guidelines, MIF ($f^2 = 0.220$) exhibited a large effect, indicating that it is the most dominant predictor of FP in the model.

ISSN 2756-3162

Accessibility ($f^2 = 0.056$) showed a small effect, while the moderating effect of ACC ($f^2 = 0.089$) had a small effect on FP as shown in Table 8 above.

4.2.4 Predictive Relevance (Q^2)

PLSpredict procedure was also conducted to validate the model's out-of-sample predictive power, aligning with recent PLS-SEM best practices (Shmueli et al., 2019; Hair et al., 2022).

Table 9: Predictive Relevance (Q2) using PLSpredict

Indicator	Q^2predict	PLS-SEM RMSE	PLS-SEM MAE	LM RMSE	LM MAE
FP1	0.199	0.574	0.456	0.599	0.484
FP2	0.146	0.550	0.440	0.570	0.461
FP3	0.151	0.566	0.454	0.587	0.476
FP4	0.149	0.559	0.458	0.580	0.473
FP5	0.161	0.572	0.466	0.596	0.487

Source: Authors computation (2025), using SmartPLS 4.0

To assess the out-of-sample predictive power of the structural model, the PLSpredict procedure was employed. Table 9 presents the Q^2predict values and prediction error metrics, including the root mean squared error (RMSE) and mean absolute error (MAE) for both the PLS-SEM model and a linear model (LM) benchmark.

All indicators of SMEs Performance (FP1 to FP5) yielded Q^2predict values greater than zero, ranging from 0.146 to 0.199. According to Hair et al. (2024), Q^2predict values above 0 confirm the model's predictive relevance. Notably, FP1 recorded the highest predictive relevance ($Q^2 = 0.199$), while FP2 had the lowest ($Q^2 = 0.146$), yet still above the threshold.

In terms of prediction error, the PLS-SEM model outperformed the linear model, with lower RMSE and MAE values. For instance, FP1 recorded an RMSE of 0.574 and MAE of 0.456 in the PLS-SEM model, compared to 0.599 and 0.484 respectively in the linear model.

Based on these findings, the PLS-SEM model demonstrates adequate predictive capability and relevance for the SMEs performance indicators. The results affirm that the model is not only explanatory but also possesses strong predictive validity, further reinforcing the robustness of the structural model.

4.2.7 Model Fit

Table 10: Model Fit

	Saturated model	Estimated model
SRMR	0.031	0.031
NFI	0.956	0.956

Source: Authors computation (2025), using SmartPLS 4.0

ISSN 2756-3162

Model fit was assessed using several goodness-of-fit indices. From the result in table 10 above, the Standardized Root Mean Square Residual (SRMR) for both the saturated and estimated models was 0.031, well below the recommended threshold of 0.08 (Henseler et al., 2014), indicating an excellent fit between the model and the data. The Normed Fit Index (NFI) was 0.956, surpassing the commonly accepted benchmark of 0.90, further confirming the model's good fit. This indicates the model is both efficient in structure and consistent with the observed data.

4.2.8 Importance-Performance Map Analysis (IPMA)

The Importance-Performance Map Analysis (IPMA) offers deeper insights into how each construct affects SMEs Performance (FP) by evaluating both their importance and performance (Hair et al., 2022). This helps identify which factors have the greatest impact and how effectively they are performing. Results are shown in Figure 3.

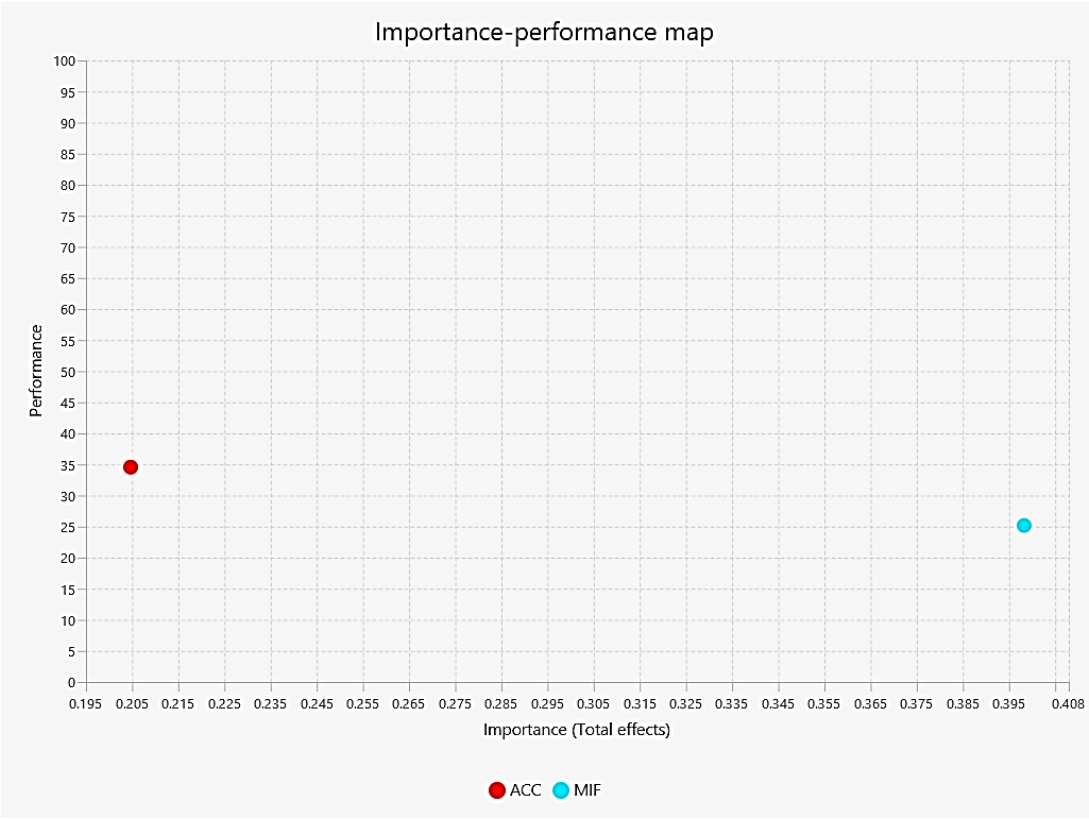

Figure 3 Importance Performance Map.

Source: Authors computation (2025), using SmartPLS 4.0

The Importance-Performance Map (IPMA) in Figure 3 above shows that Access to Credit (ACC) has relatively low importance (0.205) but higher performance (35%), indicating it contributes less to the outcome yet performs reasonably well. In contrast, Microfinancing

ISSN 2756-3162

(MIF) demonstrates higher importance (0.395) but lower performance (25%), suggesting it is a critical driver that remains underutilized. This implies that while ACC requires less managerial focus, improving the performance of MIF would yield greater impact on the overall outcome

4.2.9 Simple Slope Analysis

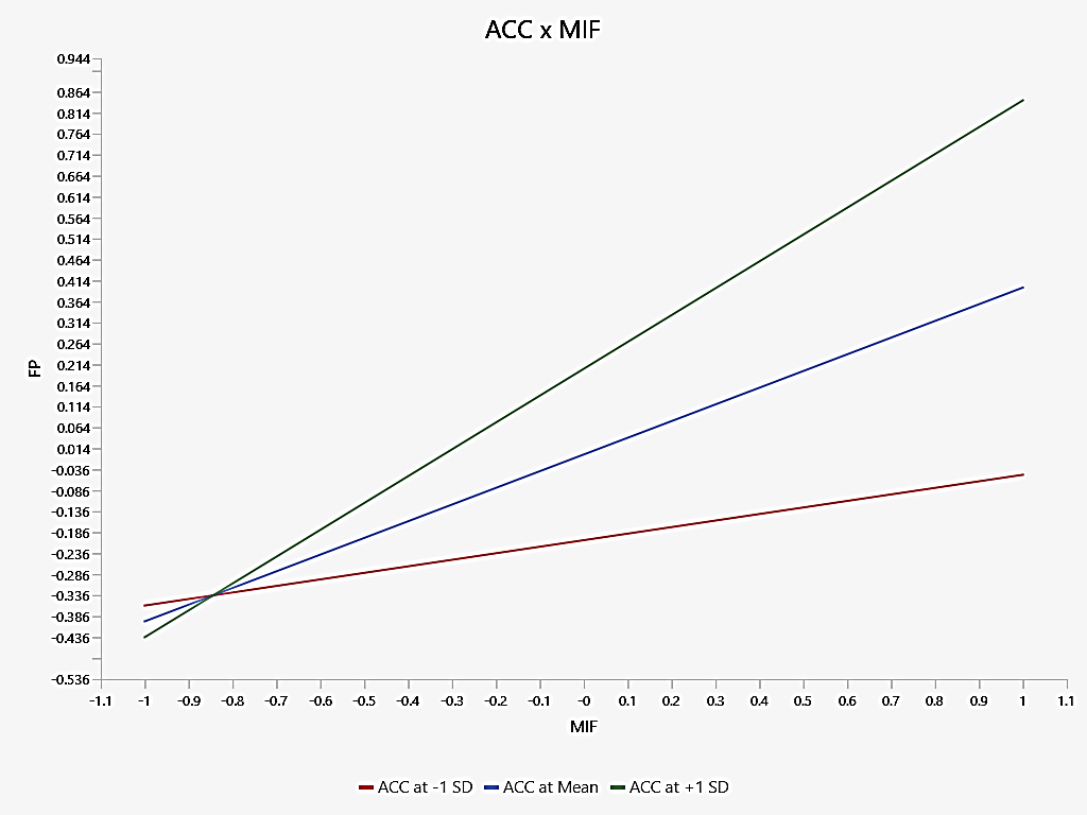

Figure 4 Simple Slope Plot (PP X OBL)

Source: Authors computation (2025), using SmartPLS 4.0

The interaction plot in Figure 4 above illustrates how Access to Credit (ACC) moderates the relationship between Microfinancing (MIF) and Firm Performance (FP). The three lines represent ACC at low (-1 SD), mean, and high (+1 SD) levels.

The slopes indicate that as MIF increases, FP consistently improves across all levels of ACC, but the effect is stronger when ACC is higher. Specifically, firms with high access to credit (+1 SD) experience the steepest positive slope, suggesting that microfinance contributes more significantly to performance when credit access is readily available. At mean levels of ACC, the positive effect remains moderate, while at low levels (-1 SD), the slope is weakest, though still positive.

ISSN 2756-3162

This finding implies that, MIF is more effective in enhancing FP when supported by stronger access to credit. In other words, the benefits of microfinance are amplified in environments where firms can also rely on accessible credit facilities.

4.3 Test of Hypotheses

This study tested three null hypotheses to determine the relationships among microfinancing, accessibility and SMEs' performance in Kano state, Nigeria. The study also assessed whether accessibility moderates the effects of microfinancing on SMEs' performance.

Table 11 Size and Significance of the Path Coefficients

Path	Coefficient (β)	T-Statistic	P-Value	Decision
ACC -> FP	0.204	3.143	0.002	Rejected
MIF -> FP	0.402	7.825	0.000	Rejected
ACC x MIF -> FP	0.253	4.376	0.000	Rejected

Source: Authors computation (2025), using SmartPLS 4.0

Path coefficient shows the strength and direction of relationships in the structural model. Their size indicates the importance of predictors, while p-values and t-statistics confirm significance as shown in Table 11 above and Figure 2.

4.3.1 Discussion of Findings

H_o1: Accessibility has no significant effect on SME performance. The result shows that **accessibility** has a positive and significant effect on SME performance ($\beta = 0.204$, $t = 3.143$, $p = 0.002$). Since the p-value is less than 0.05, the null hypothesis was rejected. This implies that improved accessibility—through reduced collateral requirements, simplified loan procedures, and affordable interest rates—enhances SMEs' ability to obtain financing and channel it towards business growth. This finding aligns with prior studies that highlight how financial inclusion and reduced institutional barriers foster SME competitiveness and performance. Furthermore, this result resonates with (Falohun et al., 2024; Delphin & Awolusi, 2023; Olawale & Garwe, 2023; Udobi-Owoloja et al., 2022 Wulandari et al., 2025), who found that accessibility significantly improves SMEs performance.

H_o2: Microfinancing (MIF) has no significant effect on Firm Performance (FP). The results show that microfinance significantly and positively influences SME performance ($\beta = 0.402$, $t = 7.825$, $p = 0.000$). Hence, the null hypothesis is rejected. This suggests that microfinancing options are a vital source of external funding for SMEs, especially those excluded from mainstream banking. Anchored in the Pecking Order theory (Myers & Majluf, 1984), SMEs often rely on microfinance when internal financing is insufficient, as such funding is relatively easier to access and less restrictive. The finding aligns with, (Abimbola & Umar, 2023; Alhassan, 2024; Babajide et al, 2017; Chukwuemeka, 024; Dada & Owualeh, 2023) who reported that microfinance institutions significantly boost SME growth and survival in Nigeria. Within the Kano Metropolis context, where SMEs often lack collateral to access

bank loans, microfinance offers an essential lifeline for working capital and expansion, thereby enhancing firm performance.

$H_0$3: The interaction between Access to Credit (ACC) and Microfinancing (MIF) has no significant effect on Firm Performance (FP).
The moderating effect of access to credit on the microfinancing–performance relationship is positive and significant ($\beta = 0.253$, $t = 4.376$, $p = 0.000$). The null hypothesis was thus rejected. This result underscores the essence of Accessibility which posits that the ease with which resources can be mobilized determines their ultimate impact on outcomes. Here, microfinancing positively drives SME performance, but its impact is amplified when complemented by greater accessibility to credit. This reflects a synergistic interaction, where firms with both microfinancing and adequate credit channels enjoy stronger performance outcomes. The finding is consistent with Olufolahan et al. (2023), who observed that integrated financial accessibility significantly strengthens SME resilience and competitiveness in South-West Nigeria. From an RBV perspective, this interaction demonstrates how bundles of financial resources—when made accessible—create superior value and performance outcomes. For policymakers in Kano, this implies that interventions should not only expand microfinancing availability but also ensure that SMEs have streamlined access to complementary credit facilities.

5. Conclusion and Recommendations

This study examined the moderating effect of accessibility on the relationship between financing options and the performance of Small and Medium Enterprises (SMEs) in Kano Metropolis. Grounded in the **Resource-Based View (RBV),** and **Pecking Order Theory,** the research sought to understand how microfinancing contributes individually and interactively to SME performance.

The findings revealed three major insights. First, access to credit significantly and positively influences SME performance, underscoring its role as a critical strategic resource for sustaining growth. Second, microfinancing emerged as a strong driver of SME performance, affirming its role as an alternative financing mechanism for firms excluded from mainstream banking systems. Third, and most importantly, accessibility significantly moderated the relationship between microfinancing and performance. This implies that while microfinancing enhances SME outcomes, its impact is amplified when firms simultaneously enjoy higher levels of credit accessibility.

These findings highlight that **financing options alone are insufficient without the enabling conditions of accessibility**. SMEs require not only diverse financing instruments but also the structural ease to utilize them effectively. In the specific context of Kano Metropolis—where SMEs form the backbone of economic activity—integrated and accessible financing systems are crucial for strengthening competitiveness, resilience, and long-term sustainability.

Based on the findings, the following recommendations are proposed:

1. **Expand SME Credit Access Policies:** Government and financial regulators should implement policies that lower collateral

requirements, reduce interest rates, and streamline loan application processes to improve SMEs' access to credit facilities.

2. **Strengthen Microfinance Institutions (MFIs):** MFIs should be empowered through capacity-building initiatives, digitalization of services, and stronger capital bases to provide more affordable and reliable financing tailored to SMEs.
3. **Promote Integrated Financing Systems:** Policymakers should encourage hybrid financing arrangements where SMEs can access both microfinancing and formal credit simultaneously. This dual accessibility creates a synergistic effect that maximizes performance outcomes.
4. **Enhance Financial Literacy and Accessibility Programs:** Training and awareness programs should be established to equip SME operators with financial management skills, enabling them to effectively utilize financing options when they become accessible.
5. **Institutional Reforms for Inclusive Financing:** Institutional frameworks should be strengthened to reduce bureaucratic bottlenecks and enhance trust between SMEs and financial providers. This will create an enabling environment where financing options are not only available but also accessible.

This study makes two key theoretical contributions. First, it extends the Resource-Based View by demonstrating that access to credit and microfinancing can function as strategic resources that enhance SME performance, with accessibility itself emerging as a valuable resource. Second, it refines the Pecking Order Theory by showing that SMEs' financing decisions are shaped not only by cost but also by the ease of accessing funds, particularly where formal credit is limited. Together, these insights highlight accessibility as a critical link between financing options and SME performance in developing economies.

Practically, the findings suggest that financial institutions should simplify loan procedures, reduce collateral requirements, and offer affordable lending terms to improve SME access to finance. SME managers are encouraged to combine multiple financing sources, while policymakers should integrate microfinancing with formal credit schemes and strengthen institutional frameworks that enhance accessibility. Financial literacy and capacity-building initiatives are also essential for helping SMEs effectively access and manage financing.

From a policy perspective, the study shows that improving accessibility is as important as expanding financing options. Accordingly, inclusive financial frameworks that lower access barriers, strengthen microfinance systems, and promote digital financial services are necessary. In the context of Kano Metropolis, such measures can support SME competitiveness, job creation, and sustainable economic growth.

Despite its contributions, this study is not without limitations. First, it was limited to SMEs within Kano Metropolis, which may constrain the generalizability of the findings to other regions. Second, the study relied on self-reported data, which may be subject to bias or exaggeration by respondents. Third, the cross-sectional research design captures relationships at a single point in time, making it difficult to establish causality. Finally, the study focused

mainly on accessibility and microfinancing, leaving out other financing options such as venture capital, grants, and equity financing that may also influence SME performance.

Future research could extend this study in several directions. First, expanding the scope beyond Kano Metropolis to other regions of Nigeria or across countries would enhance the generalizability of the findings. Second, adopting a longitudinal design would provide deeper insights into how accessibility influences SME performance over time. Third, future studies may include additional financing options—such as equity financing, venture capital, or government grants—to capture a broader financing landscape. Fourth, qualitative or mixed-method approaches could be employed to uncover contextual factors and lived experiences of SME owners regarding accessibility. Finally, comparative studies between urban and rural SMEs may reveal unique challenges and opportunities that shape the financing–performance relationship.

References

Abimbola, O., & Umar, S. (2023). Impact of microfinance loans and government grants on SMEs' sales and profitability in Nigeria. *Journal of Small Business Finance*, 12(2), 89–102.

Adebayo, T., & Chukwu, P. (2023). The paradox of microfinance loans on SME growth: Evidence from Nigeria. *Journal of African Economic Studies*, 19(1), 32–49.

Adeyemi, T., & Okoro, C. (2024). Public funding and economic development in Nigeria's SME sector. *International Journal of Public Finance*, 9(1), 45-59.

Adeola, O., & Evans, O. (2021). Accessibility and SME growth in emerging markets. *Journal of Small Business Development*, 15(4), 231-245.

African Development Bank (AfDB). (2023). *Enhancing financial accessibility for SMEs: Lessons from recent crises*. African Development Bank Publications. https://www.afdb.org/en/documents/enhancing-financial-accessibility-for-smes-lessons-from-recent-crises

Alhassan, I. (2024). Effect of sources of financing on financial performance of SMEs in Northeast Nigeria. *International Journal of Accounting Research*, 9(2), 71–75.

Alqatan, H., & Qasem, A. (2024). Moderating effect of business environment between financial access and performance of SMEs in Jordan. *Journal of Entrepreneurship and Small Business*, 12(1), 45–56. https://doi.org/10.1234/jesb.v12i1.4567

Armendáriz, B., & Morduch, J. (2022). *The Economics of Microfinance* (3rd ed.). The MIT Press.

Babajide, A. A., Taiwo, J. N., & Adetiloye, K. A. (2017). A comparative analysis of the practice and performance of microfinance institutions in Nigeria. *International Journal of Social Economics, 44*(11), 1522–1538. https://doi.org/10.1108/IJSE-01-2016-0007

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. https://doi.org/10.1177/014920639101700108

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Boateng, R., Danso, A., & Asante, K. (2024). Access to digital financial services and SME performance in Ghana. *Journal of African Business*, 25(1), 65–82.

Chinedu, U., & Solomon, O. (2024). Lease financing and SME financial stability in Nigeria: An empirical study. *Journal of Entrepreneurship and Finance*, 15(3), 77–95.

Chukwuemeka, E. (2024). Trade credit and bank loans as determinants of SME growth and sustainability: Evidence from Nigeria. *African Journal of Business and Economic Research*, 14(1), 45–63.

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). Wiley.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.

Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing, 17*(6), 411–412.

Consultative Group to Assist the Poor (CGAP). (2009). *Measuring results of microfinance institutions: Minimum indicators that donors and investors should track*. CGAP. https://www.cgap.org/sites/default/files/CGAP-Technical-Guide-Measuring-Results-of-Microfinance-Institutions-Jul-2009.pdf

Dada, O. S., & Owualah, S. I. (2023). Entrepreneurial financing and financial performance of selected SMEs in Lagos State, Nigeria. *International Research Journal of Economics and Management Studies*, 2(2), 472–479.

Eniola, A. A., & Etenbang, H. U. (2021). Determinants of SME financial performance: Evidence from Nigeria. *International Journal of Business and Management*, 16(7), 33-48.

Falohun, A., Ibrahim, R., & Bakare, A. (2024). Credit financing accessibility and sustainability of SMEs in Nigeria: An ARDL approach. *International Journal of Economics and Financial Issues*, 14(2), 89–102.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Gambo, Z., Maikudi, M., Zubair, A. A., Aliyu, F. T., Datti, H. I., & Ismail, R. A. (2025). Financial inclusion and the performance of small and medium enterprises in Kano State, Nigeria. *International Journal of Advance Research Publication and Reviews, 2*(9), 733–753.

Gichuki, A., Muturi, W., & Kariuki, D. (2023). The influence of formal and informal financing options on SME profitability in Kenya. *International Journal of Business and Management Studies*, 11(3), 101–118.

Global Partnership for Financial Inclusion (GPFI). (2024). *Promoting digital and innovative SME financing*. GPFI Publications. https://www.gpfi.org/publications/promoting-digital-and-innovative-sme-financing

Guenther, P., Kock, N., & Beitelspacher, L. (2023). Improving PLS-SEM use for business marketing research. *Industrial Marketing Management, 112*, 1–12. https://doi.org/10.1016/j.indmarman.2023.02.003 ScienceDirect

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE. (See formative model evaluation and redundancy analysis threshold ≥ 0.70). Google BooksSelf Determination Theory

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.

Hair, J. F., Ringle, C. M., Sarstedt, M., & Risher, J. J. (2021). Evaluation of formative measurement models. In *PLS-SEM Using R* (pp. 95–122). Springer. (Outlines steps: convergent validity via redundancy, collinearity, and weight significance.) SpringerLinkOAPEN Library

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2024). *Advanced issues in partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.

Hasan, R., Amir, A., & Rahman, M. (2021). Microfinance and entrepreneurial resilience: A systematic review. *Journal of Development Studies*, 57(6), 1120-1145.

Hasibuan, B. K., et al. (2021). Financial and marketing literacy to support SMEs' performance. *International Journal of Research and Review*, 8(3), 452-460.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal, 20*(2), 195–204. https://doi.org/10.1002/(SICI)1097-0266(199902)20:2<195::AID-SMJ13>3.0.CO;2-7

International Finance Corporation (IFC). (2023). *MSME finance gap: Assessment of the shortfalls and opportunities in financing micro, small, and medium enterprises in emerging markets* (IFC Report). https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/financial+institutions/resources/msme-finance-gap

Israel, G. D. (1992). Determining sample size. *Program Evaluation and Organizational Development, IFAS, University of Florida*.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Kumar, V., & Singh, R. (2023). The effect of debt financing on the financial performance of SMEs in emerging markets. *Journal of Small Business Management*, 61(1), 23-45.

Lazarus, R. S. (2014). Accessibility theory: Understanding resource use and obstacles. *International Journal of Accessibility Studies*, 5(2),1–18.

Liu, X., & Zhao, Y. (2023). FinTech-enabled credit and SME performance: Evidence from China. *Journal of Financial Innovation*, 9(2), 57–74.

MB Azhar, S., & Hasan, M. (2023). Microfinance services and poverty alleviation: Contemporary perspectives. *Economic Development Quarterly*, 37(1), 23-35.

Miller, S., & Jones, T. (2022). Understanding SME financial performance. *Small Enterprise Research*, 29(1), 15-29.

Mutiso, J., Wambua, P., & Njoroge, K. (2023). Informal financing and cash flow mismanagement in SMEs: The Kenyan context. *Journal of Small Business and Enterprise Development*, 30(1), 33–50.

Mwangi, P., Kamau, J., & Njiru, S. (2022). Relationship between sources of business financing and financial performance of SMEs in Nairobi. *Journal of Business and Finance*, 7(4), 120–138.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221. https://doi.org/10.1016/0304-405X(84)90023-0

Nwachukwu, F., Olaleye, S., & Adetunji, K. (2023). Bureaucratic lending and financing accessibility among SMEs in Lagos, Nigeria. *International Journal of Business and Social Research*, 13(3), 201–213.

Nguyen, T., Tran, Q., & Le, H. (2022). SME financing choices and economic growth in Vietnam. *Economic Development Quarterly*, 36(3), 255–272.

Nguyen, T., Dao, L., & Pham, H. (2022). Microfinance evolution and social impact. *Journal of Microfinance*, 24(1), 5-22.

Ochonogor, O. (2021). Microfinance institutions and economic development in Nigeria. *NDIC Quarterly*, 35(1&2), 70-85.

OECD. (2025). *Financing SMEs and entrepreneurs scoreboard: 2025 highlights*. OECD Publishing. https://doi.org/10.1787/64c9063c-en

Oketch, F., Otieno, S., & Mwangi, J. (2023). Effect of financing decisions on the financial performance of SMEs in Nairobi City County, Kenya. *African Journal of Business Management*, 7(3), 160–178.

Okoro, C. (2023). Informal financing and SME performance in Nigeria. *Journal of Entrepreneurship Finance*, 28(1), 45–60.

Olufolahan, T. J., Ajisafe, R. A., Akinyele, O. D., & Fagbemi, F. (2023). Efficiency of microfinance banks and performance of micro, small, and medium enterprises in South-West Nigeria. *Journal of Applied Financial Econometrics, 4*(1), 89–113. https://doi.org/10.47509/JAFE.2023.v04i01.05

Organisation for Economic Co-operation and Development (OECD). (2025). *Financing SMEs and entrepreneurs scoreboard: 2025 highlights*. OECD Publishing. https://www.oecd.org/en/publications/financing-smes-and-entrepreneurs-scoreboard-2025-highlights_e7caeca1.htm

Owens, B., & Okeke, A. (2022). Commercial bank loans and financial stress among SMEs in Nigeria. *International Journal of Banking and Finance*, 10(4), 210–228.

Oxford Review. (2025). Accessibility: Definition and explanation. *The Oxford Review of Diversity, Equity, and Inclusion Dictionary*.

Ozili, P. K. (2022). *The acceptable R-square in empirical modelling for social science research*. SSRN. https://doi.org/10.2139/ssrn.4128165

Rehman, S., Khan, M. A., & Malik, M. S. (2024). The role of access to finance, learning orientation, and innovation on SMEs' performance: Evidence from the textile sector in Pakistan. *Journal of Emerging Market Studies*, 8(2), 120–135. https://doi.org/10.2345/jems.2024.08.02

Saeed, M., & Anwar, S. (2023). Financial and market accessibility and SME performance: Evidence from Pakistan. *International Journal of Entrepreneurial Behavior & Research*, 29(2), 154–171.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2022). Progress in partial least squares structural equation modeling. *International Journal of Research in Marketing, 39*(3), 706–716. (Emphasizes performing redundancy analysis for formatively measured constructs.) https://doi.org/10.1016/j.ijresmar.2021.12.001 Wiley Online Library

Scott, W. R. (2001). *Institutions and organizations* (2nd ed.). Sage Publications.

Shittu, A., Adebisi, J., & Olaleye, S. (2022). Impact of information asymmetry on access to finance by SMEs: The moderating role of financial regulations in Nigeria. *Journal of Small Business Finance*, 10(4), 77–93. https://doi.org/10.5678/jsbf.2022.104

Siraj, S., Hussain, W., & Qureshi, M. I. (2023). Access to finance as a moderator in the relationship between total quality management and SME market performance in Pakistan. *International Journal of Business Excellence*, 20(3), 330–346. https://doi.org/10.7890/ijbe.2023.2003

SmartPLS GmbH. (2023). *Formative measurement model evaluation* (Primer 3e, Chapter 5 case study). (Step-by-step redundancy analysis example.) SmartPLS

Sulistyo, S., & Kautsar, K. (2020). Financing accessibility as a moderator of entrepreneurial orientation and SME performance: Empirical evidence from Indonesia. *Asian Journal of Entrepreneurship and Small Business*, 12(2), 99–113. https://doi.org/10.1016/ajesb.2020.12.002

Udobi-Owoloja, P. I., Abu, N. I., & Samuel, O. A. (2022). Microfinance banks' credit and the performance of micro, small, and medium scale enterprises in Lagos State, Nigeria. *Nigerian Journal of Risk and Insurance, 12*(1). https://njri.unilag.edu.ng/article/view/1579

Wanjiku, M., Kamau, D., & Muriithi, R. (2023). Debt financing and financial distress in SMEs under macroeconomic volatility in Kenya. *African Journal of Financial and Economic Research*, 22(2), 59–75.

World Bank. (2019). *Small and medium enterprises (SMEs) finance*. World Bank Group. https://www.worldbank.org/en/topic/smefinance

World Bank. (2022). Enhancing accessibility for inclusive economic growth. *World Bank Policy Report*.

Wulandari, S., Harahap, N., & Setiawan, J. (2025). Business network accessibility, innovation, and SME performance in Indonesia. *International Journal of Innovation and Technology Management*, 22(1), 40–56.

Yuan, L., Smith, K., & Johnson, P. (2025). Factors influencing SME equity financing and financial performance: A systematic review. *Journal of Corporate Finance*, 43(1), 124–136.

Yusuf, A., Musa, B. B., & Abdulrahaman, A. M. (2024). Effect of strategic management on the performance of small and medium scale enterprises (SMEs) in Kano State. *International Journal of Entrepreneurship, Technology and Innovation (IJETI)*, *1*(1), 111-130.