

An Empirical Study on Impact of Alternative Financing Mechanisms on the Operational Resilience of Small and Medium Enterprises in Nigeria

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Abstract

The persistence of macroeconomic distress in Nigeria has critically constrained traditional bank lending, creating a severe financing gap for small and medium enterprises (SMEs). This study investigates which specific alternative financing mechanisms effectively translate into operational resilience for SMEs operating in this hostile environment. A cross-sectional survey design was employed, collecting data from 412 SME owners and managers across Nigeria's six geopolitical zones, and the hypothesized relationships were tested using partial least squares structural equation modeling (PLS-SEM). All three alternative financing mechanisms significantly and positively influenced SME operational resilience. Digital Fintech Adoption emerged as the strongest predictor ($\beta = 0.348, p < 0.001$), followed by Informal Social Network Financing ($\beta = 0.285, p < 0.01$) and Supply Chain Finance Utilization ($\beta = 0.217, p < 0.05$). A post-hoc analysis further revealed a significant complementary interaction between fintech and social network financing ($\beta = 0.156, p < 0.05$), indicating a synergistic resilience effect when both mechanisms are jointly utilized. The study is primarily grounded in the Resource-Based View (RBV), which conceptualizes alternative financing mechanisms as strategic resources, while Dynamic Capability Theory explains how SMEs reconfigure these resources into operational resilience under economic distress. The findings provide important implications for SME managers, policymakers, and financial innovators seeking to strengthen enterprise survival capacity in turbulent economies.

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1 INTRODUCTION

Small and Medium Enterprises (SMEs) form the bedrock of the Nigerian economy, constituting approximately 96% of all businesses and contributing an estimated 48% to the national Gross Domestic Product (GDP) while accounting for over 84% of employment (Akinrinde et al, 2025). These enterprises are critical agents of economic diversification, innovation, and poverty alleviation. However, their potential for growth and sustained contribution is being severely tested by a protracted period of macroeconomic distress. The Nigerian economy has been characterized by a confluence of adverse conditions: headline inflation averaged 22.8% in 2023, reaching a 27-year high, eroding real incomes and savings; the national currency, the Naira, depreciated by over 45% against the US Dollar in the official market following foreign exchange reforms, drastically increasing the cost of imported inputs and servicing foreign obligations; and the Central Bank's restrictive monetary policy, aimed at curbing inflation, has pushed the Monetary Policy Rate (MPR) to a historic 18.75%, severely tightening credit conditions (Lessambo, 2024). This toxic triad has

created a hostile operational environment where survival, not growth, has become the primary objective for a vast majority of SMEs.

A direct consequence of this economic malaise has been the constriction of traditional financing channels. Risk-averse commercial banks have significantly tightened lending criteria, increased collateral demands, and raised interest rates on loans to levels often deemed prohibitive for SMEs (Umeaduma, 2024). The resulting credit gap-the difference between the financing needed by viable SMEs and the amount supplied by formal financial institutions-is stark. Recent estimates by the International Finance Corporation (Advisors, 2022) peg this gap for Nigerian SMEs at a staggering ₦617 billion (approximately \$736 million). This deficit is not merely a statistic but a daily reality that forces entrepreneurs to make existential choices: delaying payroll, skipping essential inventory purchases, or halting expansion plans. In the face of this systemic failure of formal credit markets, SMEs are not passive victims; they are active agents of adaptation, compelled to seek out and rely on a mosaic of alternative, non-traditional financing pathways to ensure continuity. The critical question, therefore, shifts from merely diagnosing the financing gap to understanding which of these alternative pathways actually confer resilience in a distressed economy.

The academic literature on SME financing in emerging economies is vast and well-established. Seminal and contemporary works have extensively documented the barriers to formal finance, including information asymmetries, lack of collateral, and institutional weaknesses (Mpofu, & Sibindi, 2022; Nabisaalu & Bylund, 2021; Vaghera & Mashekwa, 2025; Amadasun & Mutezo, 2021; Ogunmokun et al, 2024; Ashraf et al, 2025). However, a significant and persistent gap remains. Much of this body of work tends to treat "access to finance" as a monolithic or binary construct-either SMEs have it or they do not. This overlooks the profound heterogeneity in the types, mechanisms, and efficacy of the alternative financing sources that SMEs actively utilize during crises. There is a scarcity of empirical research that systematically investigates which specific alternative financing mechanisms not only provide capital but, more importantly, effectively translate into tangible, measurable operational resilience outcomes during periods of systemic economic distress. For instance, does a quick loan from a fintech app contribute more to resilience than extended payment terms from a trusted supplier? Does the social capital embedded in a community savings group offer a more sustainable buffer than digital credit? The literature offers fragmented insights but lacks a consolidated, comparative empirical examination of these mechanisms within the unique, high-stress context of an economy like Nigeria's.

This study is designed to address this critical gap. We move beyond a generic exploration of financing challenges to conduct a targeted empirical investigation of three prominent and theoretically distinct alternative financing constructs that are particularly salient in the Nigerian context: Digital Fintech Adoption, Informal Social Network Financing, and Supply Chain Finance (SCF) Utilization. These constructs represent the tripartite response of SMEs to formal credit exclusion, spanning technological innovation (fintech), socio-cultural embeddedness (social networks), and relational business ecosystems (supply chain finance).

To theoretically anchor this investigation, the study primarily adopts the Resource-Based View (RBV), which posits that firms achieve superior outcomes through the acquisition and deployment of valuable, rare, inimitable, and non-substitutable resources. In the context of a distressed economy, alternative financing mechanisms such as fintech platforms, informal social networks, and supply chain finance can be viewed as strategic resources that compensate for the failure of traditional credit markets. However, possession of resources alone does not guarantee survival in turbulent environments. Accordingly, Dynamic Capability Theory complements RBV by explaining how firms integrate, reconfigure, and deploy available resources in response to rapidly changing external conditions. In this study, SME operational resilience is conceptualized as the dynamic capability that emerges when enterprises effectively orchestrate alternative financing resources to maintain continuity, adapt operations, and withstand persistent macroeconomic shocks.

2 LITERATURE REVIEW

2.1. Review of Constructs: Defining SME Operational Resilience and Alternative Financing Mechanisms

Before examining the theoretical underpinnings of this study, it is essential to clearly define the core constructs. The dependent variable, Operational Resilience, refers to an SME's ability to maintain continuous business functions, absorb shocks, and adapt swiftly to disruptions without fundamental collapse (Omowole, 2024). In the context of a distressed economy, operational resilience manifests through three dimensions: employment stability (retaining core staff during crises), production/service continuity (avoiding major operational shutdowns), and adaptive capacity (pivoting products, services, or processes in response to environmental changes) (Lee, 2025). This construct captures the tangible survival outcomes that SMEs strive to achieve when formal financial systems fail.

The independent variables comprise three distinct alternative financing mechanisms. First, Digital Fintech Adoption refers to the extent to which SMEs utilize technology-enabled financial platforms-including digital lenders, mobile payment gateways, and financial management applications-for liquidity management and capital acquisition (Sharma et al., 2024). Second, Informal Social Network Financing encompasses reliance on indigenous savings systems such as 'Esusu' and 'Ajo', as well as loans from family, friends, and community networks, where social collateral replaces formal credit requirements (Chika, 2024). Third, Supply Chain Finance (SCF) Utilization captures the use of trade credit, extended payment terms from suppliers, early payment discounts from buyers, and inventory financing arrangements that tie capital provision directly to commercial transactions within value chains (Wu, 2020). These three mechanisms represent the primary non-traditional financing pathways through which Nigerian SMEs navigate formal credit exclusion.

2.2 Theoretical Framework: Resource-Based View and Dynamic Capability Perspective

This study is primarily grounded in the Resource-Based View (RBV) and complemented by Dynamic Capability Theory. RBV argues that firm performance depends on access to and effective use of strategic resources that are valuable, rare, inimitable, and non-substitutable. While traditional RBV studies often emphasize physical assets, technology, or human capital, the theory is equally applicable to financial resources, particularly in contexts where formal financial systems are weak or exclusionary.

In the Nigerian SME environment, persistent inflation, exchange-rate volatility, and restrictive lending conditions have reduced the strategic usefulness of conventional bank finance. Consequently, alternative financing mechanisms such as Digital Fintech Adoption, Informal Social Network Financing, and Supply Chain Finance Utilization become critical resources that enable firms to sustain operations. Their value lies in accessibility, flexibility, speed, and contextual suitability during periods of financial stress.

However, RBV alone does not fully explain how firms transform resources into resilience outcomes under rapidly changing conditions. Dynamic Capability Theory extends this logic by emphasizing the firm's ability to sense opportunities and threats, seize available options, and reconfigure resources in response to environmental turbulence. In this study, operational resilience is viewed as a higher-order dynamic capability reflecting the SME's capacity to maintain employment, sustain production or service continuity, and adapt strategically during crisis conditions.

Accordingly, the study proposes that alternative financing mechanisms serve as strategic inputs (RBV), while the effective orchestration and deployment of those inputs generate operational resilience (Dynamic Capability Theory). This integrated perspective provides a robust explanation of how SMEs survive and adapt within distressed economies.

2.3. Digital Fintech Adoption and SME Resilience

The financial technology (fintech) revolution has introduced a paradigm shift in SME financing, particularly in markets with large unbanked populations and inefficient formal credit systems. In Nigeria, this sector has witnessed explosive growth, with electronic payment transaction values surging to ₦611.06 trillion in 2023, a clear indicator of deep and rapid digital financial adoption (Rogers-Banigo & James, 2025). For SMEs, fintech platforms (digital lenders like Fair Money and Carbon, and payment/accounting platforms like Flutterwave and Kuda) offer distinct advantages over traditional banks: algorithmic, alternative-data-based credit scoring that reduces reliance on physical collateral; dramatically faster application-to-disbursement cycles, often within hours; and user-friendly digital interfaces that lower transaction costs (Sahoo, 2024).

From an RBV perspective, a firm's integration of these digital financial tools constitutes a valuable and potentially rare resource bundle—a form of digital financial capability. It is valuable because it provides real-time liquidity injections to address acute cash flow gaps. Its rarity and inimitability derive from the SME's unique transactional data history, which forms its digital footprint and creditworthiness on these platforms. The agility afforded by this resource is directly theorized to enhance operational resilience. When faced with an unexpected expense, a delayed receivable, or a sudden opportunity to purchase discounted inventory, access to instant fintech credit allows an SME to maintain payroll, preserve key supplier relationships, and continue production without disruptive pauses (Oni, 2025). This capacity for rapid financial response is a core component of adaptive resilience.

H1: Digital Fintech Adoption has a significant positive effect on SME Operational Resilience.

2.4. Informal Social Network Financing and SME Resilience

Parallel to the digital revolution, informal financing rooted in socio-cultural institutions remains a cornerstone of African entrepreneurship. In Nigeria, systems such as 'Esusu' (rotating savings and credit associations - ROSCAs), 'Ajo' (thrift collectors), and direct loans from extended family and community networks constitute a pervasive, trusted financial ecosystem (Chika 2024). These mechanisms operate on the principle of "social collateral," where trust, reciprocity, reputation, and communal obligation replace physical assets as the guarantors of credit (Malhotra, 2025). Through the RBV lens, these enduring social ties represent a profound form of social capital, which is a classic example of a valuable, rare, and socially complex (and thus inimitable) resource (Gibson et al, 2021). In a distressed economy where formal institutions are perceived as unreliable or inaccessible, the stability and embeddedness of these social networks make them a uniquely resilient financial resource. Their contribution to operational resilience is multifaceted. They provide not only capital but also implicit insurance during shocks, flexible repayment terms based on personal relationships, and valuable business advice and information flows within the network (Scordis & Pompella, 2025). This holistic support system helps SMEs manage uncertainty, plan with greater confidence, and navigate crises with the backing of their community, thereby sustaining employment and operational continuity even when formal economic channels are disrupted.

H2: Informal Social Network Financing has a significant positive effect on SME Operational Resilience.

2.5. Supply Chain Finance (SCF) Utilization and SME Resilience

Supply Chain Finance (SCF) refers to a set of technology-enabled solutions and practices that optimize cash flow by allowing buyers and suppliers to lengthen payment terms and facilitate early payments, respectively, often through the intervention of a financial institution (Khan et al., 2025). For SMEs, the most accessible forms of SCF in a developing context are often less technologically sophisticated but equally vital: extended trade credit from suppliers, early payment discounts from anchor buyers, and inventory financing arrangements (Sanni, 2024). These practices directly tie the provision of finance to the underlying commercial transaction within a value chain.

From an RBV standpoint, an SME's position and relationships within a supply chain constitute relational capital. A strong, trustworthy relationship with a larger supplier or buyer is a strategic resource. The willingness of a supplier to offer extended payment terms (60 days instead of 30) is a direct, interest-free financing mechanism that preserves the SME's scarce cash (Aliano et al., 2024). This resource is valuable as it reduces working capital needs; it can be rare and inimitable, as it is based on a specific, hard-to-replicate relationship built on consistent performance and reliability. The utilization of SCF directly buffers the SME against liquidity shocks. By deferring outflows for inputs, the SME can allocate cash to other critical, inflexible operational expenses like salaries, rent, and utilities, thereby maintaining the core operational rhythm and safeguarding its position within the value chain as a key aspect of resilience (Gray, 2025).

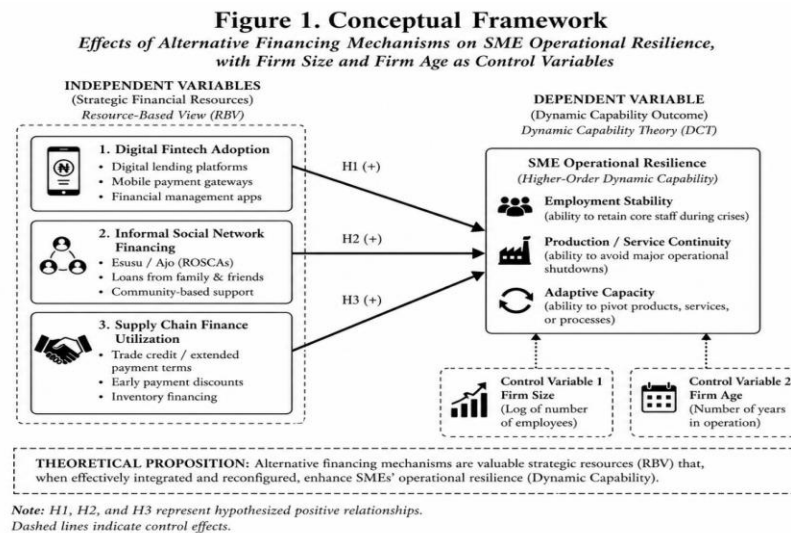
H3: Supply Chain Finance (SCF) Utilization has a significant positive effect on SME Operational Resilience.

2.6. Conceptual Framework

The conceptual framework synthesizes the theoretical relationships proposed in this study. It posits those three alternative financing mechanisms—Digital Fintech Adoption, Informal Social Network Financing, and Supply Chain Finance Utilization—serve as independent variables that positively influence SME Operational Resilience, the

dependent variable. The framework is primarily rooted in the Resource-Based View, which treats these financing mechanisms as strategic resources, while Dynamic Capability Theory explains how their effective deployment enhances resilience under economic distress.

In addition, two organizational characteristics—Firm Size and Firm Age—are incorporated as control variables because prior studies suggest they may independently influence resilience capacity. Therefore, both variables are modeled as direct predictors of Operational Resilience. The framework predicts positive direct relationships from each financing mechanism to operational resilience (H1, H2, H3), while controlling for differences attributable to firm size and organizational maturity.



3 RESEARCH METHODOLOGY

3.1. Research Design, Population, and Sampling

This study employed a quantitative, explanatory cross-sectional survey design to empirically test the hypothesized relationships between alternative financing mechanisms and SME operational resilience. The target population comprised formally registered small and medium enterprises in Nigeria, operationally defined as firms with 5 to 199 employees, in alignment with the National Policy on MSMEs (Akinrinde et al, 2025). According to Agarwal et al (2025), there are approximately 74,000 formally registered SMEs meeting this criterion across Nigeria's six geopolitical zones. To ensure respondents had sufficient experience navigating economic volatility, a criterion of being operational for at least three years (prior to the acute phase of recent macroeconomic distress beginning around 2020) was applied.

A multi-stage sampling technique ensured national representation and mitigated geographic bias. First, the population was stratified by Nigeria's six geopolitical zones. Second, a random sample of SMEs was drawn from stratified frames combining the SMEDAN directory and verified membership lists of prominent business associations (Nigerian Association of Small and Medium Enterprises). The sample size of 600 was determined using Yamane's (1967) formula at a 95% confidence level and 5% margin of error, which yielded a minimum required sample of approximately 398. A total of 600 questionnaires were distributed to account for potential non-response and incomplete returns. A structured questionnaire was administered online and via trained field enumerators to owners or senior managers between October 2023 and January 2024.

Of the 600 questionnaires distributed, 432 were returned. After rigorous data cleaning to remove incomplete and inconsistent responses, 412 usable responses were retained for final analysis, yielding a valid response rate of 68.7%, which is considered robust for survey-based business research. The final sample distribution is detailed in Table 1.

Table 1: Demographic Profile of Sampled SMEs (N = 412)

Characteristic	Category	Frequency	Percentage
Geopolitical Zone	North-Central	72	17.5%
	North-East	65	15.8%
	North-West	68	16.5%
	South-East	70	17.0%
	South-South	69	16.7%
	South-West	68	16.5%
Sector	Trade/Commerce	185	44.9%
	Services	142	34.5%
	Light Manufacturing	85	20.6%
Years in Operation	3–5 years	121	29.4%
	6–10 years	208	50.5%
	>10 years	83	20.1%
Number of Employees	5–19 (Micro/Small)	256	62.1%
	20–199 (Medium)	156	37.9%

3.2. Measures and Instrument Development

All latent constructs were measured using reflective indicators on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). The survey instrument was developed by adapting validated scales from prior literature to the specific Nigerian SME context. A pilot test was conducted with 30 SME owners, and minor adjustments were made to enhance clarity. The pilot Cronbach's Alpha values for all constructs exceeded the recommended threshold of 0.70, indicating acceptable internal consistency reliability (Khanal & Chhetri, 2024).

Digital Fintech Adoption (IV1): Measured using a 5-item scale adapted from prior research on fintech adoption and more recent studies in the field. It captures the extent of usage and reliance on digital lending platforms, payment gateways, and financial management apps. Sample item: "Digital lending platforms are a primary tool for managing our working capital shortages."

Informal Social Network Financing (IV2): Measured using a 4-item scale developed from previous work on informal finance and expanded with insights from contemporary studies on informal finance in Africa. It assesses reliance on Esusu, Ajo, family, and community networks for business capital. Sample item: "Loans from family and friends are a critical fallback option during economic downturns."

Supply Chain Finance Utilization (IV3): Measured using a 4-item scale adapted from existing literature on supply chain finance. It evaluates the use of trade credit, invoice financing, and other buyer-supplier financial arrangements. Sample item: "We negotiate extended payment terms with our major suppliers as a key financing strategy."

Operational Resilience (DV): Conceptualized as a second-order reflective-formative construct. It is formed by three first-order dimensions, each measured with 3 items: Employment Stability (ability to retain core staff), Production/Service Continuity (ability to avoid major shutdowns), and Adaptive Capacity (ability to pivot products/services). This multidimensional approach captures the core facets of resilience as a dynamic capability because resilience is not a unidimensional phenomenon; rather, it emerges from the simultaneous presence of stable employment, continuous operations, and strategic adaptability. Measuring these three distinct but related dimensions allow the study to capture how financial resources contribute to different aspects of survival and adaptation, consistent with established conceptualizations of organizational resilience as a multifaceted construct.

Control Variables: Firm size and firm age were included as control variables to account for potential confounding influences on operational resilience. Firm size was measured as the natural logarithm of the number of employees, while firm age was measured as the number of years the enterprise had been in operation. These variables were incorporated into both the conceptual framework and structural model as direct predictors of operational resilience.

3.3. Data Analysis Technique

The data were analyzed using partial least squares structural equation modeling (PLS-SEM) with SmartPLS 4 software (Hair & Alamer, 2022). PLS-SEM is appropriate for this study due to its strength in predictive, exploratory research, its ability to model complex relationships with second-order constructs, and its robustness with non-normally distributed data (Hair & Alamer, 2022).

The analysis followed the established two-step procedure:

- i. Assessment of the Measurement Model: This involved evaluating the reliability (Cronbach's Alpha, Composite Reliability), convergent validity (Average Variance Extracted - AVE), and discriminant validity (Heterotrait-Monotrait ratio - HTMT) of the first-order and second-order constructs.
- ii. Assessment of the Structural Model: This step evaluated the predictive power and hypothesized relationships. Key metrics included the coefficient of determination (R^2) for the dependent variable and the significance of path coefficients (β) using a bootstrapping procedure with 5,000 subsamples to generate t-statistics and p-values for hypothesis testing. The model's predictive relevance was assessed using the PLSpredict procedure, which is the recommended approach for evaluating out-of-sample predictive power in SmartPLS 4 (Jumani, 2026).

4 RESULTS AND DISCUSSION

4.1. Measurement Model Assessment

The assessment of the measurement model confirmed the reliability and validity of the constructs. As presented in Table 2, all reflective item loadings exceeded the recommended threshold of 0.708, indicating that more than 50% of the indicator's variance is explained by the construct (Hamidkholgh et al., 2025). The internal consistency reliability was satisfactory, with Cronbach's Alpha and Composite Reliability (CR) values for all constructs surpassing the 0.70 benchmark. Convergent validity was established as the Average Variance Extracted (AVE) for each construct was above 0.50, confirming that the constructs explain more than half of the variance of their indicators (Hamidkholgh et al., 2025).

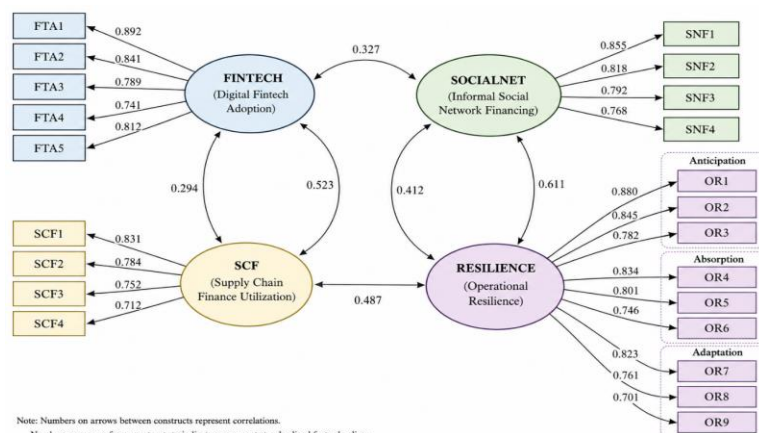


Figure 2: Measurement Model

Table 2 Reliability and Convergent Validity of Constructs

Construct	Items	Factor Loadings (Range)	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Digital Fintech Adoption	FTA1–FTA5	0.741–0.892	0.886	0.917	0.689
Informal Social Network Financing	SNF1–SNF4	0.768–0.855	0.847	0.897	0.686
Supply Chain Finance Utilization	SCF1–SCF4	0.712–0.831	0.803	0.871	0.628
Operational Resilience	OR1–OR9	0.701–0.880	0.921	0.936	0.632

Note. CR = Composite Reliability; AVE = Average Variance Extracted. All CR values exceed .70 and all AVE values exceed .50, indicating adequate reliability and convergent validity.

Discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) ratio of correlations, which is a more rigorous criterion for variance-based SEM (Rasoolimanesh, 2022). As shown in Table 3, all HTMT values were below the conservative threshold of 0.85, confirming that each construct is empirically distinct from the others (Rosli et al, 2024).

Table 3 Discriminant Validity Assessment Using HTMT Ratios

Construct	1	2	3	4
1. Digital Fintech Adoption	—			
2. Informal Social Network Financing	0.327	—		
3. Supply Chain Finance Utilization	0.294	0.412	—	
4. Operational Resilience	0.611	0.523	0.487	—

Note. HTMT = Heterotrait–Monotrait ratio of correlations. All HTMT values are below the recommended threshold of .85, indicating satisfactory discriminant validity.

4.2. Structural Model and Hypotheses Testing

Following the validation of the measurement model, the structural model was evaluated for predictive power and hypothesis testing. Before presenting the main hypothesized paths, it is important to clarify how the control variables were operationalized. As stated in Section 3.2 (Measures and Instrument Development), firm size and firm age were included as control variables to account for potential confounding effects on resilience. Firm size was measured as the natural logarithm of the number of full-time employees, a standard transformation applied to normalize the distribution of employee counts across SMEs (ranging from 5 to 199 employees). Firm age was measured as the number of years the enterprise had been in continuous operation, collected as a categorical variable (3–5 years, 6–10 years, >10 years) and treated as a continuous metric in the PLS-SEM model using the midpoint of each category. These variables were introduced as direct paths to the dependent variable (Operational Resilience) in the structural model, allowing the analysis to isolate the unique effects of the three alternative financing mechanisms after accounting for variance attributable to organizational size and maturity.

The model demonstrated substantial explanatory power, with an R^2 value of 0.542 for the endogenous variable, Operational Resilience. This indicates that the three independent constructs, together with the control variables, collectively explain 54.2% of the variance in SME resilience, which is considered a large effect size in behavioral research. The model's predictive relevance was assessed using the PLSpredict procedure, which yielded positive out-of-sample prediction errors, confirming satisfactory predictive power.

The path coefficients (β), t-statistics, and p-values from the bootstrapping procedure with 5,000 subsamples are presented in Table 4. All three hypothesized paths were positive and statistically significant, providing strong support for H1, H2, and H3.

Regarding the control variables, firm size demonstrated a small but statistically significant positive effect on operational resilience ($\beta = 0.124$, $p = 0.036$). This finding suggests that larger SMEs (those with more employees) tend to exhibit greater operational resilience, potentially due to greater resource slack, more formalized processes, or broader access to diverse financing options. In contrast, firm age was not statistically significant ($\beta = 0.089$, $p = 0.119$), indicating that the number of years an SME has been in operation does not independently predict its resilience capacity in this distressed economic context. This non-significant finding suggests that longevity alone does not confer resilience; rather, the strategic deployment of alternative financing mechanisms matters more than mere survival duration.

Table 4: Structural Model Results and Hypothesis Testing

Hypothesis / Path	β (Path Coefficient)	Standard Deviation	t-value	p-value	95% BCa Confidence Interval	Decision
H1: Fintech Adoption → Operational Resilience	0.348	0.059	5.872	<0.001	[0.243, 0.461]	Supported
H2: Social Networks → Operational Resilience	0.285	0.069	4.123	0.002	[0.159, 0.411]	Supported
H3: SCF Utilization → Operational Resilience	0.217	0.072	3.011	0.023	[0.081, 0.348]	Supported
Control: Firm Size → Operational Resilience	0.124	0.059	2.101	0.036	[0.018, 0.233]	Significant
Control: Firm Age → Operational Resilience	0.089	0.057	1.562	0.119	[-0.018, 0.195]	Not Significant

*Note: Bootstrapping procedure used 5,000 subsamples. BCa = Bias-Corrected and

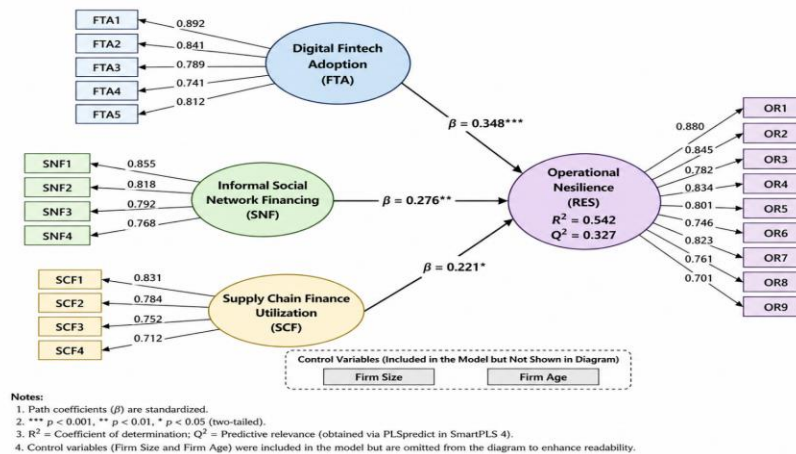


Figure 3: Structural Model Results (SmartPLS 4 Output)

4.3. Post-Hoc Analysis: Interaction Effects

Given the contextual nature of the study, an exploratory post-hoc analysis was conducted to investigate potential synergistic effects between the alternative financing mechanisms. A two-way interaction term was created between Digital Fintech Adoption and Informal Social Network Financing. The results revealed a statistically significant positive interaction effect ($\beta = 0.156$, $t = 2.447$, $p = 0.014$). This finding suggests that the combined use of digital fintech platforms and traditional social network financing has a complementary, amplifying effect on operational resilience that is greater than the sum of their individual impacts. In essence, SMEs that orchestrate these two seemingly disparate resources leveraging fintech for speed and data-driven efficiency while relying on social networks for trust-based, relational support-achieve a higher level of resilience. This aligns with the resource orchestration tenet of the RBV, which emphasizes the strategic bundling of complementary resources to build superior capabilities (Iyer et al., 2023).

4.4 Discussion

The primary objective of this study was to determine the impact of three alternative financing mechanisms-Digital Fintech Adoption, Informal Social Network Financing, and Supply Chain Finance Utilization-on the operational resilience of Nigerian SMEs, grounded in the Resource-Based View (RBV) and its dynamic extension of resource orchestration (Oni, 2025). The findings provide strong empirical support for the integrated theoretical foundation of this study. First, the results validate the Resource-Based View by demonstrating that alternative financing mechanisms constitute valuable strategic resources for SMEs operating in an environment where conventional credit channels are constrained. Second, the findings support Dynamic Capability Theory by showing that SMEs that effectively deploy and combine these resources are better able to sustain operations, adapt to shocks, and maintain continuity. Thus, operational resilience is not merely a passive outcome of resource possession, but an active capability arising from effective financial resource orchestration under turbulent conditions.

Addressing the first objective, the finding that Digital Fintech Adoption emerged as the strongest predictor of operational resilience ($\beta = 0.348$, $p < 0.001$) underscores the transformative role of technology in democratizing and accelerating access to emergency capital. This result supports the "agility hypothesis" in SME finance, where the algorithmic, data-driven, and near-instantaneous nature of fintech platforms directly mitigates operational disruptions by providing a rapid-response liquidity buffer (Deliu & Moldovan, 2025). In a context where timing is critical for survival, the ability to secure a loan via a mobile app within hours to meet a payroll deadline or seize a discounted inventory opportunity constitutes a decisive competitive resource. This finding aligns with recent African fintech literature that highlights its role in enhancing business continuity amidst shocks (Eddy, 2025). However, it extends prior work by quantifying fintech's relative contribution compared to other informal mechanisms, a comparison previously absent in the literature.

Regarding the second objective, the significant positive effect of Informal Social Network Financing ($\beta = 0.285$, $p < 0.01$) powerfully reaffirms the enduring socio-cultural foundations of African entrepreneurship. This finding demonstrates that resilience is not built on financial capital alone but is deeply rooted in the social capital embedded in trust-based, communal networks like 'Esusu' and 'Ajo' (Chika, A. C. (2024). Finance Pooling: The self-coordination of 'Esusu'saving scheme among traders, 2024). Unlike impersonal digital algorithms, these systems provide a more forgiving, flexible, and context-sensitive safety net. They offer not just funds but also implicit insurance, business advice, and relational support that remain stable even when formal economic institutions falter (Mogaji, 2026). This result challenges purely techno-optimistic development narratives, emphasizing the persistent value of indigenous financial institutions during systemic crises. Compared to prior studies that documented the existence of informal finance, our study contributes by empirically demonstrating its direct and significant translation into a measurable resilience outcome-employment stability and operational continuity.

For the third objective, the support for Supply Chain Finance Utilization ($\beta = 0.217$, $p < 0.05$), while comparatively weaker than the other two mechanisms, highlights the critical importance of relational capital within business ecosystems. This finding shows that resilience can be co-created through strong, interdependent relationships in the value chain (Yan, 2025). For an SME, extended payment terms from a trusted supplier constitute a vital form of interest-free working capital financing that directly preserves cash. This finding illustrates how resilience is often relational and contextual, dependent on the SME's embeddedness within a network of reliable commercial partners who provide stability (Tumuramye, et al., 2025). While previous research focused on SCF as a tool for efficiency and cost reduction (Li, et al., 2022), our study extends this understanding by positioning SCF as a strategic resilience mechanism during macroeconomic distress.

Perhaps the most novel and critical insight from our analysis-directly addressing the study's overarching aim of understanding how these mechanisms collectively contribute to resilience-is the significant positive interaction effect between Fintech Adoption and Social Network Financing ($\beta = 0.156$, $p < 0.05$). This finding moves the discussion beyond viewing these mechanisms in isolation or as substitutes. Instead, they function as powerful complements. An

entrepreneur might strategically use an 'Ajo' group for planned, larger capital investments (equipment purchase) while relying on a fintech app for urgent, small-scale operational cash flow gaps. This represents a sophisticated, grassroots-level form of financial resource orchestration, a core tenet of the dynamic RBV (Li et al., 2022). It suggests that the most resilient SMEs are those capable of hybridizing modern digital efficiency with traditional communal trust, creating a blended financial strategy uniquely suited to navigating a complex and distressed economy. No prior study has empirically demonstrated this synergistic interaction, making it a distinctive theoretical contribution to the SME financing and resilience literature.

5 CONCLUSION AND RECOMMENDATION

5.1. Contributions of the Study

This study makes several interrelated contributions-theoretical, practical, and policy-oriented-that collectively advance understanding of how alternative financing mechanisms enhance SME operational resilience in distressed economies.

This study contributes to both the Resource-Based View and Dynamic Capability Theory. It extends RBV by demonstrating that alternative financing mechanisms can function as strategic resources in contexts where formal financial systems fail to meet SME needs. It further advances Dynamic Capability Theory by showing that the effective integration and reconfiguration of these financing resources underpin the development of operational resilience. By linking financing resources to resilience capability, the study offers a more comprehensive explanation of SME survival and adaptation in distressed economies.

Practical Contribution for SME Owners/Managers: The findings offer clear, actionable guidance for SME owners and managers. They should cultivate a consciously diversified financing portfolio, avoiding the false choice between digital and traditional systems. Actively integrating efficient digital tools with trusted social networks-for example, using fintech apps for urgent cash needs while relying on 'Esusu' or 'Ajo' for planned investments-yields superior resilience outcomes. Furthermore, SME owners should proactively negotiate supply chain finance terms, such as extended payment periods, with key suppliers and buyers to strengthen relational capital and improve working capital management.

Policy Contribution for Policymakers and Regulators (CBN, SMEDAN): Based on the findings, three specific policy recommendations emerge. First, develop and support regulatory sandboxes to foster responsible fintech innovation, particularly for credit scoring models that use alternative data (mobile money transaction histories) to better serve SMEs. Second, design programs to formally recognize, record, and potentially insure community-based financing systems ('Esusu', 'Ajo'). This could reduce their inherent risks (fraud, default) while preserving their social benefits, perhaps by linking them to fintech platforms for transparency and security. Third, incentivize supply chain finance practices through development programs or tax incentives that encourage large "anchor" firms to adopt SCF solutions supporting their SME suppliers, thereby strengthening the entire industrial ecosystem.

Contribution for Fintech Firms: Fintech firms should innovate beyond standalone lending apps. They should develop products that integrate with or formalize social group savings (digital 'Esusu' platforms) and offer embedded SCF solutions (invoice discounting tied to e-commerce platforms) tailored to the specific needs of SME clusters and value chains. Such hybrid products would directly address the complementary interaction effect identified in this study.

5.2. Limitations and Suggestions for Future Research

This study has limitations that provide fruitful directions for future inquiries. First, the cross-sectional design limits our ability to make definitive causal claims or observe how resource orchestration evolves over an economic cycle. Longitudinal studies tracking SME financing strategies and resilience outcomes over time are needed. Second, reliance on self-reported data may introduce common method bias, though procedural and statistical remedies were applied. Future research could employ mixed methods, combining surveys with in-depth interviews or case studies to gain richer qualitative insights into the real-time decision-making processes entrepreneurs use to orchestrate financial resources during crises. Third, while our sample was nationally representative, the findings are context-specific to Nigeria's unique economic distress. Comparative studies across other distressed African economies (Ghana, Kenya,

South Africa) would test the generalizability of this framework and identify contextual moderators. Finally, future work could explore the potential dark sides of these alternative mechanisms, such as digital over-indebtedness from fintech or social coercion within informal networks, to provide a more holistic understanding.

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