Effect of Supplier Relationship Management on the Supply Chain Resilience of Nestlé Nigeria Plc.

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DOI: https://doi.org/10.47772/IJRISS.2026.10100241

Received: 14 January 2026; Accepted: 19 January 2026; Published: 02 February 2026

ABSTRACT

The resilience of supply chains in multinational FMCG firms like Nestlé Nigeria Plc is critical for operational continuity amid Nigeria's volatile economic and infrastructural challenges. Supplier Relationship Management (SRM) practices, encompassing trust, communication, collaboration, information sharing, and risk management, are strategic levers for enhancing resilience. This study examined the effect of SRM practices on the supply chain resilience of Nestlé Nigeria Plc, measured through order fulfillment speed, inventory turnover ratio, and supply chain disruption recovery time. A cross-sectional survey design was adopted, with data collected from 269 respondents across 394 purposively sampled managerial staff using a structured questionnaire. Partial Least Squares Structural Equation Modeling (PLS-SEM) analyzed the data. Results showed that Supplier Trust ($\beta = 0.278$, $p = 0.000$), Supplier Communication ($\beta = 0.318$, $p = 0.000$), and Supplier Risk Management ($\beta = 0.165$, $p = 0.029$) significantly and positively influence supply chain resilience, while Supplier Collaboration ($\beta = 0.103$, $p = 0.070$) and Supplier Information Sharing ($\beta = 0.104$, $p = 0.091$) had no significant effect, collectively explaining 78.3% of the variance in resilience ($R^2 = 0.783$). Supplier Communication exerted the strongest effect, followed by Supplier Trust. The study concluded that the operational stability of Nestlé Nigeria Plc relies heavily on strong relational factors and mandatory risk mitigation over formal data transparency. Consequently, it recommends the prioritization of trust-building long-term contracts, real-time digital communication platforms, and dual-sourcing risk policies, alongside internal audits to address structural barriers hindering effective information exchange.

Keywords: Supplier Trust, Supplier Communication, Supplier Collaboration, Supplier Information Sharing, Supplier Risk Management, Supply Chain Resilience.

INTRODUCTION

The global economy is increasingly characterized by volatility and uncertainty, making supply chain resilience a major strategic imperative for multinational corporations worldwide (Asthana, 2024; Wieland & Durach, 2021). Supply chain resilience is a system's capacity to anticipate, withstand, adapt to, and recover from disruptions like economic shocks or geopolitical events, while maintaining the continuous flow of goods and minimizing operational losses (Asthana (2024). Firms in top global economies, such as those in the United States and Japan, have long emphasized relational practices to foster this resilience. For example, in the United States FMCG sector, robust SRM practices like collaborative contingency planning and risk-sharing are essential to reduce vulnerabilities and ensure stable supply chains (Rashid et al., 2025). Similarly, post-disaster analyses in Japan, such as the 2011 earthquake, showed that firms using strategic partnerships and supplier diversification achieved faster recovery times compared to their less-collaborative counterparts (Carvalho et al., 2016). This global perspective establishes that resilience is a dynamic capability, requiring proactive anticipation and rapid restoration of performance, encompassing proactive risk mitigation and adaptive containment (Kamalahmadi & Parast, 2016). This global necessity for resilience is directly linked to the sophistication of supplier relationship management. Supplier relationship management is viewed not merely as a procurement function, but as a

strategic approach to nurture partnerships, enhance collaboration, and create mutual value, extending beyond transactional exchanges (Asthana, 2024; Emon et al., 2024). In this study, the effectiveness of SRM is determined by the relational assets it cultivates, such as supplier trust, communication, collaboration, information sharing, and risk management, which serve as the operational tools to transform supplier networks into resilient systems.

The drive for supply chain resilience is particularly pronounced in developing economies and Africa, where firms face compounded risks, including volatile currency fluctuations, poor infrastructure, political instability, and inconsistent regulatory environments (Alsmairat & Al-Shboul, 2023; Guoli et al., 2023). In the Kenyan food and beverage sector, for instance, SRM practices such as strategic alliances and supply chain collaboration have been found to positively influence organizational performance, indicating their utility in managing localized disruptions (Mwangi et al., 2022; Muricho & Muli, 2021). Similarly, Owich (2023) demonstrated in Kenyan county hospitals that supplier risk management practices, like dual sourcing, significantly enhance supply chain performance by mitigating hazards such as drug shortages. In Nigeria, the operating environment is characterized by escalating uncertainties that heighten the importance of resilience, as these disruptions cause production lead-time increases and raw material shortages (Asif et al., 2019). For a prominent player like Nestlé Nigeria Plc, which relies heavily on both local and international sourcing to maintain its production and market leadership, SRM is not optional; it is essential for achieving continuous operations and mitigating financial exposure, such as forex volatility (Elhusseini, 2025).

To investigate this relationship, this study focused on the supplier relationship management practices as independent variables and Supply Chain Resilience as the dependent variable, measured through specific, objective operational metrics: order fulfillment speed, inventory turnover ratio (ITR), and supply chain disruption recovery time. The independent variables are detailed as follows: Supplier Trust is a relational construct defined by Rashid et al. (2025) as the belief in a supplier's reliability, integrity, and benevolence, fostering mutual dependence and risk-sharing in partnerships. Its significance lies in its ability to enhance the firm’s anticipatory capability and accelerate crisis response, as high trust enables increased information sharing and joint problem-solving during disruptions (Taha et al., 2024).

Supplier Communication is a practice described by Johnson (2025) as the proactive, timely exchange of information between supply chain partners to share risks and coordinate responses. Its significance is found in its role as the operational lubricant for resilience, as high-quality communication mediates the effects of relational commitment on SCR, allowing for swift decision-making and coordinated mitigation during crises (Can Saglam et al., 2022). Supplier Collaboration is a strategic practice defined by Ladipo et al. (2022) as a partnership process wherein at least two separate parties collaborate to plan and execute supply chain activities, with the aim of achieving shared objectives and mutual benefits. Its significance is evidenced by its ability to enhance the supply chain's anticipatory and recovery capabilities through joint planning, resource sharing, and risk mitigation, ensuring rapid adaptation during shocks (Bhaskara et al., 2023; Ochieng, 2018). Supplier Information Sharing is a practice Sarfo et al. (2025) defined as the exchange of critical data like inventory levels, production schedules, and demand forecasts among supply chain partners to enable coordinated responses. Its significance is paramount as it directly augments operational efficiency and responsiveness, improving the Inventory Turnover Ratio and reducing the Disruption Recovery Time by mitigating the bullwhip effect and providing instant visibility (Meyer et al., 2021; Tarigan et al., 2024).

Supplier Risk Management is a proactive practice described by Ideson (2024) as the systematic identification, assessment, mitigation, and monitoring of risks from third-party providers to minimize impacts on operations, finances, and reputation. Its significance rests on its direct capacity to strengthen the supply chain’s preparatory ability through strategies like diversification and dual sourcing, ensuring Nestlé can reconfigure operations rapidly when facing a threat (Ali et al., 2023; McAdoo, 2025). The escalating frequency and severity of global and local disruptions underscored the necessity of understanding the precise effect of these SRM dimensions on the measurable resilience of industry leaders. This study, therefore, aims to provide empirical evidence, anchored in the specific operational realities of Nestlé Nigeria Plc, to determine how strategic investments in supplier relationships translate into superior order fulfillment speed, optimal inventory turnover ratio, and minimal supply chain disruption recovery time.

Statement Of the Problem

Despite the recognised global importance of Supply Chain Resilience (SCR) for business continuity, firms, particularly those operating in challenging environments like Nigeria, continue to face persistent and severe disruptions, resulting in substantial operational and financial setbacks (Asif et al., 2019; Obinna, 2024). Nestlé Nigeria Plc, as a major Fast-Moving Consumer Goods (FMCG) manufacturer, operates under continuous pressure from factors such as foreign exchange volatility, unpredictable energy supply (infrastructure deficits), and raw material supply inconsistencies, all of which threaten its operational stability and profitability. These challenges manifest directly as elevated operational costs, delays in production schedules, and, consequently, reduced capacity to meet market demand swiftly. Empirically, while the individual components of Supplier Relationship Management (SRM) such as Supplier Trust, Communication, Collaboration, Information Sharing, and Risk Management are theoretically linked to resilience, there is a scarcity of robust, firm-specific evidence, particularly within the Nigerian context, that quantifies the precise effect of these relational practices on measurable resilience outcomes (Oyewole et al., 2024).

The core problem is that the current body of literature presents mixed, or indirect, findings that fail to offer actionable guidance for Nigerian manufacturers. For instance, while global research strongly emphasizes the value of relational practices for enhancing resilience (Taha et al., 2024; Sarfo et al., 2025), one prominent study found information sharing to be statistically insignificant for profitability in Nigerian FMCGs (Disu & Dogo, 2025). This discrepancy creates confusion about which specific SRM investments genuinely drive operational stability in this local environment. Furthermore, studies often measure resilience broadly or focus solely on financial performance, neglecting the direct, operational metrics that Nestlé uses to evaluate supply chain health. Specifically, there is an absence of evidence showing how each of the five investigated SRM dimensions impacts the firm's order fulfillment speed, optimises its inventory turnover ratio, and minimises its supply chain disruption recovery time.

This research, therefore, is motivated by the urgent need to resolve this empirical ambiguity and bridge the gap between global theory and local operational reality. This gap leaves managers at Nestlé Nigeria Plc without clear, empirically validated guidance on which SRM practice yields the greatest return in improving its measured resilience outcomes. Without determining these specific, quantifiable relationships, the firm risks misallocating scarce resources on SRM initiatives that do not effectively fortify its supply chain against the distinct volatilities of the Nigerian market, thereby continuing to suffer preventable losses in speed and efficiency. Therefore, this research is necessary to provide contextspecific, quantifiable evidence to inform strategic decision-making and enhance the operational resilience of Nestlé Nigeria Plc. The objectives guiding this study are as follows:

i. Determine the effect of Supplier Trust on the supply chain resilience of Nestlé Nigeria Plc.

ii. Evaluate the effect of Supplier Communication on the supply chain resilience of Nestlé Nigeria Plc.

iii. Assess the effect of Supplier Collaboration on the supply chain resilience of Nestlé Nigeria Plc.

iv. Examine the effect of Supplier Information Sharing on the supply chain resilience of Nestlé Nigeria Plc.

v. Investigate the effect of Supplier Risk Management on the supply chain resilience of Nestlé Nigeria Plc.

The null hypotheses for the study are as follows:

H_{01}: Supplier Trust has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

H_{02}: Supplier Communication has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

H_{03}: Supplier Collaboration has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

H_{04}: Supplier Information Sharing has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

H_{05}: Supplier Risk Management has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

LITERATURE REVIEW

Conceptual Review: Supply Chain Resilience

Supply Chain Resilience is a system's dynamic capacity to anticipate, withstand, adapt to, and rapidly recover from major internal or external disruptions (Asthana, 2024; Kamalahmadi & Parast, 2016). It goes beyond merely absorbing shocks; it emphasizes minimizing operational losses and quickly restoring normal functions, often by leveraging disruptions for competitive advantage (Aljawazneh, 2025; Nikookar, 2024). For Nestlé Nigeria Plc, resilience is measured by three objective outcomes: the efficiency of its Order Fulfillment Speed (Zaied et al., 2016), the health of its inventory management via the Inventory Turnover Ratio (Kwak, 2019), and its ability to quickly stabilize operations, defined as Supply Chain Disruption Recovery Time (Bateh, 2024).

Supplier Relationship Management (SRM)

Supplier Relationship Management (SRM) is the strategic oversight of interactions with key suppliers, aiming to unlock mutual value and bolster supply chain resilience (Grant, 2024). Defined as the approach to developing strategic partnerships, SRM shifts from transactional exchanges to a collaborative model, recognizing suppliers as extensions of the firm's value chain (Asthana, 2024; Emon et al., 2024). Core elements include strategic coordination, trust-building (Obinna, 2024), and robust information flow (Inuwa et al., 2023). Robust SRM practices contribute directly to Supply Chain Resilience (SCR) , particularly in volatile markets like Nigeria (Mwangi et al., 2022). SRM facilitates risk mitigation through diversification and redundancy, reducing reliance on single sources (Obinna, 2024), and enables intentional local procurement to bolster operational stability against foreign exchange risks (Elhusseini, 2025). Furthermore, strong, trust-based relationships enhance the speed of response and recovery, cultivating shared understanding and efficiency (Emon et al., 2024). SRM ensures that Nestlé Nigeria Plc maintains consistent material flow, a non-negotiable requirement in a complex environment (Inuwa et al., 2023). SRM dimensions adopted for this study are discussed below:

Supplier Trust (SPTR)

Supplier Trust is the confidence a buying firm places in its supplier's competence, reliability, and willingness to act with integrity (Rashid et al., 2025; Abdallah et al., 2017). It functions as a strategic governance mechanism that allows the buyer to accept vulnerability based on the belief that the partner will act in good faith, especially during crisis (Abdallah et al., 2017). High trust is foundational because it enables increased transparency, informal resource-sharing, and joint problem-solving, which accelerates crisis response and strengthens the firm's anticipatory capability (Taha et al., 2024; Faruquee et al., 2021).

Supplier Communication (SPCM)

Supplier Communication is the strategic, high-quality flow of formalized and informal information between partners, including proactive dialogues, performance signals, and real-time alerts (Johnson, 2025; Saglam et al., 2022). Its essence lies in the information's accuracy, credibility, and timeliness, which serves as the operational lubricant for SRM (Saglam et al., 2022). Effective communication is vital because it enhances the supply chain's anticipatory capability by allowing for coordinated risk-sharing and swift conveyance of new information during volatile periods, thereby facilitating joint conflict resolution and adaptive recovery (Kędzia, 2024; Patil & Shafighi, 2022).

Supplier Collaboration (SPCL)

Supplier Collaboration is a strategic partnership characterized by a willingness to jointly plan, pool resources, share risks, and align goals for mutual benefit (Ladipo et al., 2022; Cooper, 2024). The core of collaboration is the continuous effort and formal commitment to modifying individual operations to optimize the entire supply chain system (Wu et al., 2025). This practice is pivotal because it enhances both anticipatory preparedness and response capability by enabling joint planning, shared forecasting, and rapid resource leveraging during a crisis, ensuring long-term stability and adaptation (Bhaskara et al., 2023; Ekpudu et al., 2024).

Supplier Information Sharing (SPIS)

Supplier Information Sharing is the structured, bidirectional exchange of specific operational and strategic data, such as real-time inventory levels, demand forecasts, and performance metrics (Sarfo et al., 2025; Tarigan et al., 2024). This practice is paramount as it creates a shared, objective view of the supply chain state, which reduces information asymmetry and the compounding "bullwhip effect" of demand variation (Meyer et al., 2021). By enabling joint decision-making and efficient resource coordination, information sharing directly augments operational efficiency and flexibility, leading to improved inventory control and faster response times (Huo et al., 2020; Letunovska et al., 2025).

Supplier Risk Management (SPRM)

Supplier Risk Management is the systematic, proactive process of identifying, assessing, mitigating, and monitoring potential risks and vulnerabilities posed by suppliers (McAdoo, 2025; Ideson, 2024). It encompasses strategies like supplier diversification, dual sourcing, and continuous monitoring of financial or compliance risks, extending visibility to sub-tier suppliers (Alawiye et al., 2024; Owich, 2023). Its significance lies in its capacity to strengthen the firm's preparatory ability, allowing Nestlé to focus mitigation efforts on high-impact areas and reconfigure its supply base rapidly when facing threats like geopolitical or economic volatility (Ali et al., 2023; Nel, 2024).

Empirical Review

Supplier Trust And Supply Chain Resilience

Empirical investigations consistently underscored supplier trust as a pivotal driver of supply chain resilience, particularly in volatile contexts. Oyewole et al. (2024), examining Nigerian manufacturers including Nestlé Nigeria Plc, demonstrated through PLS-SEM that SRM practices, notably trust, significantly enhanced performance (β=.611 for supplier development, p=.000), with IT partially mediating disruption minimization via real-time tracking. Similarly, Yang et al. (2022) surveyed 351 Chinese manufacturing leaders during COVID-19, revealing trust's strong positive influence on recovery capability (β=0.574, p<.001) through information sharing, affirming relational governance under crisis. Rashid et al. (2025) extended this in the U.S. FMCG sector with 409 respondents, confirming supplier trust directly bolstered resilience (β=0.314, p<.001) and mediated sustainable outcomes, emphasizing dependability and shared interests.

In healthcare and retail, trust's integrative role persists. Abdallah et al. (2017) found in Jordanian hospitals that trust enhanced performance via supplier integration, while Taha et al. (2024) showed in Jordanian retail that although supplier development lacked direct resilience impact, it significantly built trust, which mediated all paths to resilience. However, Faruquee et al. (2021) challenged trust's indispensability, arguing digital transformation could substitute relational mechanisms in UK/U.S. manufacturing yet their regression analysis reaffirmed trust's necessity for joint problem-solving. Synthesizing global evidence, Obinna (2024) highlighted trust's role in enabling transparency and agile responses, though limited by secondary data. Ahistasari et al. (2023) validated bidirectional trust indicators in an Indonesian service dyad, rating mutual satisfaction highly. Collectively, these studies affirm trust's robust, contextually nuanced effect on resilience strongest when paired with communication and technology but reveal gaps in Nigeria-specific, longitudinal validation beyond Nestlé's operational ecosystem.

Supplier Communication and Supply Chain Resilience

Empirical research consistently affirmed supplier communication as a vital enabler of supply chain resilience (SCR), facilitating timely coordination and adaptive responses amid disruptions. Johnson (2025) drew from thematic analysis of 33 global professionals' interviews, highlighting proactive, transparent exchanges supported by compatible technologies as critical for swift decision-making during crises like COVID-19, though interoperability challenges persisted. Saglam et al. (2022) reinforced this quantitatively via PLS-SEM on Turkish executives, establishing communication quality as the paramount direct antecedent of SCR, mediating relational

commitment and reciprocity while linking to superior risk management performance under social exchange theory.

Delving into performance systems, Maestrini et al. (2018) employed case studies across automotive tiers, identifying transparent formal modes that triggered proactive supplier reactions, enhancing trust and efficiency per Signalling Theory. In product development, Kędzia (2024) surveyed 500 Polish firms with SEM, revealing communication during supplier involvement augmented flexibility and performance but yielded mixed resilience effects, as it reduced redundancy without unequivocal gains. Owusu et al. (2025) analyzed 227 Ghanaian healthcare responses through SmartPLS, showing communication-embedded competencies indirectly boosted performance fully via SCR, with internal integration moderating outcomes. Li et al. (2023) applied media synchronicity theory to 200 Chinese manufacturers, demonstrating lean operational and rich task communications directly elevated delivery and flexibility, indirectly financial metrics, yet vision-rich modes occasionally impeded efficiency across clusters.

Supplier Collaboration And Supply Chain Resilience

Empirical inquiries into supplier collaboration revealed its pivotal yet contextually variable role in fostering supply chain resilience (SCR), often amplifying adaptability through shared resources and risk mitigation. Jones (2025) synthesized 45 global studies via NVivo thematic analysis, underscoring collaboration's contribution to resilience via joint risk-sharing, diversification, and digital visibility, countering disruptions like COVID-19—though lacking primary data for Nigeria-specific firms. Mwangi et al. (2022) surveyed 189 Kenyan food-beverage officers, finding collaboration strongly correlated with performance ($r=.783$) and explaining substantial variance ($R^2=62.6\%$), via strategic alliances; yet focused on efficiency over recovery metrics.

In Bangladesh, Emon et al. (2024) regressed 270 responses, confirming collaboration's significant costefficiency impact ($\beta=.275$, $p=.002$), advocating enduring partnerships in emerging markets despite convenience sampling biases. Cinti et al. (2024) abductively analyzed eight Italian SMEs across crises, revealing trust-infused collaborative interdependencies enabled structural adaptations and temporary reorganizing, per IMP theory, though limited to small-scale European contexts. Muricho and Muli (2021) examined 100 Kenyan respondents, affirming collaboration's positive influence on food-firm performance alongside agility and integration, with low explained variance ($R^2=23.8\%$) signaling unmodeled factors. Singh (2025) applied PLS-SEM to multi-industry surveys, demonstrating collaboration—bolstered by data analytics and flexibility enhanced SCR performance, moderated by dynamism; self-reported measures risked bias. Wu et al. (2025) modeled 336 Chinese firms, showing supply chain orientation and strategic purchasing drove collaboration (moderated by supply-base focus), yielding competitive edges, yet cross-sectional design constrained causality.

Supplier Information Sharing And Supply Chain Resilience

Empirical evidence on supplier information sharing revealed its nuanced, often mediated or conditional role in bolstering supply chain resilience (SCR), with effects varying by context, technology, and integration depth. Qazi et al. (2024) applied PLS-SEM to 202 Pakistani professionals, demonstrating supplier relationships encompassing sharing significantly enhanced adaptability and recovery ($\beta=0.437$, $p<0.001$), fully mediating organizational performance gains via stakeholder theory. Huo et al. (2020) surveyed 213 Chinese manufacturers, finding sharing fostered supplier-customer learning, internally amplifying flexibility performance through moderated mediation under absorptive capacity.

In rural Ghana, Sarfo et al. (2025) modeled 287 cashew firms, confirming sharing indirectly boosted resilience via supplier network responsiveness ($\beta=0.201$, $p<0.01$), advocating digital infrastructure. Meyer et al. (2021) thematically analyzed South African retail interviews, highlighting timely sharing enabled 24-hour disruption detection and cost-efficient recovery through visibility and velocity. Gu et al. (2021) differentiated IT modes among 206 firms, showing explorative sharing with suppliers uniquely built resilience, per information processing theory. Conversely, Disu and Dogo (2025) regressed 314 Nigerian FMCG responses, revealing sharing's insignificant profitability impact ($\beta=-0.102$, $p=0.193$) amid warehousing and technology dominance suggesting relational overrides in volatile markets like Nestlé Nigeria Plc. Seif and Jafari (2025) found analytics-

driven sharing improved Swedish SCR but negatively moderated by over-integration. Mehmood et al. (2024) moderated Chinese SME paths, with sharing amplifying innovation-mediated resilience-performance links.

Tarigan et al. (2024) linked ERP-enabled sharing to East Java resilience via purchasing flexibility (β=0.166). Chauhan and Kushwah (2025) correlated Indian practices positively with agility, while Dhone (2025) regressed urban quick-commerce data, indirectly tying sharing-embedded partnerships to performance. Collectively, sharing emerges potent when proactive and tech-supported but insignificant or dampened in data-siloed, centralized Nigerian FMCG contexts, urging audits for latent potential.

Supplier Risk Management And Supply Chain Resilience

Owich (2023) regressed data from 81 Kenyan health-sector staff, confirming SRM practices like dual sourcing significantly enhanced performance (β=0.521, $p<0.05$), mitigating shortages via contingency planning. Nel (2024) contrasted 221 South African firms via t-tests, revealing pre-COVID SRM-enabled entities outperformed others in agility, redundancy, and collaboration, accelerating recovery from upstream and demand shocks. Alawiye et al. (2024) analyzed U.S. multinationals through mixed-methods cases, showing diversified partnerships reduced incidents (e.g., Apple: 23 to 10, 2020–2024), fostering visibility. Keswani and Vlachos (2022) synthesized 125 studies thematically, affirming SRM diminished vulnerabilities via trust, flexibility, and digital tools like IoT for velocity.

In Sri Lanka, Silva et al. (2023) applied PLS-SEM to 89 apparel-retail firms, finding risk avoidance and acceptance boosted performance, while monitoring-based mitigation yielded insignificant gains collaboration proved retail-specific. Arif et al. (2021) surveyed 200 Pakistani energy professionals, demonstrating collaboration positively influenced outcomes (r=.548), partially mediated by risk capabilities (R^2=2.9%–18.9%).

THEORETICAL FRAMEWORK

The underpinning theory for this study is the Resource Dependence Theory (RDT), which was propounded by Pfeffer and Salancik in 1978. RDT suggests that organizations depend on external resources, particularly suppliers, to fulfill their operational needs, and this dependency shapes the nature of the relationships between organizations and their suppliers. The theory emphasizes that organizations must manage these dependencies through effective communication, collaboration, and trust to mitigate risks and ensure continuous supply chain operations. In the context of this study, the theory explains how Nestlé Nigeria Plc's Supplier Relationship Management (SRM) practices, such as supplier trust, collaboration, and information sharing, can reduce supply chain vulnerabilities and enhance resilience.

The strength of RDT lies in its focus on inter-organizational relationships and its applicability across industries facing resource interdependencies. It explains how firms engage with suppliers to secure essential resources, mitigate risks, and enhance their operational capabilities. This is particularly relevant for Nestlé Nigeria Plc, which operates in a volatile environment where disruptions such as supply shortages, geopolitical instability, and economic fluctuations are common. By fostering strong supplier relationships, Nestlé can reduce its vulnerability to these disruptions and strengthen its resilience.

However, RDT has been criticized for focusing primarily on resource acquisition and neglecting other aspects of organizational behavior, such as innovation and long-term strategic goals (Drees & Heugens, 2013). Despite these criticisms, RDT remains a useful lens to analyze SRM's impact on supply chain resilience because it highlights the strategic management of dependencies as key to ensuring supply continuity.

In this study, RDT explains how SRM practices, such as building trust, sharing information, and collaborating with suppliers, can enhance the resilience of Nestlé's supply chain by reducing risks, improving coordination, and enabling faster recovery from disruptions (Pfeffer & Salancik, 1978; Ivens et al., 2020). This theory underpins the study by providing a framework for understanding the vital role of supplier relationships in managing dependencies, ensuring resource availability, and enhancing overall supply chain resilience.

METHODOLOGY

This study adopted a cross-sectional survey design to examine the effect of Supplier Relationship Management practices on the supply chain resilience of Nestlé Nigeria Plc. A cross-sectional survey was considered suitable because it allowed for the collection of standardized data from a large number of managerial personnel at a single point, enabling the analysis of relationships between Supplier Trust, Supplier Communication, Supplier Collaboration, Supplier Information Sharing, Supplier Risk Management, and Supply Chain Resilience. This design was also cost-effective, time-efficient, and appropriate for assessing relational and operational constructs within a single multinational FMCG firm operating in Nigeria.

This study population consisted of 2,239 stable staff at Nestlé Nigeria Plc, as reported by Suleiman and Ganiyu (2024). Using Taro Yamane's formula with a 5% level of significance, a sample size of 394 respondents was determined. Purposive sampling was employed to select respondents who were deemed knowledgeable about supplier relationship dynamics and resilience outcomes, ensuring that the data collected reflected practical insights into SRM practices and supply chain performance.

TABLE 1: Allocation Of Sample Size

S/N	Company's Name	Number of Staff (Stable)	Sample Size
1	Nestlé Foods Nigeria Plc.	2,239	394

Source: Suleiman & Ganiyu, 2024.

This study targeted managerial personnel at Nestlé Nigeria Plc who hold key responsibilities across the supply chain functions that manage both the relational inputs and the operational outcomes of the firm. Specifically, respondents were drawn from the Procurement and Sourcing departments, which are responsible for executing the strategic Supplier Relationship Management initiatives; the Supply Chain and Logistics departments, which oversee core resilience metrics like order fulfillment and disruption recovery; and the Operations and Production departments, which manage inventory flows and production stability. These managers were primarily located at the company's Head Office in Lagos, where strategic procurement and central performance analysis are conducted, and at the major manufacturing and distribution facilities in Ogun State, which provide direct, empirical insight into the effect of supplier practices on measured resilience outcomes. This targeted approach ensured that the collected data reflects informed strategic decisions and quantifiable operational realities.

Data were collected using a structured questionnaire based on a five-point Likert scale ranging from Strongly Agree (5) to Strongly Disagree (1). Items for Supplier Trust (SPTR) were adapted from Rashid et al. (2025), Faruquee et al. (2021), and Abdallah et al. (2017). Supplier Communication (SPCM) items were drawn from Saglam Saglam et al. (2022), Johnson (2025), and Maestrini et al. (2018). Supplier Collaboration (SPCL) indicators were sourced from Bhaskara et al. (2023), Ambulkar et al. (2014), and Ochieng (2018). Supplier Information Sharing (SPIS) items were adapted from Sarfo et al. (2025), Tarigan et al. (2024), and Meyer et al. (2021). Supplier Risk Management (SPRM) measures were based on Owich (2023), Alawiye et al. (2024), and Ali et al. (2023). Finally, Supply Chain Resilience (SUPR) items were adapted from Zaied et al. (2016), Kwak (2019), Bateh (2024), Kamalahmadi & Parast (2016), and Asthana (2024).

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 3, which is appropriate for handling complex models with multiple latent variables, tolerating non-normal data distributions, and providing reliable results with moderate sample sizes. The analysis included evaluation of both the measurement model, to assess reliability and validity, and the structural model, to examine the hypothesized relationships between supplier relationship management practices and supply chain resilience. Ethical considerations, including informed consent, confidentiality, and voluntary participation, were strictly observed throughout the study. The reliability of the constructs was confirmed using Cronbach's Alpha, with all values exceeding the recommended threshold of 0.70, indicating strong internal consistency: Supplier Trust

(0.857), Supplier Communication (0.858), Supplier Collaboration (0.876), Supplier Information Sharing (0.875), Supplier Risk Management (0.892), and Supply Chain Resilience (0.876). Below is the model of the study:

RESULTS AND DISCUSSIONS

Out of the 394 copies of questionnaires administered, 269 were properly completed and returned, representing a response rate of 68.3%, which was sufficient for statistical analysis and representative of managerial insights at Nestlé Nigeria Plc.

TABLE 2: Factor Loadings

Construct	Item	Statement	Factor Loading
Supplier Trust (SPTR)			
	SPTR1	Key suppliers consistently deliver goods with high reliability.	0.816
	SPTR2	Suppliers share accurate information, even during internal problems.	0.824
	SPTR3	Suppliers act in Nestlé's best interest beyond contractual terms.	0.765
	SPTR4	We trust our key suppliers to maintain quality despite market pressure.	0.790
	SPTR5	Trust enables fast joint problem-solving during sudden disruptions.	0.786
Supplier Communication (SPCM)			
	SPCM1	Communication with suppliers is always timely and highly accurate.	0.832
	SPCM2	We proactively discuss potential supply risks with our suppliers.	0.844
	SPCM3	Formal performance feedback signals improve supplier reactions.	0.791
	SPCM4	Suppliers instantly share critical production or delay information.	0.746
	SPCM5	Joint meetings frequently resolve logistics bottlenecks efficiently.	0.778
Supplier Collaboration (SPCL)			
	SPCL1	We engage in joint forecasting and planning with key suppliers.	0.843
	SPCL2	We jointly develop contingency plans to manage supply shocks.	0.743
	SPCL3	Collaboration allows resource-sharing during capacity constraints.	0.839

	SPCL4	Suppliers are involved in our product development processes (SIPD).	0.828
	SPCL5	Joint efforts help reduce the total cost of supply chain operations.	0.831
Supplier Information Sharing (SPIS)			
	SPIS1	We share real-time demand forecast data with key suppliers.	0.849
	SPIS2	Suppliers provide real-time inventory and capacity status data.	0.810
	SPIS3	Data sharing helps us precisely align raw material deliveries.	0.767
	SPIS4	Information exchange reduces the negative bullwhip effect risks.	0.861
	SPIS5	Shared operational data enables us to proactively adjust production.	0.792
Supplier Risk Management (SPRM)			
	SPRM1	We systematically identify and assess risks from our key suppliers.	0.901
	SPRM2	We actively maintain dual or multiple suppliers for critical inputs.	0.867
	SPRM3	We continuously monitor key suppliers for financial instability signs.	0.862
	SPRM4	Risk management strategies reduce dependency on a single supplier.	0.814
	SPRM5	We conduct joint risk-training workshops with key supplier personnel.	0.734
Supply Chain Resilience (SUPR)			
	SUPR1	Our total time from order entry to customer delivery is very fast.	0.852
	SUPR2	We maintain a consistently high Inventory Turnover Ratio (ITR).	0.779
	SUPR3	We quickly restore normal operations after a supply disruption.	0.842
	SUPR4	Raw material shortages rarely cause significant manufacturing delays.	0.800
	SUPR5	We minimize costs effectively while recovering from supply shocks.	0.815

Source: SmartPLS Output, 2025.

Table 2 presents the measurement model assessment for SRM practices' impact on Nestlé Nigeria Plc's SCR, revealing strong reliability and validity via factor loadings. Supplier Trust (SPTR) loadings range 0.765–0.824 (>0.70; Hair et al., 2019), SPTR2 (0.824) capturing crisis transparency and SPTR3 (0.765) reliability. Supplier Communication (SPCM) spans 0.746–0.844 (>0.70; Fornell & Larcker, 1981), SPCM2 (0.844) proactive risks and SPCM4 (0.746) timely alerts.

Supplier Collaboration (SPCL) shows 0.743–0.843 (>0.70; Nunnally & Bernstein, 1994), SPCL1 (0.843) joint forecasting and SPCL2 (0.743) contingency alignment. Supplier Information Sharing (SPIS) records 0.767–0.861 (>0.70; Kline, 2015), SPIS4 (0.861) bullwhip mitigation and SPIS3 (0.767) delivery coordination. Supplier Risk Management (SPRM) yields 0.734–0.901 (>0.70; Hair et al., 2019), SPRM1 (0.901) risk assessment and SPRM5 (0.734) joint training.

Supply Chain Resilience (SUPR) ranges 0.779–0.852 (>0.70; Fornell & Larcker, 1981), SUPR1 (0.852) rapid cycles and SUPR2 (0.779) inventory efficiency. These consistent, high loadings affirm distinct, reliable indicators, establishing a robust foundation for structural analysis of SRM's resilience contributions in Nestlé's context.

TABLE 3: Construct Reliability and Validity

Construct	**Cronbach's Alpha**	**rho_A**	**Composite Reliability**	**AVE**
Supplier Trust (SPTR)	0.857	0.863	0.897	0.635
Supplier Communication (SPCM)	0.858	0.866	0.898	0.638
Supplier Collaboration (SPCL)	0.876	0.884	0.910	0.669
Supplier Information Sharing (SPIS)	0.875	0.878	0.909	0.667
Supplier Risk Management (SPRM)	0.892	0.897	0.921	0.702
Supply Chain Resilience (SUPR)	0.876	0.881	0.910	0.669

Source: SmartPLS Output, 2025.

Table 3 displays construct reliability and validity for the measurement model on SRM's effect on Nestlé Nigeria Plc's SCR. Cronbach's Alpha and Composite Reliability exceed 0.70 (Hair et al., 2019), indicating excellent internal consistency. AVE surpasses 0.50 for all constructs, confirming strong convergent validity. Thus, Supplier Trust, Communication, Collaboration, Information Sharing, Risk Management, and SCR via fulfillment speed, turnover, and recovery time are reliably and validly measured, establishing a robust foundation for structural analysis.

TABLE 4: Heterotrait-Monotrait Ratio (Htmt)

Construct	**(SPTR)**	**(SPCM)**	**(SPCL)**	**(SPIS)**	**(SPRM)**	**(SUPR)**
Supplier Trust						
Supplier Communication	0.569					
Supplier Collaboration	0.565	0.606				
Supplier Information Sharing	0.452	0.690	0.455			
Supplier Risk Management	0.442	0.518	0.425	0.602		
Supply Chain Resilience	0.607	0.452	0.479	0.605	0.696	

Source: SmartPLS Output, 2025.

Table 4 reports HTMT ratios, all below the 0.90 threshold (Henseler et al., 2015), confirming discriminant validity. Supplier Trust, Communication, Collaboration, Information Sharing, Risk Management, and Supply Chain Resilience are empirically distinct, capturing unique SRM dimensions without overlap; resilience measured by fulfillment speed, turnover, and recovery time remains clearly separate.

TABLE 5: Structural Model Assessment and Goodness-Of-Fit Results

Indicator	**Value**	**Interpretation / Threshold**
Collinearity Statistics (Inner VIF Values)		
Supplier Trust (SPTR)	1.924	< 5.0 (No multicollinearity concern)
Supplier Communication (SPCM)	3.020	< 5.0 (No multicollinearity concern)
Supplier Collaboration (SPCL)	2.995	< 5.0 (No multicollinearity concern)
Supplier Information Sharing (SPIS)	3.490	< 5.0 (No multicollinearity concern)
Supplier Risk Management (SPRM)	3.350	< 5.0 (No multicollinearity concern)
Coefficient of Determination (R^2 Values)		
Supply Chain Resilience (SUPR) (R^2)	0.783	Substantial predictive power (explains 78.3% variance)
Adjusted R^2	0.780	Reflects strong model fit
Effect Size (f^2 Values)		
Supplier Trust (SPTR)	0.122	Small effect (Cohen, 1988)
Supplier Communication (SPCM)	0.093	Small effect
Supplier Collaboration (SPCL)	0.012	Small effect
Supplier Information Sharing (SPIS)	0.011	Small effect
Supplier Risk Management (SPRM)	0.029	Small effect
Model Fit Indices		
SRMR (Saturated Model)	0.064	< 0.08 (Acceptable model fit; Henseler et al., 2015)

SRMR (Estimated Model)	0.064	< 0.08 (Acceptable model fit)
d_ULS	1.915	Lower values indicate better fit
d_G	1.007	Lower values indicate better fit
Chi-Square (χ^2)	2061.623	Lower = better fit
Normed Fit Index (NFI)	0.791	≥ 0.80 desirable; close to acceptable threshold

Source: SmartPLS Output, 2025.

Table 5 details the structural model evaluation and multicollinearity assessment for the study on supplier relationship management (SRM) effects on Nestlé Nigeria Plc's supply chain resilience (SCR). Inner VIF values, Supplier Trust (1.924), Communication (3.020), Collaboration (2.995), Information Sharing (3.490), and Risk Management (3.350) remain well below the 5.0 threshold, confirming no multicollinearity and stable estimates. The model exhibits strong predictive power, with $R^2 = 0.783$ (adjusted $R^2 = 0.780$), explaining 78.3% of SCR variance measured via order fulfillment speed, inventory turnover, and disruption recovery time. This underscores SRM's pivotal role in resilience.

Effect sizes (f^2) reveal Supplier Trust (0.122) and Communication (0.093) as the strongest small-tomoderate drivers, followed by Risk Management (0.029); Collaboration (0.012) and Information Sharing (0.011) contribute marginally yet positively (Cohen, 1988). Trust and communication thus dominate relational influences.

Model fit is robust: SRMR = 0.064 (saturated/estimated) < 0.08; d_ULS = 1.915, d_G = 1.007, ChiSquare = 2061.623, NFI = 0.791 (Henseler et al., 2015). These indices affirm the model's statistical soundness, validating hypothesis testing on SRM's resilience impact in Nestlé's context.

Table 6: Hypothesis Testing Results

Variables	**Path Coefficient**	**T Statistics**	**P Values**	**Decision**
Supplier Trust (SPTR)	0.278	5.043	0.000	Rejected
Supplier Communication (SPCM)	0.318	5.873	0.000	Rejected
Supplier Collaboration (SPCL)	0.103	1.818	0.070	Accepted
Supplier Information Sharing (SPIS)	0.104	1.694	0.091	Accepted
Supplier Risk Management (SPRM)	0.165	2.193	0.029	Rejected

Source: SmartPLS Output, 2025.

DISCUSSION OF FINDINGS

H_{01}: Supplier Trust has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

This hypothesis was rejected. The path coefficient of 0.278, t-value of 5.043, and p-value of 0.000 indicated a significant positive effect. This implies that trust in key suppliers manifested through consistent reliability, accurate information sharing even in crises, and acting in Nestlé's best interest, strengthens the firm's ability to maintain order fulfillment speed, high inventory turnover, and rapid recovery from disruptions. For instance, trusted suppliers enable swift joint problem-solving during sudden shocks, reducing downtime and stabilizing operations. This finding aligns with Oyewole et al. (2024), who reported that supplier trust significantly

enhanced organizational performance in Nestlé Nigeria Plc through IT-mediated real-time tracking and disruption minimization, and Yang et al. (2022), who found trust positively influenced recovery capability (β=0.574) via information sharing during COVID-19. These results contradict Faruquee et al. (2021), who argued that digital transformation can preclude the need for trust in building resilience, suggesting that in Nestlé's context, relational governance remains indispensable despite technological advancements.

H_{02}: Supplier Communication has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

The hypothesis was rejected, with a path coefficient of 0.318, t-value of 5.873, and p-value of 0.000, reflecting the strongest positive effect. This suggests that timely, accurate, and proactive communication such as discussing risks, sharing delay alerts, and holding joint meetings enables Nestlé to anticipate disruptions, align responses, and restore operations swiftly. For example, instant supplier alerts on production delays allow rapid inventory reallocation, preserving turnover ratios. This corroborates Johnson (2025), who highlighted proactive communication as critical for coordinated disruption responses, and Saglam et al. (2022), who confirmed communication quality directly enhanced resilience and mediated relational commitment effects. The findings contradict Kędzia (2024), who found ambiguous impacts of communication during supplier involvement in product development, indicating that in Nestlé's operational context, structured communication channels yield clearer resilience benefits.

H_{03}: Supplier Collaboration has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

This hypothesis was accepted. The path coefficient of 0.103, t-value of 1.818, and p-value of 0.070 fell short of significance at the 0.05 level. While joint forecasting, contingency planning, and resourcesharing show directional positivity, they do not significantly drive resilience metrics in this study. This may reflect Nestlé's centralized decision-making or limited supplier involvement in core processes, where collaboration yields efficiency gains but not disruption recovery speed. The result aligns with Taha et al. (2024), who found supplier development had no direct effect on resilience despite fostering trust, and contradicts Mwangi et al. (2022), who reported strong collaboration effects on performance (r=0.783) in Kenyan food firms, suggesting contextual differences in collaboration depth and resilience outcomes.

H_{04}: Supplier Information Sharing has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

The hypothesis was accepted, with a path coefficient of 0.104, t-value of 1.694, and p-value of 0.091. Though real-time demand and inventory data exchange shows promise in reducing bullwhip risks and enabling proactive adjustments, it does not significantly influence resilience indicators here. This could stem from partial adoption, data quality issues, or overriding effects of trust and communication. This finding contradicts Qazi et al. (2024), who reported supplier information sharing significantly boosted adaptability (β=0.437), and Huo et al. (2020), who found it enhanced flexibility via learning, but supports Disu and Dogo (2025), who observed insignificant effects of information sharing on profitability in Nigerian FMCG firms, implying that in Nestlé Nigeria Plc, relational factors may supersede data transparency in driving resilience.

H_{05}: Supplier Risk Management has no significant effect on the supply chain resilience of Nestlé Nigeria Plc.

This hypothesis was rejected. The path coefficient of 0.165, t-value of 2.193, and p-value of 0.029 confirmed a significant positive effect. Systematic risk identification, dual sourcing, financial monitoring, and joint training reduce dependency and enable faster recovery from shortages, directly supporting low manufacturing delays and cost-effective shock absorption. For example, multiple suppliers for critical inputs prevent single-point failures. This is consistent with Nel (2024), who showed firms with preCOVID risk strategies recovered faster via redundancy and collaboration, and Owich (2023), who found dual sourcing mitigated disruptions in Kenyan health supply chains. The results contradict Silva et al. (2023), who reported monitoring-based mitigation had no performance impact, underscoring that in Nestlé's context, proactive and diversified risk strategies yield tangible resilience gains.

CONCLUSION AND RECOMMENDATIONS

This study confirmed that Supplier Trust, Communication, and Risk Management significantly influence the supply chain resilience of Nestlé Nigeria Plc, measured through order fulfillment speed, inventory turnover ratio, and disruption recovery time. Among these, Supplier Communication demonstrated the strongest effect, followed by Supplier Trust, with Supplier Risk Management also contributing meaningfully. Supplier Collaboration and Information Sharing, however, showed no significant effect. Based on these findings, the following recommendations are proposed for Nestlé Nigeria Plc managers, suppliers, and policymakers:

i. To Solidify Supplier Trust for Operational Continuity, Nestlé Nigeria Plc must prioritize longterm, incentive-aligned contracts and institutionalize joint problem-solving forums (e.g., quarterly executive meetings). This approach will solidify the foundational trust demonstrated to enable suppliers to share accurate information, even when facing internal crises, which directly facilitates rapid recovery from disruptions and stabilizes the Inventory Turnover Ratio.

ii. To Strengthen Supplier Communication Channels, Nestlé Nigeria Plc should immediately invest in advanced, real-time digital communication platforms (e.g., dedicated supplier portals or secure messaging tools) and mandate proactive risk dialogues with Tier 1 and Tier 2 suppliers. This is crucial for sustaining the strongest resilience driver by ensuring instant, high-quality information flow during unpredictable events (like logistical bottlenecks or FX volatility), which directly improves the firm's ability to reallocate inventory and preserve Order Fulfillment Speed.

iii. To Reassess Supplier Collaboration and Information Sharing: Given their non-significant impact, Nestlé Nigeria Plc should launch an internal audit to identify the specific barriers to effective Collaboration (e.g., centralized decision-making constraints, lack of shared incentives) and Information Sharing (e.g., data quality issues, mistrust over proprietary data). The firm should pilot structured programs focused on joint planning for only high-impact categories to determine if a deeper relational investment can unlock the latent resilience potential currently observed in global studies.

iv. To Unlock the Potential of Supplier Information Sharing, given the failure of Information Sharing to achieve significance despite its theoretical benefits, Nestlé Nigeria Plc must launch an internal audit to diagnose the precise causes of this failure. The firm should investigate if the current data being shared is accurate (quality issue), timely (system integration issue), or if the problem is a relational one where managers simply do not trust the data supplied. Based on the audit, Nestlé should pilot a structured program focused on sharing only high-value, low-risk data (e.g., standardized demand forecasts) to mitigate the bullwhip effect and eventually drive the Inventory Turnover Ratio, which is currently inhibited.

v. To Bolster Proactive Supplier Risk Management, Nestlé Nigeria Plc should expand its adoption of dual sourcing for all critical raw materials sourced locally and globally. Furthermore, the firm must implement a robust system for continuous financial and operational monitoring of key suppliers. These proactive and diversified risk strategies will reduce dependency on single points of failure, directly mitigating the impact of Nigerian-specific risks (e.g., currency devaluation or plant shutdowns), thereby minimizing Supply Chain Disruption Recovery Time.

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