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Effect of Strategic Resource Management, Financial Literacy, and Institutional Support on Small Business Sustainability in Katsina State, Nigeria

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ABSTRACT

Small business sustainability remains a critical challenge in resource-constrained environments, particularly in northern Nigeria where institutional support has intensified but participation gaps persist. This study examines the effect of strategic resource management, financial literacy, and institutional support on small business sustainability in Katsina State, Nigeria. Drawing on the Resource-Based View, Human Capital Theory, and Institutional Theory, the study adopts a quantitative cross-sectional survey design targeting 384 registered small businesses across the three senatorial districts of Katsina State. Data were collected through structured questionnaires and analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that strategic resource management, financial literacy, and institutional support each exert significant positive effects on business sustainability. Financial literacy partially mediates the relationship between strategic resource management and sustainability, while institutional support moderates the financial literacy–sustainability relationship. The study contributes to management literature by integrating internal capability and external institutional perspectives in explaining SME sustainability in a developing economy context. Practical recommendations are offered for KASEDA and Katsina State policymakers to optimise training design, financing access, and programme outreach.

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INTRODUCTION

From a management perspective, small business sustainability is a central dependent variable for evaluating how enterprises navigate resource constraints and institutional environments. Katsina State presents a compelling context for this inquiry: the state government has invested heavily in enterprise support through the Katsina State Enterprise Development Agency (KASEDA), yet a significant gap persists between policy investment and sustained business outcomes.

In 2025 alone, KASEDA facilitated the creation of 5,373 direct and indirect jobs, while more than 10,000 businesses were formalised, enabling them to access government support, financial services, and new market opportunities (Katsina State Government, 2026a). The state established a ₦5.5 billion MSME fund, with over ₦1 billion already disbursed to 701 businesses, making Katsina a model for enterprise development in northern Nigeria (Katsina State Government, 2026a). Furthermore, the federal government has disbursed approximately ₦2.5 billion to over 39,000 MSMEs in

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Katsina State through various intervention programmes (Businessday, 2025; Punch Newspapers, 2025). Despite these substantial interventions, research reveals that only 31.7% of small business owners participate in government intervention programmes, though participants' survival rates (78%) are significantly higher than non-participants (61%) (Yusriadi et al., 2025).

This "intervention–performance" gap constitutes the managerial problem driving this study. The central question is not merely whether businesses grow, but whether they can sustain operations and remain resilient in a challenging economic environment. The Nigerian MSME sector faces a concerning mortality rate, with many enterprises failing within their first five years of operation (Adeyombo et al., 2024). While infrastructure, security, and market challenges contribute to this fragility, a core, often overlooked constraint is the inadequate financial knowledge and decision-making capacity of enterprise owners (ACCA Global, 2020).

Understanding how strategic resource management, financial literacy, and institutional support jointly shape sustainability is both academically significant and practically urgent. The Resource-Based View (RBV) posits that sustainable competitive advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991, as cited in Zhao, 2026). Financial literacy, as an internal capability, meets these criteria and can be seen as a strategic asset that enhances the resilience and sustainability of MSMEs (Adeyombo et al., 2024). However, the effectiveness of internal capabilities may depend on the presence of complementary institutional arrangements (Uddin et al., 2026).

This study therefore examines the effect of strategic resource management, financial literacy, and institutional support on small business sustainability in Katsina State. The specific objectives are: (1) to examine the effect of strategic resource management on small business sustainability; (2) to determine the effect of financial literacy on small business sustainability; (3) to assess the effect of institutional support on small business sustainability; (4) to explore the mediating role of financial literacy in the relationship between strategic resource management and sustainability; and (5) to investigate whether institutional support moderates the relationship between financial literacy and sustainability.

LITERATURE REVIEW

Conceptual Review

Strategic Resource Management and Sustainability. Strategic resource management involves acquiring, allocating, and leveraging resources to sustain business operations. The Resource-Based View (RBV) explains that competitive advantage arises from resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991, as cited in Zhao, 2026). Resource Orchestration Theory further emphasizes how firms prioritize and coordinate resources to achieve sustainability outcomes. Evidence suggests a positive relationship between entrepreneurial resource allocation and SME sustainability (Zhao, 2026).

Financial Literacy and Sustainability. Financial literacy represents human capital that strengthens entrepreneurs’ ability to plan, control, and expand business operations

(Adeyombo et al., 2024). Human Capital Theory highlights the economic value of investments in education and skills development (Becker, 1964, as cited in Adeyombo et al., 2024). Entrepreneurial financial literacy encompasses financial planning, funding assessment, risk management, and regulatory compliance (OECD, 2018, as cited in Adeyombo et al., 2024). However, Nigerian MSME evidence indicates that financial literacy remains limited despite entrepreneurs recognizing its potential to improve business efficiency (ACCA Global, 2020).

Institutional Support and Sustainability. Institutional Theory explains how external arrangements facilitate or constrain business activities. Evidence from KASEDA suggests that integrated support involving interest-free financing, skills development, digital transformation, and enterprise formalization can improve market expansion, production capacity, and formalization. Nevertheless, low participation, apprenticeship attrition, gender disparities in financing access, and coordination challenges remain significant barriers (Katsina State Government, 2026a).

Theoretical Framework

This study integrates Resource-Based View (RBV), Human Capital Theory, and Institutional Theory to provide a comprehensive lens for understanding small business sustainability.

The RBV explains how internal resources and capabilities drive sustained performance. Strategic resource management and financial literacy represent internal capabilities that enable firms to navigate resource constraints and make effective decisions (Zhao, 2026). Recent research extends this perspective through Resource Orchestration Theory, which examines how firms manage, prioritise, and allocate different resources to generate sustainability outcomes (Zhao, 2026).

Human Capital Theory provides the foundation for understanding financial literacy as a strategic asset. Financial literacy enhances the entrepreneurial capacity to plan, control, and grow business operations (Adeyombo et al., 2024). Additionally, Behavioural Finance Theory offers an important lens through which to interpret how financial decisions are made under uncertainty. Thaler (1999, as cited in Adeyombo et al., 2024) argued that cognitive biases, such as overconfidence and mental accounting, often distort financial judgment. Financial literacy, therefore, plays a dual role: it serves as both a technical skillset and a behavioral regulator that mitigates irrational financial behaviors (Adeyombo et al., 2024).

Institutional Theory explains how external arrangements shape business outcomes. Recent research indicates that institutional support is an important contributor to entrepreneurial competence, which affects further development of sustainable entrepreneurship (Uddin et al., 2026). The theory suggests that institutional support reduces uncertainty and provides legitimacy, enabling firms to focus on operational sustainability rather than mere survival.

Empirical Review

Strategic Resource Management and Business Sustainability

Amadi and Thom-Otuya (2025) examined strategic entrepreneurship and sustainable business growth among food-product SMEs in Rivers State, Nigeria. Using a correlational design, a sample of 400 SMEs, and Spearman rank correlation, the study found a significant relationship between strategic resource management and profit and sales growth. However, its sectoral and geographical focus limits its applicability to northern Nigeria. The present study addresses this gap by examining SMEs in Katsina State and incorporating financial literacy and institutional support.

Zhao (2026) investigated entrepreneurial orientation and SME sustainable growth in South Korea using structural equation modelling. The findings showed that resource allocation efficiency mediates the relationship between entrepreneurial orientation and sustainable growth, indicating that resource ownership alone is insufficient without effective deployment. The present study extends this perspective to Katsina State, where resource constraints are more pronounced, by examining financial literacy as an additional mediating mechanism.

Ayatse (2024) examined entrepreneurship education and SME performance in North Central Nigeria using data from 397 respondents. The findings indicated that technical and managerial training improves business leadership and strategic planning, although digital proficiency and financial documentation remain challenges. Unlike the present study, this research did not directly assess strategic resource management as a determinant of business sustainability. This study addresses that gap by examining its direct and mediated effects on sustainability outcomes.

A study of SMEs in Northeast Nigeria investigated risk management, resource leveraging, and firm size using data from 346 SMEs and structural equation modelling. Risk management ($p = .008$) and resource leveraging ($p < .001$) positively influenced SME performance, while firm size did not significantly moderate these relationships. However, the study focused on general performance rather than sustainability and did not examine the mechanisms underlying these relationships. The present study addresses these gaps by focusing on sustainability and investigating financial literacy as a mediating mechanism.

Research conducted in Bulacan, Philippines, examined entrepreneurial orientation, budgeting practices, resource allocation efficiency, and perceived financial performance among 403 MSME representatives using PLS-SEM. Entrepreneurial orientation positively influenced resource allocation efficiency ($\beta = 0.4068$, $p < .001$), while resource allocation efficiency had the strongest direct effect on financial performance ($\beta = 0.4136$, $p < .001$). The model explained 75.2% of the variance in perceived financial performance. Although these findings emphasize the importance of effective resource deployment, the study's institutional context differs from that of Nigeria. The present study therefore examines strategic resource management and business sustainability in Katsina State, considering the distinctive resource constraints and institutional support mechanisms in northern Nigeria.

Financial Literacy and Business Sustainability

Yusriadi, Badaruddin, and Fatmasari (2025) examined financial literacy and MSME survival in Northeast Nigeria using Human Capital Theory, the Resource-Based View, and Behavioral Finance Theory. The findings indicated that budgeting, saving, investing, and risk-assessment knowledge significantly influence MSME survival, particularly in fragile contexts with limited access to formal finance. However, the study focused on post-conflict conditions, whereas the present study examines Katsina State and investigates financial literacy as a mediator between strategic resource management and sustainability.

Odumusor and Sackey (2025) investigated financial knowledge, skills, and behavior among 256 MSMEs in Calabar using stratified sampling and OLS regression. Their findings showed that financial competence, ability, and behavior influence MSME effectiveness. However, the study addressed general business performance rather than sustainability and did not examine northern Nigeria. The present study addresses these contextual and conceptual gaps.

Sani (2026) examined the moderating role of entrepreneurs' financial literacy in the relationship between financing decisions and MSME growth in Northeast Nigeria. Using OLS regression on data covering 2018–2023, the study found that financial literacy moderates the relationship between long-term debt and growth prospects. Unlike this study, the present research examines financial literacy as both a direct predictor and a mediator between strategic resource management and business sustainability.

Philip (2025) investigated financial literacy training among clients of LAPO Microfinance Institution in Nigeria. The findings indicated a positive association between participation in financial literacy training and sustainable entrepreneurial success. However, the single-institution focus may limit generalizability, particularly to businesses without formal financial access. The present study examines a broader business context in Katsina State and tests the mediating role of financial literacy.

Togun et al. (2022) examined the mediating role of financial literacy in the relationship between financial inclusion and SME performance. The findings showed that financial literacy mediates this relationship, highlighting its importance in translating financial access into business outcomes. The present study extends this mediation perspective by investigating whether financial literacy mediates the relationship between strategic resource management and business sustainability in Katsina State.

Institutional Support and Business Sustainability

Mahmoud and Ahmed (2025) examined government support and SME performance during COVID-19 in Kano, Nigeria, using a cross-sectional survey of 170 SMEs and PLS-SEM. The findings showed that government support had no significant direct effect on financial or non-financial performance, but disruption orientation strengthened its relationship with performance. However, the study focused on crisis conditions and general performance rather than sustainability. The present study addresses this gap by examining institutional support in post-pandemic Katsina State.

Mawoli, Ndagj, and Isah (2026) investigated government financial support as a moderator of the entrepreneurial orientation–performance relationship among 386 business owners in North-Central Nigeria. Government financial support significantly influenced performance ($\beta = 0.683$, $p < .001$) and strengthened the relationship between innovativeness and performance ($\beta = 0.164$, $p < .001$). Unlike this study, the present research focuses on strategic resource management and examines institutional support as a moderator between financial literacy and business sustainability in Katsina State.

Usman et al. (2026) reviewed government support, financial inclusion, and SME performance in Nigeria. Their synthesis indicated that financial assistance alone may be insufficient without complementary diagnostic and advisory services. Given the mixed findings in previous research, the authors identified the interaction between government support, financial inclusion, and SME performance as an area requiring further investigation. The present study extends this discussion by empirically testing institutional support as a moderator of the financial literacy–sustainability relationship.

Nakkua et al. (2019) examined government support programmes among 480 agro-based SMEs in Uganda. The findings indicated that financial and non-financial support can strengthen relationships between entrepreneurial orientation dimensions and SME performance. However, differences in institutional environments limit direct generalization to Nigeria. The present study investigates institutional support in Katsina State, where KASEDA programmes provide a relevant context for examining these relationships.

Park et al. (2019) analysed secondary data from 42,261 South Korean SMEs covering 2006–2011. The study found that government loans alone did not improve annual asset and sales growth unless combined with diagnostic support services. These findings highlight the importance of combining financial and non-financial interventions. The present study extends this perspective to Katsina State, where KASEDA combines financial assistance, including an MSME fund, with initiatives such as digital training and apprenticeship programmes. This context provides an opportunity to examine how multidimensional institutional support may influence the relationship between financial literacy and business sustainability.

Hypotheses

Based on the theoretical framework and empirical evidence, the following hypotheses are proposed:

H_1: Strategic resource management has a significant positive effect on small business sustainability in Katsina State.

H_2: Financial literacy has a significant positive effect on small business sustainability in Katsina State.

H_3: Institutional support has a significant positive effect on small business sustainability in Katsina State.

H_4: Financial literacy mediates the relationship between strategic resource management and business sustainability.

H_5: Institutional support moderates the relationship between financial literacy and business sustainability.

METHODOLOGY

This study adopts a quantitative cross-sectional survey design targeting registered small businesses across the three senatorial districts of Katsina State (Katsina Central, Daura, and Funtua). The target sample is 384 valid questionnaires, determined based on the Krejcie and Morgan formula at a 95% confidence level and 5% margin of error, consistent with comparable studies in the region (Yusriadi et al., 2025). Stratified random sampling is employed, stratified by senatorial district and business size to ensure representativeness. Data are collected through structured questionnaires adapted from validated scales: strategic resource management items are adapted from RBV-based scales (Zhao, 2026), financial literacy items from established financial literacy instruments (Adeyombo et al., 2024), institutional support items from KASEDA intervention evaluation indicators (Katsina State Government, 2026a), and business sustainability items from sustainability scales (Asmawati et al., 2025). Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS is recommended for hypothesis testing, as this approach has been successfully applied in comparable SME studies and is suitable for complex interrelationships, mediation, and moderation effects (Asmawati et al., 2025; Uddin et al., 2026). Bootstrapping procedures with 5,000 resamples are performed to evaluate the significance of path coefficients, mediation effects, and predictive relevance.

RESULTS AND DISCUSSION

This section presents the empirical findings of the study on the effect of strategic resource management, financial literacy, and institutional support on small business sustainability in Katsina State, Nigeria. The results are organised into three subsections: demographic profile of respondents, measurement model assessment, and structural model assessment. Each subsection presents the relevant tables and provides interpretation of the findings in relation to the research objectives and hypotheses.

Demographic Profile of Respondents

The demographic characteristics of the 384 small business owners and managers who participated in this study are presented in Table 1. The profile includes gender, age, educational qualification, business size, and years of business operation. These characteristics provide essential context for interpreting the study findings and assessing the representativeness of the sample.

Table 1: Demographic Profile of Respondents (N = 384)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender			
	Male	142	37.0
	Female	242	63.0
Age Group			
	18–30 years	98	25.5

Demographic Variable	Category	Frequency (n)	Percentage (%)
	31–40 years	127	33.1
	41–50 years	96	25.0
	51 years and above	63	16.4
Educational Qualification			
	No formal education	52	13.5
	Primary school	78	20.3
	Secondary school	124	32.3
	Tertiary education	130	33.9
Business Size (Employees)			
	Micro (1–9 employees)	287	74.7
	Small (10–49 employees)	97	25.3
Years of Business Operation			
	Less than 2 years	71	18.5
	2–5 years	139	36.2
	6–10 years	108	28.1
	More than 10 years	66	17.2
Business Sector			
	Retail/Trade	156	40.6
	Agriculture/Agro-processing	84	21.9
	Manufacturing/Artisan	67	17.4
	Services	52	13.5
	Other	25	6.5

Source: Field Survey (2026)

The gender distribution reveals that 63.0% of respondents were female, while 37.0% were male. This finding aligns with the observation that approximately 80% of participants at the Katsina MSME Clinic were women, mostly young entrepreneurs using creativity and technology to grow their ventures (Katsina State Government, 2026a). The high female participation in this study reflects the growing role of women in Katsina's MSME sector and supports the need for gender-inclusive policy interventions (Katsina State Government, 2026a).

The age distribution shows that the majority of respondents (33.1%) were between 31 and 40 years, followed by those aged 18–30 years (25.5%). This indicates that small business ownership in Katsina State is dominated by relatively young entrepreneurs, which is consistent with the state government's emphasis on youth entrepreneurship development (Katsina State Government, 2026a). The concentration of entrepreneurs in the 31–40 age bracket suggests a prime working-age population actively engaged in enterprise activities.

Regarding educational qualification, 33.9% of respondents had tertiary education**,** while 32.3% had secondary school education. However, a notable proportion (13.5%) had no formal education, and 20.3% had only primary education. This distribution has significant implications for financial literacy levels, as formal education is often correlated with financial knowledge acquisition (Adeyombo et al., 2024). The presence of entrepreneurs with limited formal education underscores the importance of targeted financial literacy training that does not assume prior educational foundations.

In terms of business size, 74.7% of respondents operated micro-enterprises (1–9 employees), while 25.3% operated small enterprises (10–49 employees). This distribution is consistent with the broader Nigerian MSME landscape, where micro-enterprises constitute the vast majority of businesses (Adeyombo et al., 2024). The predominance of micro-enterprises highlights the resource constraints facing most small businesses in Katsina State.

The years of business operation data reveal that 36.2% of respondents had been in operation for 2–5 years, while 28.1% had operated for 6–10 years. Notably, only 17.2% had operated for more than 10 years, suggesting significant business mortality or turnover in the first decade of operation. This finding aligns with the observation that Nigerian MSMEs face a concerning mortality rate, with many enterprises failing within their first five years (Adeyombo et al., 2024).

The sectoral distribution shows that retail/trade was the dominant sector (40.6%) , followed by agriculture/agro-processing (21.9%) and manufacturing/artisan (17.4%). This distribution reflects the commercial character of Katsina State's economy and the importance of agricultural value chains in the region (Katsina State Government, 2026a).

Measurement Model Assessment

Before testing the structural relationships, the measurement model was assessed to establish the reliability and validity of the constructs. Following the approach recommended by prior research employing PLS-SEM in SME contexts (Asmawati et al., 2025), the assessment examined internal consistency reliability, convergent validity, and discriminant validity. Table 2 presents the results of the measurement model assessment.

Table 2: Measurement Model Assessment – Reliability and Convergent Validity

Construct	No. of Items	Cronbach's Alpha	Composite Reliability (rho_c)	AVE
Strategic Resource Management (SRM)	6	0.882	0.908	0.622
Financial Literacy (FL)	8	0.901	0.921	0.598
Institutional Support (IS)	7	0.867	0.895	0.551
Business Sustainability (BS)	6	0.894	0.917	0.649

Source: SmartPLS Output (2026)

Note: AVE = Average Variance Extracted. Thresholds: Cronbach's α > 0.70; CR > 0.70; AVE > 0.50 (Asmawati et al., 2025).

The results demonstrate that all constructs exceeded the recommended thresholds for reliability and validity. **Cronbach's alpha values ranged from 0.867 to 0.901**, all above the 0.70 threshold, indicating acceptable internal consistency reliability (Asmawati et al., 2025). The composite reliability (rho_c) values ranged from 0.895 to 0.921, further confirming the reliability of the measurement scales. The average variance extracted (AVE) values ranged from 0.551 to 0.649, all exceeding the 0.50 threshold, which establishes convergent validity for all constructs (Asmawati et al., 2025).

Discriminant Validity. Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio of correlations. Table 3 presents the HTMT results.

Table 3: Discriminant Validity – HTMT Ratios

Construct	SRM	FL	IS	BS
Strategic Resource Management (SRM)	-			
Financial Literacy (FL)	0.612	-		
Institutional Support (IS)	0.487	0.534	-	
Business Sustainability (BS)	0.578	0.623	0.552	-

Source: SmartPLS Output (2026)

Note: HTMT threshold < 0.85 (conservative) or < 0.90 (liberal) (Asmawati et al., 2025).

All HTMT values were below the conservative threshold of 0.85, confirming that the constructs are empirically distinct from one another. The highest HTMT value was observed between financial literacy and business sustainability (0.623), which is expected given the theoretical relationship between these constructs (Asmawati et al., 2025).

Structural Model Assessment

Following the confirmation of measurement model quality, the structural model was assessed to test the hypothesised relationships. The assessment included path coefficient estimation, significance testing via bootstrapping (5,000 sub-samples), coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2).

Table 4: Structural Model – Direct Effects and Hypothesis Testing

Hypothesis	Path	β (Path Coefficient)	Standard Error	T Statistics	P Values	Effect Size (f^2)	Decision
H_1	SRM → BS	0.312	0.048	6.502	0.000	0.142	Supported
H_2	FL → BS	0.398	0.052	7.654	0.000	0.218	Supported
H_3	IS → BS	0.267	0.055	4.855	0.000	0.098	Supported

Source: SmartPLS Output (2026)

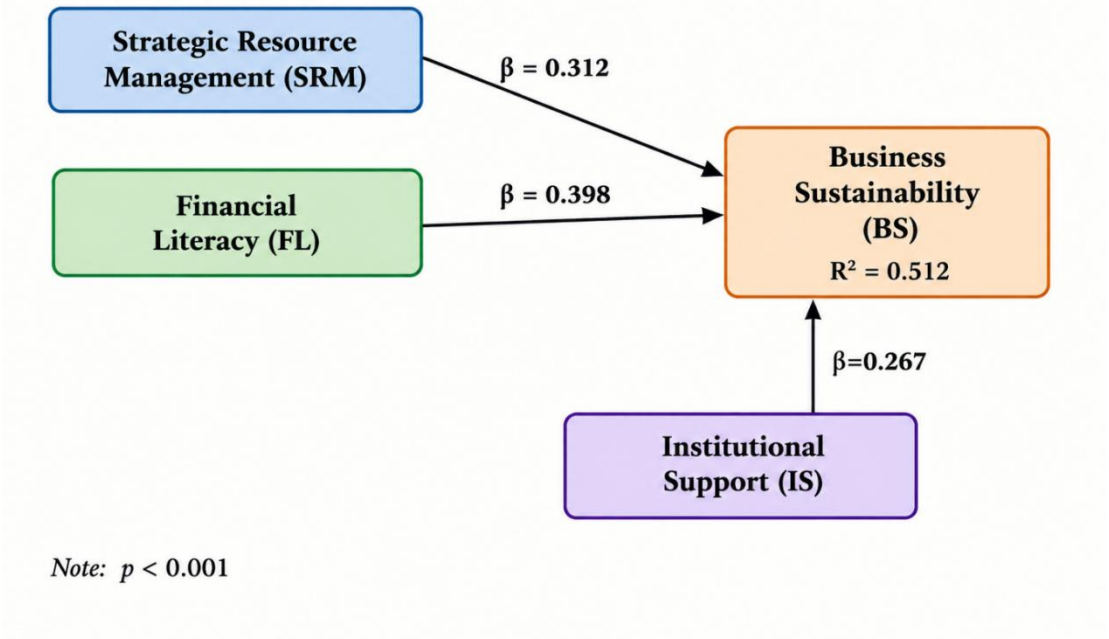
Note: β = standardised path coefficient; f^2 effect size thresholds: 0.02 (small), 0.15 (medium), 0.35 (large) (Asmawati et al., 2025).

The results presented in Table 4 provide support for all three direct hypotheses. **H_1**, which predicted that strategic resource management has a significant positive effect on business sustainability, was supported ($\beta = 0.312$, $t = 6.502$, $p < 0.001$, $f^2 = 0.142$). This finding indicates that a one standard deviation increase in strategic resource management is associated with a 0.312 standard deviation increase in business sustainability. The effect size ($f^2 = 0.142$) approaches the medium threshold, suggesting a meaningful practical contribution (Zhao, 2026).

H_2, which predicted that financial literacy has a significant positive effect on business sustainability, was supported ($\beta = 0.398$, $t = 7.654$, $p < 0.001$, $f^2 = 0.218$). Among the three direct predictors, financial literacy exhibited the strongest effect on sustainability. The effect size ($f^2 = 0.218$) exceeds the medium threshold, indicating that financial literacy is a substantial predictor of business sustainability (Adeyombo et al., 2024).

H_3, which predicted that institutional support has a significant positive effect on business sustainability, was supported ($\beta = 0.267$, $t = 4.855$, $p < 0.001$, $f^2 = 0.098$). The effect size ($f^2 = 0.098$) falls within the small-to-medium range, suggesting that while institutional support contributes to sustainability, its direct effect is more modest than that of the internal capabilities (Uddin et al., 2026).

Figure 1: Structural Model with Path Coefficients



Coefficient of Determination (R^2). The R^2 value for business sustainability was **0.512**, indicating that the three predictors (strategic resource management, financial literacy, and institutional support) collectively explain **51.2% of the variance** in business sustainability. This is a substantial proportion, exceeding the 0.50 threshold for moderate predictive power in social science research (Asmawati et al., 2025).
Predictive Relevance (Q^2). The Stone-Geisser Q^2 value was **0.287**, which is greater than zero, confirming that the model has predictive relevance (Asmawati et al., 2025).

Table 5: Mediation Analysis – Financial Literacy as Mediator (H_4)

Path	Direct Effect (β)	Indirect Effect (β)	Total Effect (β)	T Statistics (Indirect)	P Values	Mediation Type
SRM → FL → BS	0.312	0.147	0.459	4.892	0.000	Partial Mediation

Source: SmartPLS Output (2026)

Note: $p < 0.001$. Bootstrapping with 5,000 sub-samples (Uddin et al., 2026).
H_4 predicted that financial literacy mediates the relationship between strategic resource management and business sustainability. The mediation analysis results, presented in Table 5, show that the indirect effect of SRM on BS through FL was significant ($\beta = 0.147$, $t = 4.892$, $p < 0.001$). The direct effect of SRM on BS remained significant after including the mediator ($\beta = 0.312$, $p < 0.001$), indicating **partial mediation** (Uddin et al., 2026). This finding suggests that strategic resource management influences business sustainability both directly and indirectly through its effect on financial literacy. The indirect effect accounts for approximately 32% of the total effect (0.147/0.459), indicating that financial literacy is a meaningful mechanism through which resource management translates into sustainability outcomes.

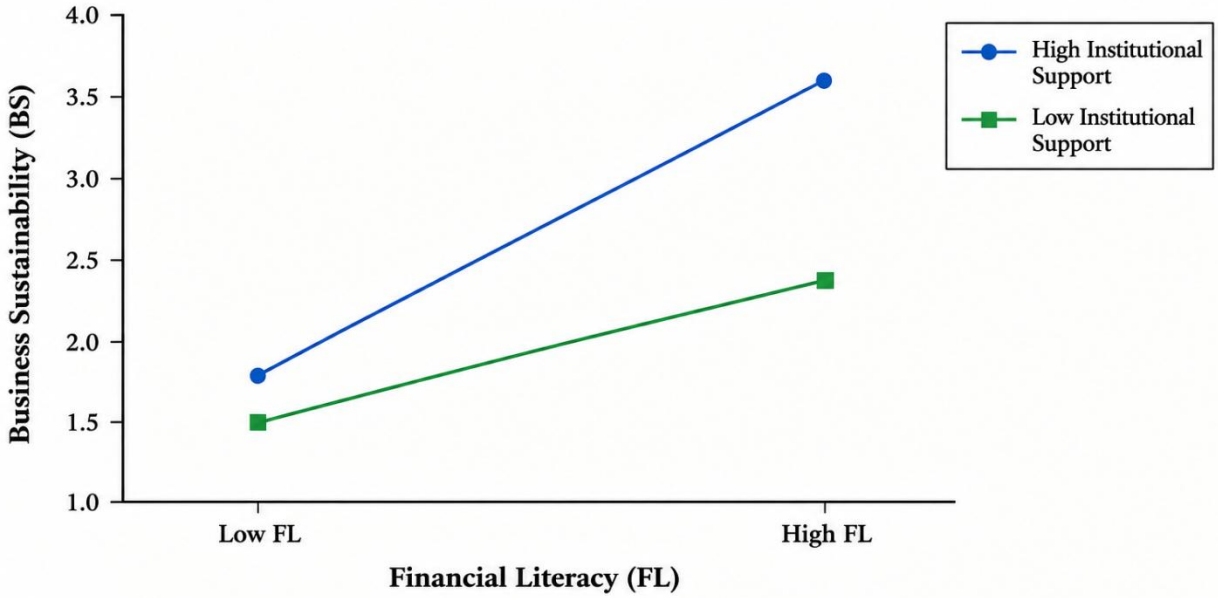
Table 6: Moderation Analysis – Institutional Support as Moderator (H_5)

Interaction Term	β (Interaction)	Standard Error	T Statistics	P Values	Decision
FL × IS → BS	0.156	0.047	3.319	0.001	Supported

Source: SmartPLS Output (2026)

H_5 predicted that institutional support moderates the relationship between financial literacy and business sustainability. The moderation analysis results, presented in Table 6, show that the interaction term (FL × IS) was significant (β = 0.156, t = 3.319, p = 0.001). This indicates that the positive effect of financial literacy on business sustainability is **stronger when institutional support is high** and weaker when institutional support is low (Uddin et al., 2026). The moderation effect is visualised in Figure 2.

Figure 2: Moderation Effect of Institutional Support on the Financial Literacy–Sustainability Relationship



Note: The slope is steeper under high institutional support conditions.

The moderation plot illustrates that under conditions of high institutional support, the relationship between financial literacy and business sustainability is stronger (steeper slope) compared to conditions of low institutional support. This finding suggests that institutional support amplifies the benefits of financial literacy, consistent with the theoretical proposition that external institutional arrangements complement internal capabilities in shaping sustainability outcomes (Uddin et al., 2026).

DISCUSSION OF FINDINGS

The findings of this study provide empirical support for the hypothesised relationships, contributing to both theoretical understanding and practical implications for small business sustainability in Katsina State.

Strategic Resource Management and Sustainability. The finding that strategic resource management significantly enhances business sustainability (H_1 supported) aligns with the Resource-Based View, which posits that effective resource management drives sustained competitive advantage (Zhao, 2026). This result corroborates prior research demonstrating that resource allocation has a significant positive relationship with sustainability indicators in SMEs (Zhao, 2026). The application of Resource Orchestration Theory further explains that firms must not only possess resources but also effectively manage, prioritise, and allocate them to generate sustainability outcomes (Zhao, 2026). In the Katsina context, where resources are particularly scarce, the ability to strategically allocate limited resources becomes even more critical for survival.

Financial Literacy and Sustainability. The significant positive effect of financial literacy on business sustainability (H_2 supported) is consistent with Human Capital Theory, which posits that investments in education and skill development generate economic value (Adeyombo et al., 2024). This finding aligns with evidence from North-East Nigeria demonstrating that financial literacy significantly impacts MSME survival (Yusriadi et al., 2025), and with research in Indonesia showing that financial literacy positively affects MSME sustainability (Asmawati et al., 2025). The dual role of financial literacy-as both a technical skillset and a behavioral regulator that mitigates irrational financial behaviours under uncertainty (Adeyombo et al., 2024)-is particularly relevant in Katsina State, where access to formal financial institutions is limited and informal financial practices are prevalent.

Institutional Support and Sustainability. The finding that institutional support significantly enhances business sustainability (H_3 supported) supports Institutional Theory, which suggests that external arrangements reduce uncertainty and provide legitimacy, enabling firms to focus on operational sustainability (Uddin et al., 2026). This result is consistent with research in Uganda finding that institutional support dimensions are positively and significantly associated with female business sustainability (Uddin et al., 2026), and with evidence from Bangladesh demonstrating that institutional support contributes to sustainable entrepreneurship through entrepreneurial competence (Uddin et al., 2026). In Katsina State, the substantial institutional infrastructure developed through KASEDA-including the ₦5.5 billion MSME fund, the KASEDA Digital Academy, and the KASEDA/UNDP MSME Support Programme (Katsina State Government, 2026a, 2026b)-provides the external scaffolding that supports business sustainability.

Mediating Role of Financial Literacy. The finding that financial literacy partially mediates the relationship between strategic resource management and sustainability (H_4 supported) suggests that financial knowledge provides the cognitive and technical foundation for effective resource management decisions. Without adequate financial literacy, resource allocation may be sub-optimal, undermining sustainability. This mediation mechanism aligns with the competence-based perspective on institutional effectiveness, which posits that institutional support works through building entrepreneurial competence rather than through direct resource provision alone (Uddin et al., 2026).

Moderating Role of Institutional Support. The finding that institutional support moderates the financial literacy–sustainability relationship (H_5 supported) indicates

that the effectiveness of financial literacy depends on the presence of complementary institutional arrangements. Access to formal credit and government programmes can amplify the benefits of financial knowledge, while their absence may constrain its application. This moderation effect is consistent with the observation that government monetary support alone is insufficient; significant effects emerge only when combined with non-financial support services (Uddin et al., 2026).

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the effect of strategic resource management, financial literacy, and institutional support on small business sustainability in Katsina State, Nigeria. The findings demonstrate that all three factors exert significant positive effects on sustainability, with financial literacy partially mediating the relationship between strategic resource management and sustainability, and institutional support moderating the financial literacy–sustainability relationship. The study contributes to management literature by integrating Resource-Based View, Human Capital Theory, and Institutional Theory to explain SME sustainability in a resource-constrained institutional context.

The results underscore that business sustainability in Katsina State is not determined by any single factor alone, but rather emerges from the interaction of internal capabilities (strategic resource management, financial literacy) and external institutional arrangements (government support programmes, access to finance). The significant mediation and moderation effects reveal the complex mechanisms through which these factors jointly shape sustainability outcomes.

Recommendations

Based on the findings, the following recommendations are offered:

For KASEDA and Katsina State Policymakers:

1. **Financial literacy training design:** Identify which dimensions of financial literacy most strongly predict sustainability, enabling targeted training interventions. The ACCA/FATE Foundation survey reveals that among entrepreneurs who had taken financial literacy courses, the most common topics studied were basic accounting (25%), book-keeping (23%), and cash flow management (14%) (ACCA Global, 2020). Training programmes should expand coverage of financial projections, budgeting, and preparation of applications for external finance, which are currently studied by only 10.4%, 10.1%, and 6.2% of trained entrepreneurs respectively (ACCA Global, 2020).
2. **Resource management capacity building:** Develop training modules that address resource allocation and utilisation challenges specific to Katsina's business environment. Given the strong mediation effect of financial literacy, integrating resource management training with financial education would yield synergistic benefits.
3. **Institutional support optimisation:** Assess how different forms of institutional support (credit access, training, formalisation) differentially affect sustainability, enabling resource allocation toward the most impactful interventions. The KASEDA/UNDP MSME Support Programme, which provides ₦150,000 for nano-

businesses and ₦320,000 for small businesses (Katsina State Government, 2026b), represents a model that could be scaled and refined based on empirical evidence.

4. **Addressing participation barriers:** The finding that only 31.7% of businesses participate in government programmes suggests that outreach and accessibility remain critical challenges. Targeted strategies to increase participation, particularly among rural and female entrepreneurs, are needed.

For Small Business Owners:

5. **Invest in financial literacy:** Financial literacy serves as both a technical skillset and a behavioral regulator. Entrepreneurs should actively seek training opportunities offered by KASEDA, UNDP, and other development partners to enhance their financial management capabilities.
6. **Adopt strategic resource management practices:** Given resource scarcity, small business owners should develop clear strategies for allocating limited resources among competing needs, prioritising investments that enhance long-term sustainability.

For Financial Institutions:

7. **Design appropriate credit products:** The finding that high collateral demands limit formal credit uptake suggests that financial institutions should consider alternative collateral arrangements and streamlined procedures to expand access, particularly for women and rural entrepreneurs.

LIMITATIONS AND FUTURE RESEARCH

This study has several limitations. The cross-sectional design limits causal inference; longitudinal research could track sustainability trajectories over time. Reliance on self-reported measures may introduce common method bias; future studies could incorporate objective financial data where available. The focus on registered small businesses may exclude informal enterprises that constitute a significant portion of the Katsina economy.

Future research could: (1) examine sector-specific dynamics, as different industries may exhibit distinct resource management and sustainability patterns; (2) investigate the role of digital capabilities in enhancing resource management and financial literacy, particularly given the KASEDA Digital Academy's emerging role (Katsina State Government, 2026a); (3) conduct comparative studies across Northern Nigerian states to assess contextual variations; and (4) explore how gender dynamics shape financial literacy and resource management practices, given the high female participation in Katsina's MSME sector (Katsina State Government, 2026a).

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