Adaptability, Involvement, and SME Performance in Nigeria: The Mediating Roles of Firm Reputation and Digital Orientation

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Abstract

Despite extensive research on organizational culture and SME performance, limited attention has been given to the mechanisms through which adaptability and involvement translate into performance outcomes, particularly within Nigerian SMEs. This study addresses this gap by examining how adaptability and involvement influence SME performance through the distinct mediating pathways of firm reputation and digital orientation. A time-lagged survey design was employed, with data collected from 341 registered SMEs in Niger State, Nigeria, using stratified random sampling. Owners and managers provided data on adaptability, involvement, firm reputation, and digital orientation at Wave 1, and performance data at Wave 2 (six months later). Hypotheses were tested using partial least squares structural equation modeling (PLS-SEM) with bootstrapping, given its suitability for simultaneously estimating complex mediation relationships among latent constructs. The results show that both adaptability and involvement are significant positive predictors of SME performance. Firm reputation mediates the relationship between adaptability and performance, while digital orientation mediates the relationship between involvement and performance. These findings indicate that adaptability and involvement operate through distinct mechanisms, with adaptability enhancing external reputational capital and involvement strengthening internal digital capabilities. The study contributes to the literature by advancing a mechanism-based understanding of culture–performance relationships in an underexplored African context. Practically, SME managers should prioritize adaptability to build reputation and foster involvement to strengthen digital orientation, while policymakers should design targeted interventions that support these distinct capability pathways.

Keywords: *Adaptability; Involvement; Firm Reputation; Digital Orientation; SME Performance*

Introduction

Small and Medium Enterprises (SMEs) play a central role in economic development, accounting for over 90% of businesses and contributing significantly to global employment (World Bank, 2024). Their importance is even more pronounced in developing economies, where they serve as key drivers of job creation and economic inclusion (Tete et al., 2025). Despite this, SMEs in many emerging contexts consistently underperform relative to their potential.

Nigeria reflects this paradox. With over 37 million MSMEs employing more than 60% of the workforce, the sector remains a critical pillar of the economy, yet its contribution to GDP remains disproportionately low, and failure rates are persistently high (SMEDAN, 2021; Ariyo, 2014). This disconnect between scale and performance suggests that existing explanations of SME success in the Nigerian context remain insufficient, particularly given the resource constraints and institutional challenges that characterize the business environment (Edeh et al., 2024).

Among firm-level determinants, organizational culture has gained increasing attention as a driver of performance. Denison's (1990) model identifies adaptability and involvement as key cultural dimensions linked to organizational effectiveness. Empirical evidence from Nigeria supports the relevance of these dimensions, showing that both adaptability and involvement significantly predict SME performance (Isah et al., 2022; Omoregbe & Umemezia, 2017). However, these studies largely focus on direct relationships, offering limited insight into how these cultural attributes translate into improved performance outcomes.

The problem this study addresses is that, despite evidence linking adaptability and involvement to SME performance, existing research in the Nigerian context provides limited understanding of the mechanisms through which these cultural dimensions influence performance. This gap constrains both theoretical development and practical application, as managers are left without clear guidance on how cultural traits can be leveraged to achieve tangible performance gains.

To address this limitation, this study adopts a mechanism-based perspective by introducing firm reputation and digital orientation as mediating variables. Firm reputation reflects external stakeholder perceptions of organizational credibility and has been shown to connect internal practices with market outcomes (Fombrun, 1996; Afful, 2023). Digital orientation, in contrast, captures an organization's strategic posture toward digital technologies and represents an internal capability through which cultural values may be translated into operational effectiveness (Kim et al., 2024; Binsaeed et al., 2023). While adaptability may enhance external legitimacy through reputation, involvement may strengthen internal capabilities through digital orientation.

Accordingly, this study addresses the following research questions: (1) Do adaptability and involvement directly influence SME performance in the Nigerian context? (2)

Does firm reputation mediate the relationship between adaptability and performance? (3) Does digital orientation mediate the relationship between involvement and performance?

Literature Review

Conceptualization

Organizational Culture

Organizational culture refers to the shared values, beliefs, and assumptions that guide behavior within an organization. Denison's (1990) model conceptualizes culture through four dimensions: adaptability, mission, consistency, and involvement. This study focuses on adaptability and involvement, which represent the flexibility-oriented quadrant of Denison's model, particularly valuable in turbulent developing economy contexts. Adaptability encompasses creating change, customer focus, and organizational learning. Involvement encompasses empowerment, team orientation, and capability development. High-involvement organizations create "a sense of ownership and responsibility" (Denison, 1990). Abdelwahed and Soomro (2024), studying Egyptian manufacturing firms, found that both involvement and adaptability significantly predict corporate performance.

Firm Reputation

Firm reputation is a critical intangible asset that signals quality and reliability to stakeholders. It functions as a signal conveying unobservable qualities about an organization's reliability and trustworthiness (Spence, 1973). The behavioral consistency principle (Aydogan, 2016) suggests that organizational culture shapes the behavioral patterns that generate consistent reputational signals. Adaptable firms continuously respond to customer needs, building reputations for responsiveness and innovation. Firm reputation enhances SME performance by reducing transaction costs, attracting talented employees, and enabling price premiums (Afful, 2023). Blajer-Gołębiewska and Vasa (2024) found that corporate reputation significantly predicts acceptable profit across multiple sectors.

Digital Orientation

Digital orientation encompasses digital mindset, capability, and integration (Kautish et al., 2025; Kim, Kim, & Ahn, 2024). It represents the extent to which a firm recognizes digital technologies as strategic assets and integrates them into operations. Digital orientation enables firms to streamline operations, expand market reach, and drive innovation. Binsaeed et al. (2023) confirmed that digital orientation directly influences financial performance in emerging markets.

SME Performance

SME performance refers to the operational and financial outcomes achieved by small and medium-sized enterprises. In VUCA environments, performance and survival depend on adaptability (You et al., 2025). Recent research examining Indonesian MSMEs found that strategic orchestration of economic, social, and human capital determines resilience during crises (Sari et al., 2025).

Empirical Review

Adaptability and SME Performance

In VUCA environments, adaptability becomes critical for SME survival and growth (You et al., 2025). Recent research examining Indonesian MSMEs found that strategic orchestration of economic, social, and human capital determines resilience during crises (Sari et al., 2025). Empirical evidence supports the positive relationship between adaptability and performance (Hosseini, 2014; Cheema & Abbas, 2017), but evidence from sub-Saharan Africa remains scarce.

Involvement and SME Performance

Involvement encompasses empowerment, team orientation, and capability development. Empirical evidence supports the involvement-performance relationship (Poku & Owusu-Ansah, 2013; Omoregbe & Umemezia, 2017; Olughor, 2014). Involvement should also influence digital orientation because empowered employees experiment with new technologies, team orientation facilitates knowledge sharing, and capability development builds digital skills.

Firm Reputation and SME Performance

The relationship between organizational culture and reputation is grounded in the behavioral consistency principle (Aydogan, 2016). Adaptable firms continuously respond to customer needs, building reputations for responsiveness and innovation. Firm reputation enhances SME performance by reducing transaction costs, attracting talented employees, and enabling price premiums (Afful, 2023). A recent systematic review confirms that "business reputation significantly influences SMEs' financial performance" (Afful, 2023). Blajer-Gołębiewska and Vasa (2024) found that corporate reputation significantly predicts acceptable profit across multiple sectors.

Digital Orientation and SME Performance

Digital orientation in turn enhances performance through operational efficiency, expanded market reach, and innovation. Kautish et al. (2025) affirm "a crucial role of digital technology resources to support digital orientation," demonstrating how technology resources enable SMEs to streamline operations and expand market reach. Binsaeed et al. (2023) confirmed that digital orientation directly influences financial performance in emerging markets.

Theoretical Framework

Resource-Based View (RBV)

The Resource-Based View conceptualizes firms as heterogeneous entities possessing unique resource bundles (Barney, 1991). Sustainable competitive advantage derives from resources that are valuable, rare, inimitable, and non-substitutable. Organizational culture, particularly adaptability and involvement, represents a socially complex, path-dependent resource difficult to replicate. Kautish et al. (2025) affirm "a crucial role of digital technology resources to support digital orientation," demonstrating how technology resources enable SMEs to streamline operations and expand market reach.

Dynamic Capabilities Theory

Building on RBV, dynamic capabilities theory introduces the firm's ability to integrate, build, and reconfigure competences to address rapidly changing environments (Teece, Pisano, & Shuen, 1997). Recent research confirms that digitally-driven business model innovation requires supportive organizational structures and strategic renewal to translate into performance gains (van Tonder et al., 2024). Adaptability enables sensing of digital opportunities; involvement enables seizing them through employee engagement.

Signaling Theory

Signaling theory addresses information asymmetry between parties (Spence, 1973). Firm reputation functions as a signal conveying unobservable qualities about reliability and trustworthiness. Organizational culture shapes the behavioral consistency that generates reputational signals.

Hypotheses Development

Therefore, this study hypothesizes that:

H1: Adaptability positively influences SME performance.

H2: Involvement positively influences SME performance.

H3: Adaptability positively influences firm reputation.

H4: Firm reputation positively influences SME performance.

H5: Firm reputation mediates the relationship between adaptability and SME performance.

H6: Involvement positively influences digital orientation.

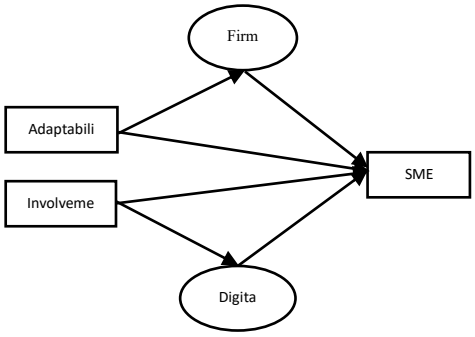
H7: Digital orientation positively influences SME performance.

H8: Digital orientation mediates the relationship between involvement and SME performance.

Conceptual Model

Figure 2.1

Conceptual Framework Showing Direct and Mediated Relationships



Source: Authors Compilation (2026)

The figure presents a conceptual model linking organizational culture to SME performance through two mediating mechanisms. The model identifies adaptability and involvement as key cultural dimensions. Adaptability enhances firm reputation, which subsequently improves SME performance, while involvement promotes digital orientation, which in turn strengthens SME performance through improved efficiency, market reach, and innovation. Overall, the framework suggests that organizational culture influences SME performance both directly and indirectly through firm reputation and digital orientation.

Methodology

Research Design and Sample

Adopting a positivist research philosophy (Saunders, Lewis, & Thornhill, 2019), this study employed a time-lagged survey design with two waves separated by six months to reduce common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). Wave 1 collected data on adaptability, involvement, firm reputation, and digital orientation, while Wave 2 collected SME performance data. Procedural remedies to mitigate common method bias included temporal separation of predictor and outcome variables, respondent anonymity, and careful questionnaire design (Podsakoff et al., 2012).

The study population comprised 23,197 SMEs in Niger State, Nigeria, including 22,092 small enterprises and 1,105 medium enterprises, according to the SMEDAN–NBS (2021) National MSME Survey. The minimum sample size of 378 was determined using the Krejcie and Morgan (1970) formula at a 95% confidence level and 5% margin of error. To accommodate nonresponse, the sample was increased to 567 SMEs (Bartlett, Kotrlik, & Higgins, 2001). Stratified random sampling with proportional allocation across Niger State's three senatorial zones was applied (Cochran, 1977; Lohr, 2022). Insecurity in parts of Niger North required restricting sampling to accessible local government areas, with replacement firms drawn from nearby clusters.

Table 3.1 Distribution of SMEs According to Senatorial Zones

Senatorial Zone	Total SMEs	Small Enterprises	Medium Enterprises	Rationale
Niger East	10,901	10,381	520	Dominant zone: administration, urban infrastructure, commercial density
Niger South	7,893	7,516	377	Moderate SME presence: regional trade, institutional activities
Niger North	4,403	4,193	210	Lower SME density: rural economy, persistent insecurity
Total	23,197	22,090	1,107	

Source: Authors Compilation from SMEDAN (2021)

Table 3.2 Distribution of SMEs Across Senatorial Zones

Senatorial Zone	Proportion	Allocated Sample	Rationale
Niger East	47%	266 SMEs	High SME density; state capital, educational institutions, commercial hub
Niger South	34%	193 SMEs	Active trade, transport corridors, educational institutions

Senatorial Zone	Proportion	Allocated Sample	Rationale
Niger North	19%	108 SMEs	Lower SME activity, security-constrained environment
Total	100%	567 SMEs	—

Source: Authors sample allocation which was proportional to SME distribution across the three senatorial zones.

Of the 567 questionnaires distributed at Wave 1, 386 were returned (68.1%), with 353 usable after screening (62.3%). At Wave 2, 341 SMEs provided performance data (96.6% retention), yielding a final matched sample of 341 SMEs.

Measures

All constructs were measured using five-point Likert scales, ranging from 1 (strongly disagree) to 5 (strongly agree). Adaptability was operationalized as a second-order construct with three dimensions: creating change, customer focus, and organizational learning, as adapted from Denison, Janovics, and Young (2006). Similarly, involvement was measured as a second-order construct comprising empowerment, team orientation, and capability development (Denison et al., 2006). Firm reputation was assessed using six items adapted from Taghian (2012) and validated by Afful (2023), while digital orientation was measured across three dimensions — digital mindset, digital capability, and digital integration — following Ngo (2024). SME performance was captured using eight items adapted from Spillan and Parnell (2006). Control variables in the study included firm size, industry sector, owner education, and owner gender.

A pilot study conducted with 30 SMEs confirmed that all constructs possessed adequate psychometric properties. Composite reliability exceeded the recommended threshold of 0.70 for each construct, average variance extracted surpassed 0.50, and discriminant validity was confirmed using the Fornell-Larcker criterion (Fornell & Larcker, 1981). These results indicate that the measurement instruments were reliable and valid for the main study.

Data Analysis

Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4 was employed to test the hypothesized relationships (Hair, Risher, Sarstedt, & Ringle, 2019). Adaptability and involvement were modeled as reflective–reflective hierarchical component models using the two-stage approach, recommended for higher-order constructs in PLS-SEM.

Mediation effects were assessed using bootstrapping with 5,000 resamples to generate confidence intervals for indirect effects (Preacher & Hayes, 2008). Common method bias was addressed through procedural remedies (temporal separation and respondent anonymity) and statistical checks. Full collinearity variance inflation factors (VIFs) were below 3.3, indicating minimal bias (Kock, 2015). Harman's single-factor test showed the first factor accounted for 28.4% of variance, further confirming that CMB was unlikely.

The measurement model was evaluated using reliability, convergent validity, and discriminant validity criteria before testing the structural model, ensuring methodological rigor.

Results and Discussion

Sample Characteristics

Table 4.1 Sample Characteristics of SME Owners and Firms

Characteristic	Category	Frequency	Percentage
Owner Gender	Male	292	85.6
	Female	49	14.4
Owner Education	SSCE/Diploma	74	21.8
	First Degree	197	57.8
	Postgraduate	52	15.3
	Other	18	5.1
Firm Age	Young (0–5 years)	102	30.0
	Mature (6–10 years)	113	33.1
	Established (11+ years)	126	36.9
Firm Size	Small (10–49 employees)	244	71.7
	Medium (50–99 employees)	83	24.4
	Larger Medium (100–199 employees)	14	3.9

Authors Computation (2026) Note. Percentages may not total 100 due to rounding.

Interpretation: The sample was predominantly male (85.6%), with most owners holding a first-degree qualification (57.8%). Firm age was fairly balanced, with slightly more established firms (36.9%), and small firms dominated (71.7%), reflecting typical SME distributions in Niger State.

Measurement Model Assessment

Table 4.2 Reliability and Convergent Validity of First-Order Constructs

Construct	Items	Loading Range	(CR)	(AVE)
Firm Reputation	6	0.73–0.86	0.77	0.54
Digital Orientation	9	0.71–0.88	0.92	0.68
SME Performance	8	0.72–0.86	0.86	0.56
Creating Change	4	0.75–0.84	0.81	0.59
Customer Focus	4	0.77–0.86	0.83	0.62
Organizational Learning	4	0.74–0.82	0.79	0.55
Empowerment	5	0.72–0.83	0.80	0.57

Construct	Items	Loading Range	(CR)	(AVE)
Team Orientation	5	0.73–0.85	0.82	0.58
Capability Development	4	0.76–0.84	0.80	0.56

Authors Computation (2026)

Note. Discriminant validity confirmed using the Fornell-Larcker criterion and HTMT ratios (all <0.90).
Interpretation: All constructs exceeded the recommended thresholds for reliability (CR > 0.70) and convergent validity (AVE > 0.50). Factor loadings were satisfactory, and discriminant validity was confirmed using the Fornell-Larcker criterion and HTMT ratios (<0.90), ensuring constructs were distinct.

Table 4.3 Second-Order Construct Assessment

Second-Order Construct	Dimension	Path Coefficient	t-value	p-value
Adaptability	Creating Change	0.81	22.34	<.001
	Customer Focus	0.79	19.87	<.001
	Organizational Learning	0.76	18.23	<.001
Involvement	Empowerment	0.83	24.56	<.001
	Team Orientation	0.78	20.12	<.001
	Capability Development	0.74	17.89	<.001

Authors Computation (2026)

Note. AVE: Adaptability = 0.62, Involvement = 0.61; CR: Adaptability = 0.88, Involvement = 0.87.
Interpretation: Adaptability and Involvement were well represented by their dimensions. High path coefficients and significant t-values confirm strong construct validity, with AVE and CR above recommended thresholds (Adaptability AVE = 0.62, CR = 0.88; Involvement AVE = 0.61, CR = 0.87).

Common Method Bias

Harman's single-factor test indicated the first factor accounted for 28.4% of variance, below the 50% threshold, confirming that common method bias was not a concern.

Structural Model Assessment

Table 4.4 Direct Effects (H1–H6)

Hypothesis	Relationship	B	t-value	p-value	Decision
H1	Adaptability → Performance	0.52	17.33	<.001	Supported
H2	Involvement → Performance	0.14	1.96	.050	Supported
H3	Adaptability → Reputation	0.48	14.21	<.001	Supported
H4	Involvement → Digital Orientation	0.53	16.78	<.001	Supported
H5	Reputation → Performance	0.46	13.45	<.001	Supported
H6	Digital Orientation → Performance	0.40	11.23	<.001	Supported

Authors Computation (2026)

Interpretation: Adaptability had the strongest direct effect on SME performance, highlighting the critical role of responsiveness. Involvement had a smaller but significant effect, indicating internal employee engagement supports performance indirectly.

Table 4.5 ***Mediation Effects (H7–H8)***

Hypothesis	Indirect Path	Indirect Effect	SE	95% CI	Decision
H7	ADT → REP → PERF	0.22	0.03	[0.16, 0.28]	Supported
H8	INV → DIG → PERF	0.21	0.05	[0.11, 0.31]	Supported

Authors Computation (2026)

Note. ADT = Adaptability; INV = Involvement; REP = Reputation; DIG = Digital Orientation; PERF = Performance.
Interpretation: Both mediators were significant, confirming that adaptability influences performance via reputation (signaling mechanism) and involvement via digital orientation (operational mechanism).

Table 4.6
Total Effects on SME Performance

Variable	Direct Effect	Indirect Effect	Total Effect
Adaptability	0.52	0.22	0.74
Involvement	0.14	0.21	0.35

Authors Computation (2026)

Interpretation: Adaptability had the highest total effect, emphasizing the combined strength of direct and mediated pathways. The model explained 43% of variance in SME performance ($R^2 = 0.43$) with medium predictive relevance ($Q^2 = 0.30$).

Table 4.7
Summary of Hypothesis Testing

Hypothesis	Statement	Decision
H1	Adaptability positively influences SME performance	Supported
H2	Involvement positively influences SME performance	Supported
H3	Adaptability positively influences firm reputation	Supported
H4	Involvement positively	Supported

Hypothesis	Statement	Decision
	influences digital orientation	
H5	Firm reputation positively influences SME performance	Supported
H6	Digital orientation positively influences SME performance	Supported
H7	Firm reputation mediates adaptability-performance	Supported
H8	Digital orientation mediates involvement-performanc	Supported

Authors Compilation (2026)

Discussion: The results confirm that adaptability and involvement enhance SME performance through distinct mechanisms. Adaptability strengthens reputation (external signaling), while involvement strengthens digital orientation (internal operational capability). These findings extend prior studies in sub-Saharan Africa (Abdelwahed & Soomro, 2024; Afful, 2023) and align with dynamic capabilities and signaling theory. The mediating pathways highlight the importance of addressing both internal and external strategic resources to improve SME performance.

Conclusion

This study examined how adaptability and involvement, as key dimensions of organizational culture, influence SME performance through distinct mechanisms. Evidence from 341 Nigerian SMEs shows that adaptability enhances performance by strengthening firm reputation, while involvement drives performance by building digital orientation. These findings demonstrate that organizational culture does not operate as a single, uniform construct but through differentiated pathways that link internal capabilities and external positioning to performance outcomes.

The study contributes to the literature by moving beyond direct culture–performance relationships and providing empirical support for the mediating roles of firm reputation and digital orientation. It offers a more nuanced explanation of how specific cultural traits translate into performance, particularly within the context of SMEs operating in resource-constrained and institutionally complex environments.

Recommendations

For SME Owners

SME owners should align their cultural priorities with their strategic objectives. Where the goal is to enhance market visibility and customer trust, emphasis should be placed on adaptability through responsiveness to customer needs and changing market conditions. Where the priority is operational efficiency and competitiveness, greater focus should be placed on involvement by empowering employees, encouraging teamwork, and investing in skill development.

For Managers

Managers should allocate resources in line with the intended performance pathway. Efforts to build reputation should focus on improving responsiveness to external stakeholders, while digital capability development should prioritize internal capacity building. This requires not only investment in technology but also fostering collaboration, shared responsibility, and continuous learning among employees.

For Policymakers

Policy interventions should be more targeted and aligned with specific capability gaps. Programs aimed at enhancing adaptability should be complemented with initiatives that improve firm visibility, such as access to certification, trade platforms, and market linkages. Interventions promoting involvement should be integrated with digital support programs, ensuring that technology adoption is matched with internal skill development. Regional differences should also be considered in policy design.

For Financial Institutions

Financial institutions should incorporate non-financial indicators such as firm reputation and digital readiness into their assessment frameworks. These factors provide additional insight into an SME's resilience, operational efficiency, and long-term viability, thereby enabling more informed lending decisions.

Limitations and Future Research

This study has its limits, and those limits open the door for more work. First, we only looked at SMEs in Nigeria, so we can't be sure these findings hold in other countries or cultures. Future research could test these ideas across different settings to see if the patterns stick.

Second, while we collected data at two different points in time, that's not the same as tracking businesses over many years. A longer-term study would give us more confidence about cause and effect. Following the same SMEs for several years, with multiple rounds of data, would be a big step forward.

Third, we relied on what business owners told us. That's useful, but it's only one perspective. Future studies could bring in voices from employees, customers, or even pull in hard data like financial records to round out the picture.

Fourth, our six-month gap between data collections might not have been long enough to capture real changes in something like reputation, which often builds slowly over time. Longer windows would help.

Finally, we focused on reputation and digital orientation as the key bridges between culture and performance. But there are almost certainly others—innovation, for example, or resilience in tough times. Future research could explore those, and also look at things like environmental turbulence or how long a business has been around, which might change how these relationships play out.

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