Innovations

Information Technology as a Bridge: Enhancing Supplier Relationship Management Practices and Organizational Performance of Nigerian Manufacturing Industry

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Abstract: *This study investigates the impact of Supplier Relationship Management (SRM) practices on organizational performance in the Nigerian manufacturing sector, with a focus on the mediating role of information technology (IT). A purposive sampling method was used to select four key companies—Procter & Gamble, PZ Cussons, Unilever, and Nestlé—while snowball sampling was employed to select 50 employees from each company, yielding a total sample size of 200. Data were analyzed using Path Analysis Structural Equation Modeling (PA-SEM) via STATA version 15. The findings reveal that SRM practices have a significant and positive effect on organizational performance, with supplier trust, communication, involvement, and development emerging as particularly impactful. Among these, supplier development showed the strongest relationship with performance.Thestudy further underscores the critical role of information technology (IT) in enhancing organizational performance. Effective utilization of IT was found to mediate the relationships between supplier trust, involvement, and development, with the most pronounced effect observed in the case of supplier involvement.These results highlight the importance of leveraging IT to optimize supplier relationships and improve organizational outcomes. Companies should focus on building strong supplier relationships founded on trust and clear communication, actively involve suppliers in decision-making, and invest in supplier development to drive innovation and efficiency. Additionally, effective IT integration is essential for supporting these relationships and boosting overall performance.*

Keywords: *IT, SRM, Supplier communication, Supplier trust, Supplier development, SI*

Introduction

In today's competitive manufacturing landscape, many African nations face significant challenges, with over 70% of manufacturing companies becoming distressed or shutting down operations. Sajuyigbe *et al.* (2021) observe that Africa's industrialization experience has been disappointing, as the sector's contribution to the continent's GDP remains stagnant or declining. Africa's share of global manufacturing has dropped from around 3% in the 1970s to less than 2% today. In Nigeria, the manufacturing sector grapples with similar challenges, leading to reduced productivity and the exodus of firms seeking better opportunities in neighboring countries. The main issues affecting Nigeria's manufacturing sector include inadequate transportation, energy, and communication infrastructure, which disrupt consistent supplier relationships, leading to delays and increased costs (Sajuyigbe *et al.*, 2021). Ndema *et al*. (2023) also highlight how unreliable transportation networks, political instability, and frequent policy changes disrupt supplier networks, causing production delays and inventory management issues.Zulkefli (2021) adds that many African nations have limited local suppliers for raw materials, forcing manufacturers to rely on international suppliers, which raises lead times and shipping costs.

Furthermore, ineffective supplier management systems and inconsistent quality standards often result in poor raw material quality, driving up production costs and increasing the risk of product recalls. The performance of Nigeria's manufacturing industry has declined significantly, contributing less than half of what it did to the national GDP two decades ago. According to the Nigerian Bureau of Statistics (2023), over 40% of the sector has either scaled down operations or relocated to more stable countries with better infrastructure and business-friendly policies. This decline is largely attributed to poor supplier connections, leading to higher production costs and reduced profitability.

Research has shown that the success of manufacturing firms is increasingly dependent on the effectiveness of their supply chain management, with a strong emphasis on Supplier Relationship Management (SRM). SRM focuses on optimizing interactions between organizations and their suppliers by prioritizing key dimensions such as supplier trust, supplier communication, supplier involvement and supplier development. These factors are essential for maintaining stable, cost-effective, and efficient supply chains. As globalization accelerates and customer demands become more complex, manufacturing firms must ensure a steady supply of raw materials, maintain high-quality production standards, and deliver products on time. This makes SRM crucial for building long-term relationships with reliable suppliers, reducing costs, mitigating risks, and boosting overall operational efficiency.In addition, the rise of Information Technology (IT) has revolutionized the way organizations manage supplier relationships. IT tools enable real-time

communication, seamless data sharing, and streamlined processes throughout the supply chain. These technologies effectively integrate SRM practices, resulting in significant improvements in organizational performance and operational efficiency.

Previous studies in both developed and emerging economies have conceptualized Supplier Relationship Management (SRM) in various ways and have established its connection to organizational performance in countries such as the United Kingdom (Wilson, 2022), the United States (O'Brien, 2014), Zimbabwe (Denhere & Choga, 2022), Australia (Weele & Van, 2010), Kenya (Rajab *et al*., 2021), China (Zhang & Liu, 2020), Turkey(Yurdakul & Kazan, 2020), Iran (Valmohammadi, 2013), and Singapore (Stock & Lambert, 2001). However, none of these studies have specifically conceptualized SRM in terms of supplier trust, supplier communication, supplier involvement and supplier development, nor have they thoroughly examined the role of information technology in these dimensions. This reveals a significant gap in understanding how integrating IT into SRM can help manufacturers optimize their supply chains, improve operational efficiency, reduce costs, and enhance their competitive advantage. This study aims to address this gap by examining the mediating effect of IT on the relationship between SRM and organizational performance in the Nigerian manufacturing industry. Specifically, it seeks to determine the extent to which supplier trust, supplier communication, supplier involvement, and supplier development influence the organizational performance of manufacturing industry in Nigeria.

Theoretical Framework

Several theories, including Resource-Based View (RBV)(Olapoju, 2019), Transaction Cost Economics (TCE)(Babu, 2022), Social Exchange Theory (SET), Dynamic Capabilities Theory (DCT), Systems Theory, Information Processing Theory, and Innovation Diffusion Theory independently connect Information Technology (IT), Supplier Relationship Management (SRM), and organizational performance. However, none of these available studies used mixed theories to
link the SRM practices, IT and organizational performance. This novel study intends to bridge the gap in literature by using different theories such as Social Exchange Theory and Dynamic Capabilities Theoryto explain the relationship between the SRM practices, information technology and organizational performance in emerging economies like Nigeria. These theories provide valuable frameworks for understanding how integrating IT into SRM practices can improve manufacturing performance. Specifically, SET emphasizes the relational aspects and trust-building essential for effective supplier partnerships, while DCT highlights the adaptability and innovation that emerge from these relationships. This synergy ultimately leads to enhanced operational efficiency and a competitive advantage in the manufacturing sector.

Social Exchange Theory (SET)

Social Exchange Theory (SET) is a sociological and psychological concept that explains social behavior as an exchange of resources between individuals or groups. It offers a valuable framework for understanding the interplay between supplier relationship management (SRM), information technology (IT), and manufacturing performance. SET emphasizes that social interactions involve an exchange process, where parties aim to maximize benefits and minimize costs. In a business setting, this theory helps explain how SRM, IT, and manufacturing performance are interrelated. According to Francis (2020), the theory suggests that successful exchanges depend on the perceived value of the relationship. When manufacturers leverage IT to manage supplier relationships effectively, they create mutually beneficial scenarios that improve negotiation outcomes and enhance shared benefits, ultimately boosting manufacturing performance. Opaleye *et al.* (2021) argue that IT integration facilitates better communication and information sharing, building trust between manufacturers and suppliers. This trust is essential for fostering long-term partnerships, which can strengthen collaboration and reduce risks.

Similarly, (Asa et al., 2023)emphasize that IT-enabled communication supports joint efforts between manufacturers and suppliers, leading to more innovative solutions, collaborative problem-solving, and streamlined processes, all of which contribute to improved performance and efficiency in the manufacturing sector. (Asa et al., 2023)further show that SET creates a foundation for strong supplier relationships, enhancing the quality, reliability, and flexibility of the supply chain. Manufacturers offer loyalty, business continuity, and timely payments, while suppliers provide timely deliveries, quality materials, and technical support.

Akhtar et al. (2020) highlight that Social Exchange Theory (SET) underscores the importance of building trust and loyalty between manufacturers and suppliers, which is essential for maintaining long-term partnerships. In the manufacturing sector, these trust-based relationships enhance collaboration, leading to timely, high-quality deliveries that improve production efficiency. Similarly, Khalil *et al.* (2019)suggest that SET provides a framework for manufacturers and suppliers to form mutually beneficial relationships, where both parties perceive value, leading to better negotiation outcomes and optimized resource use. This results in lower costs and improved manufacturing performance. Kaire (2017) emphasizes that trust-based relationships grounded in SET principles strengthen the supply chain's resilience to disruptions. Strong partnerships allow for better risk-sharing, enabling flexible responses to market shifts or supply chain challenges, thereby enhancing organizational performance. Moore (2012) also argues that SET fosters collaboration and reciprocity, encouraging manufacturers and suppliers to jointly pursue

innovation, process improvements, and problem-solving. When supported by IT, these collaborations lead to innovative solutions that increase manufacturing efficiency and competitive advantage.

Cheng (2009) further asserts that organizations effectively applying SET to manage supplier relationships, while leveraging IT for performance enhancement, develop a sustainable competitive advantage. These organizations create a supply chain ecosystem that is efficient, agile, and adaptive, which is crucial in the rapidly evolving global market. In conclusion, SET is vital in the manufacturing industry, as it strengthens supplier relationships, enhances communication through IT, and boosts organizational performance by promoting efficiency, innovation, and reliability across the supply chain.

Dynamic Capabilities Theory (DCT)

Dynamic Capabilities Theory (DCT) refers to an organization's ability to integrate, build, and reconfigure internal and external competencies to navigate rapidly changing environments. Introduced by David Teece, Gary Pisano, and Amy Shuen in the 1990s, the theory highlights that organizations must not only possess resources but also the capacity to adapt and utilize these resources to stay competitive in dynamic markets(Savolainen, 2017). According to Poi and Okwandu (2021), firms with robust supplier relationships and IT capabilities empowered by DCT can streamline their supply chains, reduce lead times, and lower costs, leading to more efficient production processes. Lawer *et al.* (2014)further emphasize that DCT provides a platform for the manufacturing industry to ensure a smooth flow of materials and information between companies and their suppliers. The theory stresses the significance of agility, learning, and innovation within Supplier Relationship Management (SRM), which fosters long-term strategic collaboration. In a related study,Okok (2021) demonstrates that DCT enables manufacturing firms to adjust supplier contracts, renegotiate terms, or switch suppliers when necessary to sustain performance and ensure supply chain continuity.

Babu (2022)argues that within the context of SRM, IT, and performance in the manufacturing industry, DCT plays a pivotal role in sustaining a competitive advantage. Xu and Zhao (2022)concur, noting that manufacturing firms that dynamically leverage IT can accelerate innovation in processes and products. For example, applying data analytics and artificial intelligence (AI) to optimize supply chains or production processes enhances efficiency, reduces costs, and improves product quality. DCT allows firms to continually innovate by integrating new technologies and knowledge into their operations. Hamiza and Isoh (2019) also confirm that DCT enables firms to reconfigure their IT infrastructure to meet evolving business needs. For instance, a firm may need to upgrade its production software to support new manufacturing processes or enhance data security. The

ability to seamlessly adapt IT systems to changing technologies and business requirements is crucial for maintaining competitiveness. By integrating DCT with SRM and IT, manufacturing firms can operate more efficiently, sensing market shifts and reconfiguring operations—including supply chains, IT systems, and production processes—to remain agile in the face of challenges such as raw material shortages or competitive pressures (Azmi *et al*., 2018; Ledisi *et al.*, 2022). A study by Khalil *et al.* (2019)reveals that DCT directly impacts the overall performance of manufacturing firms by helping them effectively respond to market changes, maintain competitiveness, and sustain growth. This underscores the importance of DCT in enhancing SRM, IT systems, and organizational performance in the manufacturing industry. The theory empowers firms to adapt to shifting environments, leverage technological advancements, and innovate continuously, ensuring they maintain a competitive edge and achieve long-term performance goals.

Conceptual Review and Hypotheses Development

Supplier Trust and Organizational Performance

Supplier trust plays a vital role in building long-term, collaborative relationships between organizations and their suppliers. It promotes better communication, smoother transactions, and mutual understanding, which, in turn, enhance organizational performance. Mogire *et al*. (2023)highlight that trust facilitates open communication, enabling firms and suppliers to share sensitive information such as cost structures, forecasts, and production plans. This collaborative approach aligns objectives and fosters more effective problem-solving, improving production efficiency, reducing lead times, and lowering costs. Tran (2022) study reveals that trusted supplier relationships decrease the risk of opportunistic behavior, such as the misuse of confidential information or unilateral contract violations. Trust reduces the need for excessive monitoring and contractual safeguards, lowering transaction costs and allowing the firm to concentrate on strategic priorities. Similarly,Lincolin and Kinyua (2022) affirm that trust-based collaboration drives product innovation, enhances quality, and improves flexibility in responding to market changes. Social Exchange Theory (SET) and Dynamic Capabilities Theory (DCT) both affirm that trust in supplier relationships serves as a crucial driver of collaboration and performance (SET) while also playing a vital role in promoting agility, adaptability, and innovation (DCT), all of which contribute to enhanced organizational performance (Rajasulochana, 2022; Kotler, 2017; Al-Rasyid, 2017). Vasić *et al.* (2019)also argue that trust-based supplier relationships support sustained performance by ensuring a reliable supply of high-quality materials, improving supplier responsiveness, and enabling more adaptable procurement strategies. Naini et al. (2022) reinforce this view, emphasizing that trust-based collaboration is a

strong predictor of organizational performance. Thus, the following hypothesis is proposed:
H1: Supplier trust is significantly associated with organizational performance

Supplier Communication, and Organizational Performance
Supplier communication involves the exchange of information between an organization and its suppliers to ensure smooth, efficient, and collaborative business operations. This communication spans various activities, including sharing production forecasts, negotiating terms, discussing product specifications, and managing orders. Effective supplier communication is critical for maintaining a steady flow of goods and services, fostering mutual understanding, and aligning the objectives of both parties(Pérez-Morón et al., 2022). According toEvelina (2022), supplier communication is a cornerstone of efficient supply chain management. Clear, open, and regular communication helps organizations align with suppliers, reduce operational risks, boost performance, and create opportunities for long-term collaboration and innovation.Chen (2022)highlights that communication between suppliers and organizations fosters collaboration on process improvements and product innovations. Through the exchange of ideas and insights, both parties can enhance performance, lower costs, and develop new products. Amrouse et al. (2017) found that open and transparent communication builds trust and strengthens relationships, promoting more collaborative and strategic partnerships.

Similarly, Poufinas et al. (2018) emphasize that proactive communication helps anticipate and mitigate risks such as supply disruptions, compliance issues, or shifting market demands, thereby ensuring business continuity. Kamau (2013) further illustrates that effective communication optimizes operations byensuring that supplies are delivered on time, at the right cost, and in the correct quantities, thereby enhancing production efficiency. Similarly, Sukati *et al*. (2020) emphasize that communication about shipping schedules, delivery updates, and logistics issues significantly influences organizational performance. This indicates that effective supplier communication has a substantial impact on organizational performance, enhancing coordination, reducing errors, fostering innovation, improving flexibility, and strengthening relationships. By maintaining open and transparent communication, organizations can build more resilient and efficient supply chains, driving long-term success and sustaining a competitive advantage. Therefore, the following hypothesis emerges:
H2: Supplier communication is closely linked to organizational performance.

Supplier involvement and Organizational Performance
Supplier involvement refers to the degree to which suppliers are integrated into an organization's decision-making processes and product development activities.

Suppliers who actively participate in these areas contribute valuable knowledge and expertise, leading to higher-quality products, reduced costs, and faster time-to-market. Research consistently shows a positive relationship between supplier involvement and organizational performance. For instance, Olapoju (2019)argues that involving suppliers in the design and development phases facilitates better integration of their expertise and materials, enhancing the quality of the final product. Al-Rasyid (2017) also asserts that collaboration with suppliers fosters cost-saving innovations in production processes, materials, and supply chain management, lowering overall production costs.

Similarly, Kiarie (2017) demonstrates that early involvement of suppliers in the manufacturing process allows their technical knowledge to drive innovation in product design, materials, and processes, providing manufacturers with a competitive advantage. A study by Nabiliki *et al*. (2018)highlights that close collaboration with suppliers helps manufacturers streamline their operations, reduce lead times, and accelerate the production cycle, resulting in quicker product launches. Lukhoba and Muturi (2015) also provide evidence that supplier involvement enhances operational flexibility, enabling quicker responses to changes in demand, production schedules, and supply chain disruptions. Amrouse et al. (2017) align with these findings, noting that close collaboration with suppliers aids in identifying and managing supply chain risks, such as material shortages or quality issues, thereby ensuring smoother operations and reducing production delays. Kotler (2015) further demonstrates that engaging suppliers in strategic decision-making strengthens partnerships, builds trust, and results in more reliable and consistent supply chains, ultimately improving long-term performance. Based on these insights, the following hypothesis is proposed:

H3: Supplier involvement is significantly associated with organizational performance.

Supplier Development and Organizational Performance

Supplier development refers to a structured process undertaken by organizations to enhance the performance and capabilities of their suppliers, thereby improving organizational performance (Okok, 2021). Khalil *et al.* (2019)explain that the primary objective of supplier development is to ensure that suppliers meet or exceed the organization's expectations in areas such as quality, delivery, cost, and innovation. This process often includes activities such as training, technology transfer, process improvements, and collaborative projects aimed at strengthening the supplier's contributions to the organization's supply chain. Jiang and Yang (2019)emphasize that providing suppliers with necessary training and resources to enhance their skills in quality management, production efficiency, and technology adoption is

directly linked to improved organizational performance. Akhtar et al. (2020) also demonstrate that working closely with suppliers to identify areas for improvement, solve issues, and implement solutions positively impacts overall supply chain performance, significantly influencing organizational outcomes. Adedokun et al. (2017) found that supplier development initiatives reduce costs through improved supplier processes, reduced material waste, optimized production methods, and streamlined supply chain management, leading to lower production costs and enhanced organizational performance. Similarly, Westhuizen and Ntshingila (2020) highlight that a well-developed supplier base is less susceptible to risks such as supply disruptions, quality defects, or financial instability. Supplier development programs help identify and mitigate these risks, ensuring smoother operations and improving performance.

Jha (2022) affirms that supplier development fosters collaboration and joint innovation, with suppliers and manufacturers working together on new technologies or methods, driving innovation and enhancing manufacturing capabilities. Yi et al. (2022) further reveal that by improving the efficiency and responsiveness of suppliers, manufacturers can reduce lead times and accelerate production cycles, resulting in faster product launches and a competitive market advantage.This evidence suggests that supplier development plays a crucial role in enhancing manufacturing performance by improving product quality, lowering costs, increasing supply chain reliability, promoting innovation, and mitigating risks. A robust supplier development program aligns supplier capabilities with the strategic objectives of the manufacturing firm, leading to sustained competitive advantage and enhanced organizational performance (Laukkanen & Tura, 2022). Thus, the following hypothesis is proposed:

H4: Supplier development is significantly associated with organizational performance.

Mediating effect of Information Technology

Existing studies have confirmed that information technology (IT) is directly and indirectly linked to organizational performance through factors like supplier trust, communication, involvement, and development (Ogonu *et al.*, 2016; Mukyala, 2020). Kucia *et al*. (2021)highlight IT's crucial mediating role between Supplier Relationship Management (SRM) practices and organizational performance in manufacturing industries. By serving as a bridge, IT improves communication, collaboration, and efficiency within SRM, leading to better organizational outcomes. Jadhav (2015) notes that IT enables manufacturers to track supplier performance in real-time, monitor key metrics such as delivery times, quality, and cost efficiency, and swiftly address supply chain disruptions. This enhanced supplier management leads to improvements in cost, quality, and responsiveness.

Ogonu (2016) further emphasizes that IT facilitates real-time communication between manufacturers and suppliers through digital platforms like supplier portals, cloud-based systems, and enterprise resource planning (ERP) tools. This fosters quicker decision-making, better coordination, and more transparent relationships, which enhance SRM practices and organizational performance. Mukyala (2020) adds that IT automates routine SRM tasks such as order processing, contract management, and supplier performance monitoring, reducing manual errors, improving efficiency, and allowing resources to be focused on strategic initiatives.

Khaddam *et al.* (2020)also reveal that IT promotes innovation within SRM by enabling collaboration on product development, process improvements, and technology adoption between manufacturers and suppliers. Tools like data analytics, artificial intelligence (AI), and machine learning (ML) support the co-development of innovative solutions, improving product quality and reducing costs, ultimately boosting organizational performance. Evidence shows that leveraging IT allows manufacturing organizations to streamline SRM processes and maximize the impact of supplier selection, involvement, and development on overall performance ( ). The following hypotheses are proposed:

H5: Information Technology (IT) has a significant relationship with organizational performance.

H6: IT mediates the relationship between supplier trust and organizational performance.

H7: IT mediates the relationship between supplier communication and organizational performance.

H8: IT mediates the relationship between supplier involvement and organizational performance.

H9: IT mediates the relationship between supplier development and organizational performance.

Conceptual framework for the study

Following a comprehensive review of the literature, a conceptual model has been developed to demonstrate the mediating role of Information Technology (IT) in the relationship between supplier relationship management (SRM) practices—namely, supplier trust, supplier communication, supplier involvement, and supplier development—and their impact on the performance of SMEs.

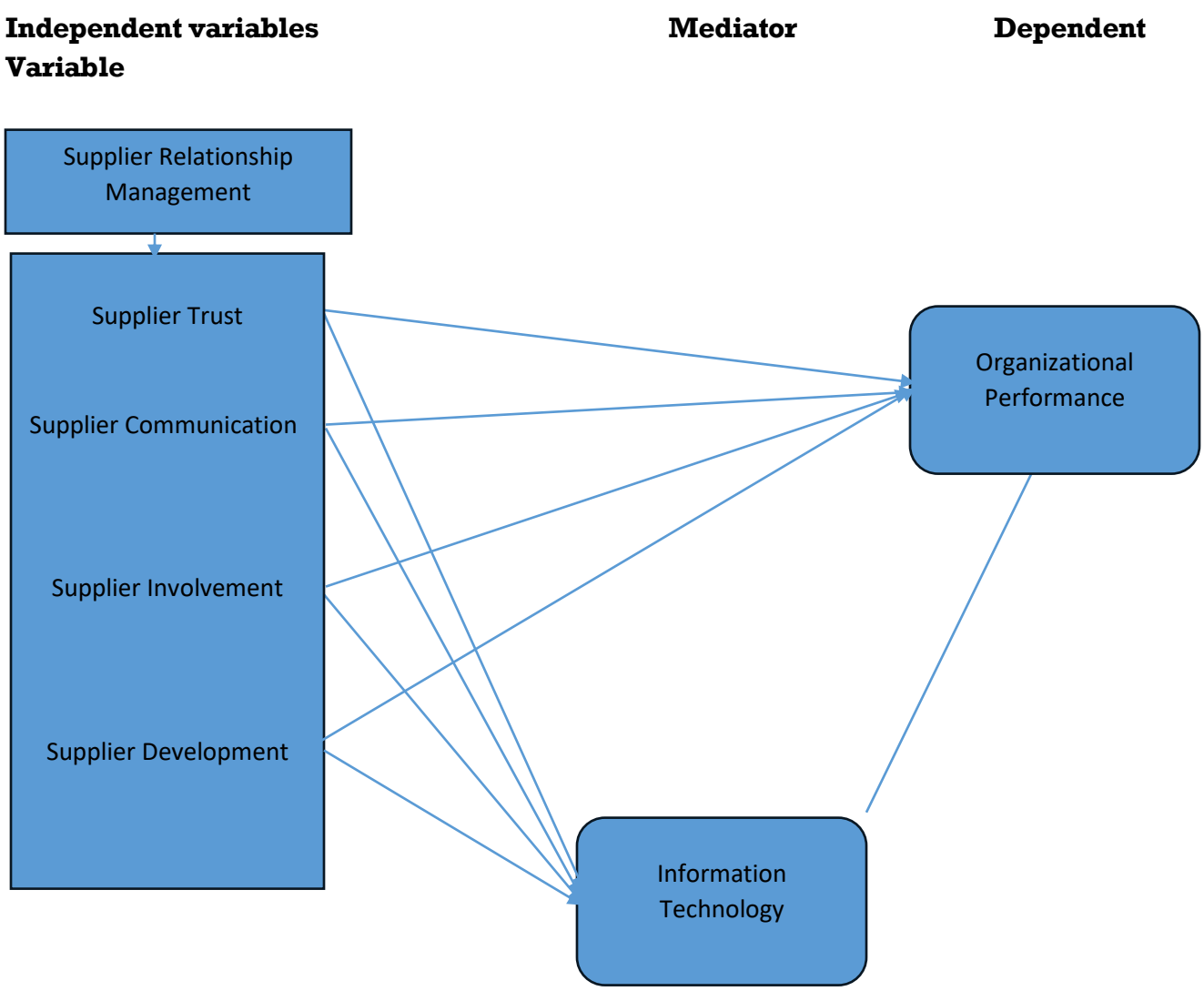

Figure 1: Conceptual Model

Figure 1 illustrates a conceptual model that predicts organizational performance based on Information Technology (IT) and Supplier Relationship Management (SRM) practices, including supplier trust, supplier communication, supplier involvement, and supplier development. The model highlights the mediating role of IT in the relationship between SRM practices and organizational performance. This section outlines the hypotheses and framework, focusing on how IT and SRM can enhance organizational performance by improving cost efficiency, product quality, responsiveness, and the ability to address supply chain disruptions swiftly. SRM practices contribute to cost savings, enhanced product quality, shorter lead times, and greater competitiveness in the manufacturing industry. IT, in turn, enables the optimization of SRM practices by improving communication, collaboration, and

overall efficiency, leading to better organizational outcomes. Accordingly, we hypothesize direct relationships between SRM practices and both IT and organizational performance, as well as relationships between SRM practices and organizational performance mediated by IT.

Methods

A cross-sectional research design was employed to investigate the current state of Supplier Relationship Management (SRM) practices and IT adoption within the manufacturing sector, particularly in light of the challenges posed by globalization. Procter & Gamble, PZ Cussons, Unilever, and Nestlé were selected using purposive sampling, while snowball sampling was utilized to select 50 employees from each company, resulting in a total sample size of 200 respondents. According to Easter-Smith et al. (2008), snowball sampling is appropriate when it is challenging to identify individuals within the population. These companies were chosen due to their status as market leaders in the Nigerian manufacturing industry, with the assumption that they share common SRM practices that contribute to improving quality of life and fostering a healthier future.

Data collection was conducted through structured questionnaires, distributed to participants who agreed to take part between July 5 and September 12, 2024. By the end of the data collection period, 190 completed questionnaires were retrieved, yielding a high response rate of 95%. This impressive response rate was facilitated through prior engagement with the HR departments of each company, explaining the importance of the study, and the involvement of research assistants to address any questions from respondents. Exploratory Factor Analysis (EFA) was performed to assess the suitability and validity of the measurement instruments, using the maximum likelihood method and Promax rotation. The communalities for each variable exceeded 0.50, and the Kaiser-Meyer-Olkin (KMO) test yielded a value of 0.878. Additionally, Bartlett's test for sphericity was statistically significant at the 1% level. These results confirmed the factorability of the data (see Table 1).

Data analysis was carried out using Path Analysis Structural Equation Modeling (PA-SEM) with STATA version 15, to examine the direct effects of SRM practices on organizational performance, as well as the mediating role of IT in the relationship between SRM practices and organizational performance.

Table 1: *Exploratory factor analysis for testing validity of the constructs*

Supplier trust (ST)	1	2	3	4	5
Our organization trusts our suppliers to consistently meet agreed-upon delivery schedules	.802				
We believe that our suppliers act in the best interest of our organization.	.812				
Our organization relies on our suppliers to uphold ethical business practices.	.811				
We have confidence in our suppliers' ability to fulfill long-term commitments.	.817				
Our suppliers provide honest and transparent information regarding product quality.	.779				
Supplier communication (SC)					
Communication with our suppliers is frequent and timely.		.809			
Our suppliers clearly communicate any changes to product specifications.		.816			
We can easily reach our suppliers whenever we need to discuss important matters.		.819			
Our suppliers regularly provide us with updates on the status of our orders.		.776			
There is open and transparent communication between our organization and our suppliers.		.821			
Supplier Involvement (SI)					
Our suppliers are involved in the early stages of product design and development.			.823		
We engage our suppliers in collaborative planning and forecasting activities.			.806		
Our suppliers provide input during strategic decision-making processes.			.829		
Our organization involves suppliers in discussions about product innovations.			.816		
We work closely with our suppliers to improve production processes.			.827		
Supplier Development (SD)					
Our organization provides training and support to help suppliers improve their performance.				.800	

We actively invest in improving the capabilities of our suppliers.				.818	
We work with suppliers to ensure they adopt best practices and new technologies.				.820	
Our suppliers participate in programs aimed at enhancing their quality and efficiency.				.799	
We collaborate with suppliers on initiatives to improve sustainability and innovation.				.788	
Organizational performance (OP)					
Our organization has experienced improved operational efficiency over the past year.					.811
We have seen a noticeable increase in customer satisfaction due to supplier collaboration.					.821
Our organization's financial performance has improved due to better supplier relationships.					.829
Our organization has reduced costs by improving supplier management.					.777
Overall, our organization has experienced growth in market share through effective SRM practices.					.812

Table 1 demonstrates that the results of the Exploratory Factor Analysis (EFA) confirm the validity of the measurement instruments, with the questionnaire items consistently and strongly correlating with their respective constructs. The high factor loadings indicate that the items effectively represent Supplier Trust, Supplier Communication, Supplier Involvement, Supplier Development, and Organizational Performance. As a result, the factor structure provides strong evidence supporting the construct validity of the study's measures.

Results

Socio-demographic Characteristics

The background information covered gender, age, education, and years of experience. In terms of gender, 65% of the respondents were male, while 35% were female. Regarding age, 10% of respondents were under 20 years old, with the largest group (34%) falling within the 21 to 30 age range. Those aged 31 to 40 made up 42%, and 10% were between 41 and 50 years old, indicating that the majority were relatively young and active. Concerning education, 40% of respondents had vocational training, while 42% held a bachelor's degree, 12% a master's degree, and 6% a

doctorate. As for years of experience, 40% had over 20 years, 30% had 15 to 19 years, 20% had 10 to 14 years, and 5% had 5 to 9 years of experience.

The implications of this background information suggest a workforce that is predominantly male, relatively young, and well-educated. With the majority of respondents aged between 21 and 40, this indicates a demographic that is likely in their prime working years, energetic, and capable of adapting to new challenges. The significant proportion of respondents with higher education, particularly bachelor's and master's degrees, suggests a strong foundation of knowledge and skills, which can contribute to higher productivity and innovation. The considerable experience level, with 40% having over 20 years of experience, also suggests a wealth of practical expertise that could enhance organizational decision-making and leadership. This combination of youth, education, and experience presents an environment conducive to growth, innovation, and long-term success.

Table 2: Path Analysis Structural Equation Modelling (Direct Effect)

Path	Beta-value	t-value	p-value	Hypothesis	Remark
ST→ *O*P	0.602	7.77	0.000	H1	Supported
SC→ *O*P	0.507	5.29	0.000	H2	Supported
SI→ *O*P	0.592	6.08	0.000	H3	Supported
SD→ *O*P	0.611	7.86	0.000	H4	Supported
IT→ *OP*	0.476	5.07	0.000	H5	Supported

The results from the Structural Equation Modelling (SEM) in Table 2 reveal the direct effects of various independent variables (ST, SC, SI, SD, and IT) on organizational performance (OP). A beta value of 0.602 and a t-value of 7.77 indicate that supplier trust (ST) positively influences organizational performance. Additionally, the p-value of 0.000 confirms that this effect is statistically significant, highlighting the strong positive impact of ST on OP. This study aligns with Lincolin and Kinyua (2022), who found that trust-based collaboration fosters product innovation, improves quality, and enhances flexibility in responding to market changes. Social Exchange Theory (SET) and Dynamic Capabilities Theory (DCT) also support the idea that trust in supplier relationships is a key driver of collaboration and performance. Similarly, Rajasulochana (2022) highlights that supplier trust enhances agility, adaptability, and innovation, all of which contribute to improved organizational performance. Vasić *et al.* (2019) further argue that trust-based supplier relationships ensure a steady supply of high-quality materials, improve supplier responsiveness, and enable more flexible procurement strategies, supporting sustained performance.

Naini et al. (2022) also emphasize that trust-based collaboration is a strong predictor of organizational performance.

The implication of these results is that supplier trust (ST) plays a critical role in enhancing organizational performance. The strong positive relationship, as evidenced by the beta value of 0.602 and a statistically significant p-value of 0.000, suggests that organizations that foster trust with their suppliers are likely to see substantial improvements in performance. This finding underscores the importance of building and maintaining reliable, trust-based supplier relationships as a strategic approach to driving organizational success. Organizations should prioritize strengthening supplier trust as it directly contributes to better operational outcomes. Thus, H1 is supported.

The results also indicate that supplier communication (β= 0.507; t = 5.29) has a significantly positive effect on organizational performance.The study aligns with the findings of Poufinas et al. (2018), which indicate that proactive communication aids in anticipating and mitigating risks like supply disruptions, compliance challenges, and changing market demands, thereby ensuring business continuity. Kamau (2013) also confirms that effective communication optimizes operations by ensuring timely deliveries, appropriate costs, and accurate quantities, ultimately enhancing production efficiency. Additionally, Sukati et al. (2020) emphasize that communication regarding shipping schedules, delivery updates, and logistics issues plays a significant role in influencing organizational performance.The implication of this result is that effective communication with suppliers can substantially enhance organizational performance. The moderately strong relationship suggests that improvements in supplier communication practices may lead to better coordination, reduced inefficiencies, and stronger supply chain management, ultimately boosting overall performance. Organizations should therefore prioritize establishing clear, consistent, and timely communication with suppliers to drive operational success. Therefore, H2 is supported.

A beta value of 0.592, t-value of 6.08, and p-value of 0.000 indicate that supplier involvement has a strong and statistically significant positive relationship with organizational performance. This study supports the findings of Kiarie (2017), which state that involving suppliers early in the manufacturing process allows their technical expertise to drive innovation in product design, materials, and processes, giving manufacturers a competitive edge. Similarly, Nabiliki et al. (2018) demonstrate that close collaboration with suppliers enables manufacturers to streamline operations, reduce lead times, and accelerate production cycles, leading to faster product launches. Additionally, Lukhoba and Muturi (2015) confirm that supplier involvement enhances operational flexibility, allowing for quicker

responses to changes in demand, production schedules, and supply chain disruptions. The implication of this result is that actively involving suppliers in key processes can significantly enhance organizational performance. The strong and statistically significant relationship suggests that organizations that engage suppliers in decision-making, product development, and other collaborative efforts are likely to experience improved operational efficiency, innovation, and overall success. Therefore, fostering closer partnerships with suppliers can be a strategic advantage for improving performance outcomes. This supports H3.

The result of the analysis also demonstrates that supplier development has one of the strongest relationships with organizational performance, evidenced by a beta value of 0.611 and a t-value of 7.86. The study aligns with Adedokun et al. (2017), who found that supplier development initiatives lower costs by enhancing supplier processes, reducing material waste, optimizing production methods, and streamlining supply chain management, ultimately resulting in decreased production costs and improved organizational performance. Similarly, Westhuizen and Ntshingila (2020) emphasize that a well-developed supplier base is less vulnerable to risks such as supply disruptions, quality defects, or financial instability. Supplier development programs play a crucial role in identifying and mitigating these risks, ensuring smoother operations and enhanced performance. Furthermore, Jha (2022) affirms that supplier development promotes collaboration and joint innovation, with suppliers and manufacturers collaborating on new technologies and methods, thereby driving innovation and strengthening manufacturing capabilities. Yi et al. (2022) also indicate that by enhancing the efficiency and responsiveness of suppliers, manufacturers can reduce lead times and accelerate production cycles, leading to quicker product launches and a competitive advantage in the market.

The implication of this result is that supplier development plays a crucial role in enhancing organizational performance. The strong relationship, as indicated by the high beta and t-values, suggests that investing in supplier development—such as training, capacity building, and process improvements—can lead to significant performance gains for the organization. Companies that prioritize strengthening their suppliers' capabilities are likely to achieve better operational outcomes, increased efficiency, and competitive advantage. Hence, H4 is supported.

The evidence also confirms that information technology has a significant positive impact on organizational performance, with a beta value of 0.476, a t-value of 5.07, and a p-value of 0.000. This study aligns with Ogonu (2016), who asserts that information technology facilitates quicker decision-making, improved coordination, and more transparent relationships, thereby enhancing supplier relationship

management (SRM) practices and overall organizational performance. Additionally, Mukyala (2020) highlights that IT automates routine SRM tasks such as order processing, contract management, and supplier performance monitoring, which reduces manual errors, increases efficiency, and allows resources to be redirected toward strategic initiatives. Furthermore, Khaddam*et al.* (2020) demonstrate that IT fosters innovation within SRM by enabling collaboration on product development, process improvements, and technology adoption between manufacturers and suppliers.

The implication of this result is that leveraging information technology significantly enhances organizational performance. The strong statistical relationship suggests that adopting and integrating IT systems can improve efficiency, decision-making, and overall operational effectiveness. Organizations that invest in IT infrastructure and digital tools are likely to see notable performance improvements, gaining a competitive edge in the market through better data management, communication, and automation of processes. This supports H5.

Overall, the results highlight critical factors that organizations can leverage to improve performance, emphasizing the importance of addressing multiple dimensions simultaneously to maximize impact.

Table 3: Path Analysis Structural Equation Modelling (Indirect Effect)

Path	Beta-value	t-value	p-value	Hypothesis	Remark
ST→ *IT* → *O*P	0.727	8.01	0.000	H6	Partially Supported
SC → *IT* → *O*P	0.698	7.93	0.000	H7	Partially Supported
SI → *IT* → *O*P	0.769	8.87	0.000	H8	Partially Supported
SD → *IT* → *O*P	0.678	7.87	0.000	H9	Partially Supported

Table 3 displays the results of a path analysis conducted using structural equation modeling (SEM) to assess the indirect effects of various factorssupplier trust, supplier communication, supplier involvement, and supplier developmenton organizational performance (OP), mediated by information technology (IT). The beta value of 0.727 indicates a strong positive effect of supplier trust on organizational performance through information technology, with a p-value of 0.000 suggesting that

the mediating effect of IT is partial. This finding implies that organizations should prioritize building trust and effective communication with suppliers, as strengthening these relationships can lead to improved utilization of information technology, ultimately enhancing overall performance. Thus, hypotheses H6 and H7 are partially supported.

The beta value of 0.769 demonstrates the strongest positive impact among the paths, indicating that supplier involvement significantly influences organizational performance through information technology. The p-value of 0.000 further suggests that the mediating effect of IT is partial. Given the strong impact of supplier involvement, organizations should actively engage suppliers in key processes and decision-making. This collaboration can foster innovation and improve operational efficiencies. Additionally, the beta value of 0.678 illustrates a robust positive relationship between supplier development and organizational performance, mediated by information technology. The p-value of 0.000 reinforces that the mediating effect of IT is partial. This positive mediation effect highlights the necessity for organizations to invest in strong IT systems, as effective IT infrastructure can enhance supplier management and performance outcomes. Therefore, supplier development initiatives should be implemented to equip suppliers to contribute effectively to operations, leading to sustained performance benefits. Consequently, hypotheses H8 and H9 are also partially supported.
Overall, the results suggest that organizational performance is influenced by a complex network of relationships and processes. A holistic approach that integrates supplier relationships, communication, and technology is crucial for achieving optimal outcomes.

Conclusion:

This study examines the impact of Supplier Relationship Management (SRM) practices on organizational performance in the Nigerian manufacturing industry, with a particular focus on the mediating role of information technology (IT).Results indicate that SRM practices have a significant direct positive effect on organizational performance. Among these practices, supplier trust, communication, involvement, and development were found to be particularly influential. Notably, supplier development exhibited the strongest relationship with organizational performance.The study also highlights the significant contribution of information technology (IT) to organizational performance. This supports the idea that effective IT utilization can enhance performance. Furthermore, the analysis suggests that IT plays a mediating role in the relationships between supplier trust, involvement, and development on organizational performance.This is particularly evident in the case of supplier involvement, where IT has the most pronounced impact. These findings

underscore the importance of leveraging IT to optimize supplier relationships and drive improved organizational outcomes.

In conclusion, this study underscores the interconnectedness of trust, communication, involvement, development, and technology in driving organizational performance. Organizations should prioritize building robust supplier relationships based on trust and effective communication, actively engage suppliers in decision-making processes, and invest in their development to foster innovation and operational efficiency. Moreover, leveraging information technology is crucial to support these relationships and ultimately enhance organizational performance.

Theoretical implications:

This study advances the literature by presenting a comprehensive framework that elucidates the interconnectedness of Supplier Relationship Management (SRM), Information Technology (IT), and organizational performance within emerging economies such as Nigeria. By integrating Social Exchange Theory (SET) and Dynamic Capabilities Theory (DCT), the research offers a dual-theoretical perspective that enhances our understanding of how SRM practices and IT collaboratively enhance manufacturing performance. This integration facilitates a nuanced examination of relational dynamics, as articulated by SET, alongside the adaptability and innovative capabilities emphasized by DCT. Applying SET underscores the significance of trust, reciprocity, and relational exchanges in effective SRM. This focus indicates that successful supplier relationships extend beyond mere transactions; they hinge on mutual benefits and shared objectives. Such insights can inform how firms devise partnership strategies within emerging markets. Conversely, the application of DCT reveals that organizations need to be both dynamic and adaptable to maintain competitive advantages. This suggests that firms in Nigeria and similar contexts should not only invest in IT but also concentrate on developing their capabilities to effectively harness these technologies for innovation and process enhancement. The study highlights that incorporating IT into SRM practices bolsters communication, information sharing, and collaboration between manufacturers and suppliers, offering practical implications for firms seeking to enhance operational efficiency and performance through technological investments.

The theoretical frameworks presented can guide managers in manufacturing firms to prioritize relational aspects of supplier management while investing in dynamic capabilities. By acknowledging the interplay between trust-building (SET) and adaptability (DCT), managers can formulate more effective strategies that lead to

improved performance outcomes. By concentrating on emerging economies like Nigeria, this research addresses a significant gap in the existing literature, which often prioritizes developed markets. This focus invites further investigation into how contextual factors impact the application of established theories like SET and DCT in diverse economic environments. Ultimately, the combined theoretical perspective laid out in this study provides a robust foundation for future empirical research exploring the intersections of SRM practices, IT, and performance across various industries and regions. It opens pathways for investigating other influencing factors, such as cultural, economic, and technological variables. In summary, the theoretical implications of this study underscore the necessity for a holistic understanding of supplier relationships within emerging economies, emphasizing the critical roles of trust, adaptability, and technology integration in enhancing organizational performance. By leveraging SET and DCT, the research not only enriches academic discourse but also offers valuable insights for managers in the manufacturing sector.

Practical Implications:

The results of this study provide several critical practical implications for both manufacturers and policymakers in the Nigerian manufacturing sector. For Manufacturers, the strong positive relationship between supplier trust and organizational performance emphasizes the critical need for manufacturers to cultivate trust within their supplier relationships. This can be achieved through transparent communication, reliability, and mutual respect. Manufacturers should implement strategies to build trust, including regular meetings and feedback mechanisms. Given the significant influence of supplier communication on performance, manufacturers must prioritize establishing effective communication channels with their suppliers. Timely sharing of information regarding orders, logistics, and market demands is essential for fostering collaboration and coordination. Leveraging communication technologies can also help reduce misunderstandings and operational inefficiencies. The findings indicate that involving suppliers early in the manufacturing process can significantly enhance innovation and operational efficiency. Manufacturers should actively engage suppliers in product development and decision-making processes, utilizing their expertise to drive improvements and gain a competitive advantage. The strong connection between supplier development and organizational performance suggests that manufacturers should invest in initiatives to enhance their suppliers' capabilities. This could involve training programs, capacity building, and process optimization to ensure that suppliers meet quality and efficiency standards, ultimately leading to improved performance.

Moreover, the significant positive impact of information technology (IT) on performance indicates that manufacturers need to invest in robust IT systems. Adopting digital tools for supply chain management, process automation, and data analysis can enhance decision-making and operational efficiency. Additionally, manufacturers should provide training for their staff to effectively utilize these technologies. A holistic strategy that integrates trust, communication, supplier involvement, and development is essential. Manufacturers should aim to create collaborative relationships with their suppliers, focusing on joint initiatives that promote innovation and responsiveness to market changes.

For Policymakers, they should prioritize enhancing the technological infrastructure that supports manufacturing operations. Investments in digital technologies and supply chain management systems can significantly boost overall industry performance. Establishing guidelines and best practices for supplier relationship management (SRM) can assist manufacturers in optimizing their operations. Policymakers should also promote training programs and workshops to educate manufacturers on effective SRM practices. Furthermore, policymakers can facilitate collaboration between manufacturers and suppliers through initiatives that promote networking and partnerships. This could involve creating platforms for dialogue, resource sharing, and supporting industry associations focused on supplier development. Providing regulatory support for innovation in supplier development and technology adoption can drive improvements in organizational performance across the manufacturing sector. Policymakers should consider offering incentives for companies that invest in supplier training and technology integration. Implementing monitoring systems to evaluate the effectiveness of SRM practices across the industry is also crucial. Regular assessments can provide valuable insights into areas needing improvement, ensuring that manufacturers leverage supplier relationships effectively.

In conclusion, the findings of this study underscore the essential roles of trust, communication, involvement, development, and IT in enhancing organizational performance within the Nigerian manufacturing sector. By adopting the recommended practices, manufacturers can improve their performance outcomes, while policymakers can create an enabling environment that supports these initiatives. The synergy between effective SRM practices and robust IT infrastructure is vital for achieving sustainable competitive advantages in today's dynamic market landscape.

Limitation and suggestion for further studies:

While this study presents research conclusions with significant theoretical and practical implications, it also has limitations that warrant further exploration in future research. Firstly, the sample for this study is confined to the manufacturing sector in

Southwest Nigeria, necessitating further investigation to determine whether the findings are generalizable to other regions of Nigeria. Secondly, this study did not examine moderating variables, such as innovation capabilities, which could help elucidate the mechanisms through which supplier relationship management (SRM) practices affect organizational performance in the manufacturing industry. Future research should consider incorporating additional variables to enhance the modeling framework and improve the comprehensiveness of the mechanisms by which SRM practices influence organizational performance in the manufacturing sector.Thirdly, this study is limited to the manufacturing sector. Future research could replicate this study across other sectors, such as healthcare, oil and gas, construction, and agriculture, to broaden the generalizability of the findings. Additionally, it would be beneficial to conduct a similar study within Small and Medium Enterprises (SMEs) to assess whether they encounter challenges related to SRM practices and information technology.

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