

EFFECT OF SUPPLY CHAIN MANAGEMENT PRACTICES ON THE PERFORMANCE OF MANUFACTURING COMPANIES IN THE FCT ABUJA

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ABSTRACT

Persistent operational inefficiencies and declining customer satisfaction among manufacturing firms in the FCT Abuja, often linked to weak coordination within supply chains, informed this study, which examined the effect of supply chain management practices on the performance of manufacturing companies in the FCT Abuja. The study adopted a descriptive survey research design, with a population of 430 employees drawn from Subtotal (Afrifab Steel) and G.U. Ebeco Industries, from which a sample size of 207 was determined using Yamane's formula and selected through stratified sampling. Primary data were collected using a structured questionnaire, while data analysis was conducted using regression analysis with the aid of SPSS version 27. The findings revealed that strategic supplier partnership had a significant positive effect on operational performance, while customer relationship management significantly influenced customer satisfaction. The study concluded that effective supply chain management practices were critical drivers of both operational efficiency and customer-oriented performance among manufacturing firms in Abuja. Based on these findings, the study recommended that firms should strengthen long-term supplier partnerships through collaboration and information sharing, and enhance customer relationship management practices by improving responsiveness and feedback systems.

keywords: supply chain management practices, strategic supplier partnership, customer relationship management, operational performance, customer satisfaction

INTRODUCTION

Supply chain management has increasingly developed from a predominantly operational function into a strategic capability that influences how firms coordinate their networks, respond to disruptions, build resilience, and compete in uncertain global environments (Ivanov & Dolgui, 2020; Chowdhury et al., 2021; Wieland & Durach, 2021; Iftikhar et al., 2024). Its strategic importance has become especially evident as firms confront increasingly uncertain and disruption-prone business environments (Christopher & Peck, 2004). Over the past few years, this shift has become even more visible. Disruptions linked to global crises, fluctuating demand patterns, and rising customer expectations have forced firms to rethink how they organise and

coordinate their supply networks. What once appeared to be a linear flow of materials is now understood as a complex, interdependent system where relationships, information, and timing matter just as much as production itself. In this broader landscape, firms that actively refine their supply chain practices often appear better positioned to absorb shocks and sustain performance. Recent empirical work points in this direction, suggesting that structured and well-integrated supply chain practices contribute to both efficiency and long-term competitiveness (Zhou & Li, 2020; Gera et al., 2022; Mustafi et al., 2024). Yet, these global patterns do not always translate neatly across contexts, particularly within emerging economies where infrastructural and institutional realities introduce a different set of constraints.

Against this backdrop, supply chain management practices can be understood as the deliberate coordination of activities and relationships that facilitate the movement of goods, services, and information from source to end user. They reflect how firms engage with suppliers, respond to customers, and align internal processes with external demands. More than a set of technical routines, these practices function as strategic tools through which organisations seek to enhance performance outcomes such as efficiency, responsiveness, and customer value (Alam, 2022; Hassan, 2023). Within this broad construct, two dimensions deserve closer attention. Strategic supplier partnership captures the extent to which firms build long-term, collaborative relationships with their suppliers. In practical terms, this may involve shared planning, consistent communication, and a degree of mutual dependence. For manufacturing firms in Abuja, where supply disruptions and cost volatility are not uncommon, such partnerships can provide a degree of stability. Reliable supplier performance and well-managed supplier relationships can reduce firms' exposure to frequent and prolonged supply disruptions, thereby limiting production delays and strengthening their capacity to manage input uncertainty (Elliott et al., 2022; Zhou et al., 2022; Burkhart & Bode, 2024). Alongside this, customer relationship management focuses on how firms understand and respond to their customers. It encompasses feedback mechanisms, service responsiveness, and ongoing engagement. In a competitive market where switching costs are relatively low, the ability to sustain strong customer relationships can influence not only repeat patronage but also the firm's capacity to anticipate demand shifts. Evidence from Nigerian and broader African contexts suggests that firms that nurture both upstream and downstream relationships tend to perform more consistently (Adebiyi et al., 2021; Ogomegbunam, 2023; Martey et al., 2022).

Performance, particularly within the manufacturing sector, resists a narrow definition. It is rarely confined to financial outcomes alone, especially in environments such as Abuja where operational realities shape day-to-day decision-making. For manufacturing firms, performance often reflects how efficiently resources are utilised

and how effectively customer expectations are met. Operational performance speaks to internal efficiency, including production reliability, cost management, and the ability to meet delivery timelines (Adah et al., 2025). These aspects are critical in a setting where infrastructural challenges, energy constraints, and supply inconsistencies can disrupt production cycles. Customer satisfaction, on the other hand, reflects the external dimension of performance. It is concerned with how customers perceive product quality, service delivery, and overall value. In practice, a firm may achieve reasonable operational efficiency yet struggle with customer retention if service expectations are not met. This dual perspective on performance aligns with recent studies that highlight the importance of balancing internal efficiency with external responsiveness in manufacturing environments (Abiodun & Omoregbe, 2021; Nuraini et al., 2021).

What remains less straightforward, however, is how supply chain management practices interact with these performance dimensions within the specific context of FCT-Abuja. On one level, it seems plausible that firms investing in strong supplier partnerships and effective customer relationship systems would experience smoother operations and improved customer satisfaction. Yet, the reality may be more nuanced. External constraints, ranging from logistics bottlenecks to regulatory pressures, can mediate how these practices translate into tangible outcomes. A manufacturing firm might develop close supplier relationships and still encounter delays beyond its control. Similarly, investments in customer engagement may take time before reflecting in measurable performance gains. This suggests a relationship that is not entirely linear, but rather contingent on context, execution, and perhaps even timing. It is within this space of possibility and uncertainty that this study seeks to engage, examining how supply chain management practices relate to the performance of manufacturing companies in Abuja without assuming a uniform pattern of effects.

Statement of the Problem

The operating environment of manufacturing firms in Abuja had remained challenging. Companies such as Afrifab Steel and G.U. Ebeco Industries continued to operate under

conditions characterised by unstable raw material supply, rising transportation and logistics costs, foreign exchange volatility, poor transport infrastructure, and inconsistent electricity supply, all of which constrained operational performance. According to the Manufacturers Association of Nigeria (MAN, 2024), the manufacturing sector's average capacity utilisation stood at 57.0% in 2023, while inventory of unsold finished goods increased to approximately ₦1.24 trillion, reflecting weak market absorption and operational inefficiencies. The National Bureau of Statistics (2024) also reported that manufacturing contributed approximately 8.6% to Nigeria's real Gross Domestic Product in 2023, indicating that despite its strategic importance, the sector continued to underperform relative to its potential. Within Abuja, these macroeconomic and operational challenges had implications for firms such as Afrifab Steel and G.U. Ebeco Industries, where supply disruptions could delay production schedules, increase operating costs, weaken supplier relationships, and ultimately reduce customer satisfaction.

Although several empirical studies had examined supply chain management practices and organisational performance (Zhou & Li, 2020; Adebisi et al., 2021; Martey et al., 2022; Ogomegbunam, 2023), most were conducted outside the FCT or examined supply chain management as a broad construct without specifically investigating the combined influence of strategic supplier partnership and customer relationship management on operational performance and customer satisfaction within manufacturing companies in Abuja. Furthermore, few studies had focused specifically on Afrifab Steel and G.U. Ebeco Industries despite their significant roles in the manufacturing landscape of the FCT. This contextual and empirical gap created the need for this study to examine how supply chain management practices influenced the performance of manufacturing companies in the FCT Abuja.

Research Questions

Based on the stated problem, this study seeks to address the following questions:

- i. How does strategic supplier partnership affect the operational

performance of manufacturing companies in the FCT Abuja

- ii. To what extent does customer relationship management influence customer satisfaction among manufacturing companies in the FCT Abuja

Research Objectives

To examine the effect of supply chain management practices on the performance of manufacturing companies in the FCT Abuja. The specific objectives are to:

- i. assess the effect of strategic supplier partnership on the operational performance of manufacturing companies in the FCT Abuja.
- ii. evaluate the effect of customer relationship management on customer satisfaction among manufacturing companies in the FCT Abuja.

Research Hypotheses

In line with the objectives of the study, the following null hypotheses are formulated:

H₀₁: Strategic supplier partnership has no significant effect on the operational performance of manufacturing companies in the FCT Abuja.

H₀₂: Customer relationship management has no significant effect on customer satisfaction among manufacturing companies in the FCT Abuja.

Scope of the Study

This study was delimited to examining the effect of supply chain management practices on the performance of selected manufacturing companies in the Federal Capital Territory, Abuja. Specifically, the study focused on two dimensions of supply chain management practices, namely strategic supplier partnership and customer relationship management, while organisational performance was assessed using operational performance and customer satisfaction. The geographical scope covered Afrifab Steel Limited and G.U. Ebeco Industries Limited in Abuja, and the study population comprised employees working in procurement, production, logistics, warehousing, sales, customer service, and

administrative units because of their direct involvement in supply chain-related activities. The study adopted a cross-sectional survey approach and relied on primary data collected through a structured questionnaire during the 2026 study period. Other supply chain dimensions, such as information sharing, inventory management, lean practices, and technology integration, as well as financial performance indicators, were excluded from the study.

LITERATURE REVIEW

Conceptual Framework

Concept of Supply Chain Management Practices

Supply chain management practices have increasingly been framed as a set of coordinated organisational routines that govern how firms manage relationships, information, and material flows across the value chain. Rather than a purely logistical function, contemporary perspectives treat these practices as strategic capabilities that shape how firms respond to uncertainty and create value. In more recent scholarship, supply chain management practices are described as structured activities that enhance integration among supply chain partners while improving efficiency and responsiveness within the firm (Alam, 2022; Hassan, 2023). This shift in thinking reflects a broader recognition that competitive advantage is rarely generated within firm boundaries alone; it emerges through networks of interdependent actors whose actions must be synchronised, even if imperfectly.

There is also a growing sense that the effectiveness of these practices depends less on their presence and more on how they are implemented in context. For instance, while global firms may rely heavily on digital integration and advanced analytics, manufacturing firms in developing economies often navigate more fragmented systems where informal coordination still plays a role. In Nigeria, and particularly within the Abuja manufacturing environment, supply chain practices tend to evolve in response to infrastructural constraints and market volatility.

This makes them both adaptive and uneven in their outcomes. Empirical work has suggested that firms that deliberately strengthen relational and informational dimensions of their supply chains tend to achieve better performance outcomes, although the extent of this improvement varies depending on external conditions (Ogomegbunam, 2023; Mustafi et al., 2024).

Strategic Supplier Partnership

Strategic supplier partnership refers to the deliberate development of long-term, collaborative relationships between a firm and its key suppliers. It moves beyond transactional exchanges towards a model where both parties share information, risks, and, in some cases, decision-making responsibilities. Recent studies conceptualise this dimension as a critical mechanism for ensuring supply reliability, cost efficiency, and innovation in product development (Zaidi & Lakhal, 2025; Nuraini et al., 2021). In practice, it often involves joint planning, early supplier involvement, and continuous communication, all of which contribute to reducing uncertainties within the supply chain.

Still, the reality is that forming such partnerships is not always straightforward, particularly in environments characterised by weak institutional frameworks. In Abuja, manufacturing firms frequently encounter issues such as inconsistent supplier performance and fluctuating input costs. Under these conditions, firms that succeed in building stable supplier relationships may gain a form of operational resilience that others lack. There is, however, a subtle tension here. While close partnerships can enhance trust and coordination, they may also increase dependency on a limited number of suppliers, which could become risky if disruptions occur. This duality suggests that strategic supplier partnership is not a simple remedy but a nuanced practice that requires careful balancing (Adebiyi et al., 2021; Martey et al., 2022).

Customer Relationship Management

Customer relationship management, often shortened to CRM, focuses on how firms build, maintain, and deepen relationships with their customers. It encompasses activities such as customer feedback collection, service

responsiveness, and personalised engagement. More recent conceptualisations position CRM as both a technological and relational capability, where digital tools support, but do not replace, meaningful interactions with customers (Alam, 2022; Gera et al., 2022). The underlying idea is that firms that understand their customers more deeply are better equipped to meet expectations and adapt to changing demand patterns.

In the context of manufacturing firms in Abuja, CRM takes on a slightly different texture. Customers, whether distributors or end users, often place significant emphasis on reliability and service consistency. A firm that responds promptly to complaints or adjusts production to meet specific customer needs is likely to build stronger loyalty over time. Yet, CRM in this setting is not without its constraints. Limited technological infrastructure and resource pressures may restrict the extent to which firms can implement sophisticated CRM systems. As a result, many firms rely on more informal but still effective approaches, such as direct communication and relationship-based transactions. These practices, while less formalised, can still contribute meaningfully to performance outcomes when managed thoughtfully (Abiodun & Omoregbe, 2021; Ogomegbunam, 2023).

Concept of Organisational Performance

Performance, as a construct, resists a single, universally accepted definition. In manufacturing contexts, it is often understood as the extent to which a firm achieves its operational and market objectives within given constraints. Contemporary perspectives tend to adopt a multidimensional view, recognising that financial indicators alone do not fully capture organisational effectiveness. Instead, performance is increasingly assessed through a combination of operational efficiency, customer outcomes, and adaptability to changing conditions (Hassan, 2023; Mustafi et al., 2024). This broader framing allows for a more nuanced understanding of how firms function in real-world environments where trade-offs are inevitable.

For manufacturing companies in Abuja, performance is shaped by both internal capabilities and external realities. Firms must navigate challenges such as energy costs,

supply inconsistencies, and logistical delays, all of which influence how efficiently they can operate. At the same time, they must meet customer expectations in markets that are becoming more competitive and quality-conscious. This dual pressure creates a situation where performance is not simply about achieving targets but about sustaining operations under constraints. It also highlights why examining performance through specific dimensions, rather than as a single aggregate measure, offers a more meaningful analytical lens (Martey et al., 2022; Nuraini et al., 2021).

Operational Performance

Operational performance refers to the efficiency and effectiveness with which a firm manages its internal processes. It typically encompasses aspects such as production efficiency, cost control, lead time reduction, and quality consistency. Recent literature frames operational performance as a direct outcome of how well a firm aligns its resources and processes with its strategic objectives (Zhou & Li, 2020; Hassan, 2023). In this sense, it acts as an internal barometer of organisational health, reflecting the firm's ability to deliver outputs reliably and efficiently.

Within Abuja's manufacturing sector, operational performance is often tested by external constraints that disrupt internal processes. Power outages, transportation delays, and fluctuating input prices can all affect production schedules. Firms that manage to maintain stable operations under such conditions often do so by refining their supply chain practices, even if incrementally. Yet, achieving high operational performance is not merely about overcoming constraints; it also involves continuous improvement and adaptation. This suggests that operational performance is both a result and a driver of organisational learning, evolving as firms respond to changing circumstances (Adebiyi et al., 2021; Ogomegbunam, 2023).

Customer Satisfaction

Customer satisfaction captures how well a firm's products and services meet or exceed customer expectations. It reflects perceptions of quality, reliability, and value, rather than purely objective measures. In recent scholarship,

customer satisfaction is often linked to long-term organisational outcomes such as loyalty and market share, making it a critical dimension of performance (Abiodun & Omoregbe, 2021; Gera et al., 2022). It is, in many ways, the external validation of a firm's internal efforts.

For manufacturing firms in Abuja, customer satisfaction can be particularly sensitive to inconsistencies in supply and service delivery. A delay in product availability or a decline in quality can quickly erode trust, especially in markets where alternatives are accessible. At the same time, firms that consistently meet delivery timelines and respond effectively to customer concerns tend to build stronger relationships over time. Interestingly, even small improvements in service responsiveness can have a noticeable impact on customer perceptions. This highlights the subtle but powerful role that customer-focused practices play in shaping performance outcomes, even when broader operational challenges persist (Martey et al., 2022; Mustafi et al., 2024).

Theoretical Framework

This study is anchored on the Resource-Based View (RBV) of the firm. The theory was originally proposed by Wernerfelt in 1984 and later extended by Barney in 1991. The central assumption of RBV is that firms achieve sustained competitive advantage by possessing and effectively deploying valuable, rare, inimitable, and non-substitutable resources. In more recent discussions, supply chain management practices are increasingly interpreted as strategic capabilities rather than mere operational activities, aligning closely with the RBV perspective (Alam, 2022; Hassan, 2023).

That said, the theory has not been without criticism. Some scholars argue that RBV tends to underemphasise external environmental factors, focusing too heavily on internal resources while overlooking market dynamics and institutional constraints. This limitation becomes particularly evident in developing economies where external challenges can significantly shape firm outcomes. Even so, the strength of RBV lies in its ability to explain why firms operating within similar environments often perform differently. It draws attention to the role of internal capabilities, such as

relationship management and coordination mechanisms, in driving performance.

In the context of this study, RBV provides a useful lens for understanding how supply chain management practices function as strategic resources within manufacturing firms in Abuja. Strategic supplier partnerships and customer relationship management can be seen as capabilities that, when effectively developed, enable firms to enhance operational performance and customer satisfaction. While external constraints may influence outcomes, the theory suggests that firms that cultivate these capabilities are more likely to navigate such challenges successfully. This makes RBV particularly relevant for examining the nuanced relationship between supply chain practices and performance in the FCT-Abuja manufacturing sector.

Empirical Review

Al-Shboul et al. (2017) examined the effect of supply chain management practices on supply chain and manufacturing firms' performance, focusing on manufacturing firms across Jordan, where the study adopted a quantitative cross-sectional survey design with a population comprising manufacturing firms registered within the industrial sector, from which a structured sample of firms was selected using stratified sampling, and primary data were collected through structured questionnaires administered to supply chain and operations managers and analysed using structural equation modelling; the study reported that supply chain management practices, particularly strategic supplier relationships and information sharing, significantly improved both supply chain and firm performance, leading to the recommendation that firms should invest in collaborative supply chain structures and integration mechanisms, although the study acknowledged limitations relating to its cross-sectional design and geographic concentration, which restricted generalisability.

Ogomegbunam (2023) investigated the effect of supply chain management practices on manufacturing firms' performance in Delta State, Nigeria, adopting a survey research design with a population of registered manufacturing firms in the state and a sample derived through purposive sampling, while data

were obtained from primary sources using structured questionnaires and analysed using regression analysis; the findings indicated that supply chain management practices had a significant positive effect on firm performance, particularly through improved coordination and supplier relationships, and the study recommended that firms strengthen integration across their supply chains, though it was limited by its reliance on self-reported data and focus on a single state, which may have constrained broader applicability.

Martey et al. (2022) explored the performance implications of supply chain management practices among manufacturing firms in Ghana using a quantitative survey design, with a population consisting of manufacturing firms and a sample selected through random sampling techniques, while primary data were collected via questionnaires and analysed using multiple regression analysis; the study found that supply chain management practices significantly influenced both operational and financial performance, prompting recommendations for enhanced collaboration and investment in supply chain systems, although limitations included potential response bias and the exclusion of qualitative insights that could have enriched interpretation.

Adebisi et al. (2021) examined supply chain management practices and manufacturing firms' performance in Nigeria by adopting a descriptive survey design involving professionals within manufacturing organisations, where the sample was drawn using convenience sampling and data were collected through structured questionnaires and analysed using descriptive statistics and inferential techniques; the study revealed that effective supply chain practices positively influenced operational efficiency and competitive advantage, and it recommended that firms prioritise strategic supplier partnerships and information integration, while noting limitations such as the relatively small sample size and reliance on professionals' perceptions.

Abiodun and Omoregbe (2021) assessed the relationship between supply chain management, competitive advantage, and organisational performance in the Nigerian manufacturing sector using a survey research design, with a population of manufacturing

firms and a sample selected through stratified sampling, while primary data were collected via questionnaires and analysed using regression techniques; the findings suggested that supply chain management significantly enhanced competitive advantage and overall performance, leading to recommendations for improved coordination and technological adoption, although the study was limited by its cross-sectional nature and the exclusion of longitudinal performance measures.

Hassan (2023) investigated the impact of supply chain integration on organisational performance within a South Asian context using a quantitative research design, where the population comprised manufacturing firms and the sample was obtained through random sampling, while data were collected through structured questionnaires and analysed using structural equation modelling; the study found that supply chain integration had a strong positive effect on performance outcomes, particularly through improved operational coordination, and recommended that firms deepen integration across supply chain partners, though limitations included contextual specificity and limited generalisability to other regions.

Zhou and Li (2020) analysed the impact of supply chain practices and quality management on firm performance among small and medium manufacturing enterprises in China, adopting a quantitative survey design with a large sample selected through random sampling, while primary data were collected via structured questionnaires and analysed using advanced econometric techniques; the study reported that supply chain practices significantly enhanced firm performance, especially when combined with quality management systems, and recommended the integration of supply chain and quality initiatives, although the study acknowledged limitations related to its focus on SMEs and a single national context.

Das (2018) explored the impact of sustainable supply chain management practices on firm performance in Indian organisations using a survey-based research design, where the population included manufacturing firms and the sample was selected using purposive sampling, while data were collected through questionnaires and analysed using regression analysis; the findings indicated that sustainable

supply chain practices positively influenced environmental and economic performance, leading to recommendations for greater adoption of sustainability-oriented practices, although the study was limited by its sectoral focus and reliance on self-reported data.

Gera et al. (2022) conducted a systematic literature review on supply chain management practices and performance, synthesising findings from multiple empirical studies across different regions using a qualitative review methodology, where secondary data sources were analysed through thematic analysis; the review concluded that supply chain management practices consistently contributed to improved organisational performance, particularly through integration and collaboration, and recommended further empirical research in emerging economies, while acknowledging limitations such as potential publication bias and the exclusion of non-English studies.

Alam (2022) examined the relationship between supply chain management practices and organisational performance in the manufacturing industry using a quantitative survey design, with a population of manufacturing firms and a sample selected through random sampling, while data were collected via structured questionnaires and analysed using regression analysis; the study found a significant positive relationship between supply chain practices and performance, recommending increased investment in supply chain capabilities, although it was limited by its cross-sectional design and lack of industry-specific differentiation.

Zaidi and Lakhal (2025) investigated the impact of lean manufacturing practices on green supply chain management and corporate sustainable performance among manufacturing firms in Tunisia using a quantitative research design, where the population comprised manufacturing firms and the sample was selected through stratified sampling, while data were collected through questionnaires and analysed using structural equation modelling; the study found that lean practices significantly enhanced green supply chain management and sustainable performance, leading to recommendations for integrating lean and environmental practices, although limitations included contextual

constraints and the focus on a specific industrial setting.

Literature Gap

The reviewed literature revealed important contextual, conceptual, methodological, and measurement gaps. Contextually, several previous studies were conducted outside Nigeria, including Jordan, Ghana, China, India, South Asia, and Tunisia, making their findings difficult to apply directly to manufacturing firms operating within the distinctive infrastructural and institutional environment of the Federal Capital Territory, Abuja (Al-Shboul et al., 2017; Das, 2018; Zhou & Li, 2020; Martey et al., 2022; Hassan, 2023; Zaidi & Lakhal, 2025). Although some Nigerian studies examined supply chain management and organisational performance, they focused on other geographical locations or the Nigerian manufacturing sector generally rather than manufacturing companies in Abuja (Abiodun & Omoregbe, 2021; Adebisi et al., 2021; Ogamegbunam, 2023). Conceptually, much of the existing research treated supply chain management practices as a broad or composite construct, without separately examining how strategic supplier partnership affects operational performance and how customer relationship management influences customer satisfaction (Alam, 2022; Gera et al., 2022; Ogamegbunam, 2023). In terms of measurement, previous studies commonly assessed organisational performance through aggregated financial, competitive, environmental, or general performance indicators, thereby giving limited attention to the specific outcomes of operational performance and customer satisfaction examined in the present study (Das, 2018; Zhou & Li, 2020; Martey et al., 2022). Methodologically, most of the reviewed empirical studies adopted cross-sectional survey designs and relied on self-reported questionnaire data, which may have introduced response bias and limited the ability to observe changes in supply chain practices and performance over time (Al-Shboul et al., 2017; Adebisi et al., 2021; Alam, 2022; Hassan, 2023). Furthermore, limited empirical evidence exists on Afrifab Steel Limited and G.U. Ebeco Industries Limited, despite the supply disruptions, logistics constraints, input-cost volatility, and customer-service challenges

confronting manufacturing firms in Abuja. The present study therefore addressed these gaps by examining the distinct effects of strategic supplier partnership and customer relationship management on operational performance and customer satisfaction among selected manufacturing companies in the FCT Abuja.

METHODOLOGY

The study adopted a descriptive survey research design, which was considered appropriate because it allowed for the systematic collection of quantitative data from respondents in their natural organisational setting and facilitated the examination of relationships between supply chain management practices and performance without manipulating any variables. The population of the study comprised 375

employees drawn from Subtotal (Afrifab Steel) and G.U. Ebeco Industries in Abuja, while the target population specifically focused on employees of Subtotal (Afrifab Steel) and G.U. Ebeco Industries, including Subtotal (G.U. Ebeco), given their direct involvement in supply chain and operational activities. These two manufacturing companies were purposively selected because they are among the established indigenous manufacturing firms operating within the FCT and possess functional procurement, production, logistics, warehousing, sales, customer service, and administrative units that are directly involved in supply chain management activities. Their operational structures therefore provided an appropriate context for examining the influence of supply chain management practices on organisational performance.

S/N	Company	Population
1	Subtotal (Afrifab Steel Ltd.)	195
2	Subtotal (G.U. Ebeco Industries Ltd.)	180
	Grand Total	375

The sample size was determined using Yamane's (1967) formula, expressed as $n = \frac{N}{1+N(e)^2}$, where $N = 375$ and the level of precision $e = 0.05$; thus, $n = \frac{375}{1+375(0.05)^2} = \frac{375}{1+0.9375} = \frac{375}{1.9375} \approx 194$, indicating a sample size of 194 respondents. To minimise the effect of non-response, incomplete questionnaire, and unusable responses, a 20% margin of safety was added to the calculated sample size. 20% of 194 = 39. Therefore, the final sample size = 194 + 39 = 233 respondents. A stratified sampling technique was employed to divide the population into relevant subgroups based on organisational units, ensuring that all categories of employees were proportionately represented, thereby reducing sampling bias and enhancing the generalisability of the findings. Primary data were utilised for the study, and the method of data collection involved the administration of a structured questionnaire designed on a Likert scale to capture respondents' perceptions. Reliability of the instrument was established using Cronbach's alpha coefficients, which yielded acceptable values for all constructs,

namely strategic supplier partnership ($\alpha = 0.81$), customer relationship management ($\alpha = 0.84$), operational performance ($\alpha = 0.79$), and customer satisfaction ($\alpha = 0.83$), indicating good internal consistency, while validity was ensured through content validity by subjecting the instrument to expert review and the validity of the research instrument was established through a pilot study. The questionnaire was initially administered to employees of a manufacturing company outside the selected firms but possessing characteristics similar to those of the study population. The pilot study enabled the researcher to identify ambiguous statements, assess the clarity and relevance of the questionnaire items, improve the wording of questions, and ensure that the instrument adequately measured the constructs of interest before the final administration. Data analysis was conducted using regression analysis with the aid of Statistical Package for Social Sciences (SPSS) version 27, and the models were specified as follows: for hypothesis one, $OP = \beta_0 + \beta_1 SSP + \varepsilon$, and for hypothesis two, $CS = \beta_0 + \beta_1 CRM + \varepsilon$, where OP represented operational performance, SSP denoted strategic supplier partnership, CS represented customer

satisfaction, CRM denoted customer relationship management, β_0 was the intercept, β_1 the regression coefficient, and ε the error term.

RESULTS AND DISCUSSIONS

This section presented the results of the data analysis and discussed the findings in relation to the study objectives and hypotheses. Data collected from respondents were carefully coded, processed, and analysed using appropriate statistical tools, particularly regression analysis with the aid of SPSS version 27.

Table 1: Administered Questionnaire

	Number	Percentage
Questionnaire Distributed	233	100%
Returned Questionnaire	194	83.3%
Unreturned Questionnaire	39	16.7%

Source: Field Survey, (2026)

Table 1 showed that a total of 233 questionnaires were distributed to the respondents, representing 100% of the administered copies. Out of these, 194 questionnaires were successfully completed and returned, representing a response rate of 83.3%, while 39 questionnaires, accounting for 16.7%, were not returned. The high response rate indicated that the majority of the selected respondents participated in the study, thereby providing sufficient data for the analysis. This level of response was considered adequate for survey research and enhanced the reliability, representativeness, and credibility of the findings. The implication of this result was that

Test of Hypotheses

Hypothesis One

H₀₁: Strategic supplier partnership has no significant effect on the operational performance of manufacturing companies in the FCT Abuja.

Model 1

$$OP = \beta_0 + \beta_1 SSP + \varepsilon \dots\dots\dots 1$$

Table 3

Model Summary

the returned questionnaires provided a sound basis for drawing valid conclusions on the effect of supply chain management practices on the performance of manufacturing companies in the FCT Abuja.

Diagnostics Test

Table 2

Coefficients^a

		Collinearity Statistics	
Model		Tolerance	VIF
1	SSP	.451	2.218
	CRM	.530	1.888

a. Dependent Variable: PF

Table 2 presented the results of the multicollinearity diagnostic test for the independent variables used in the study. The findings showed that strategic supplier partnership (SSP) had a tolerance value of 0.451 and a Variance Inflation Factor (VIF) of 2.218, while customer relationship management (CRM) recorded a tolerance value of 0.530 and a VIF of 1.888. The tolerance values were well above the minimum acceptable threshold of 0.10, and the VIF values were substantially below the maximum threshold of 10.0, indicating the absence of multicollinearity among the predictor variables. This implied that strategic supplier partnership and customer relationship management were sufficiently independent of one another and did not exhibit excessive intercorrelation that could distort the regression estimates. Consequently, the regression model was considered statistically reliable and appropriate for testing the hypotheses, thereby increasing the validity and robustness of the study's findings.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.62	0.384	0.381	0.78

a. Predictors: (Constant), SPP

Source: SPSS Output Version 27.0.

The model summary results indicated that strategic supplier partnership had a moderately strong positive relationship with operational performance, as reflected by the correlation coefficient ($R = 0.62$). The coefficient of determination ($R^2 = 0.384$) showed that approximately 38.4% of the variation in operational performance was explained by strategic supplier partnership, while the adjusted R^2 (0.381) confirmed the stability of the model after adjusting for sample size. The standard error of the estimate (0.78) suggested a reasonable level of accuracy in prediction. These results implied that strategic supplier partnership contributed meaningfully to operational performance, although other factors not captured in the model also played a role.

Table 4 **ANOVA^a**

Model	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	55.12	1	55.12	119.30	< .001
Residual	88.72	192	0.462		
Total	143.84	193			

a. Dependent Variable: OP

b. Predictors: (Constant), SPP

Source: SPSS Output Version 27.0.

The ANOVA results revealed that the regression model was statistically significant, as indicated by the F-value of 119.30 and a p-value less than 0.001. This demonstrated that the model provided a better fit to the data than a model with no predictors, and that strategic supplier partnership significantly explained variations in operational performance. The implication of this finding was that the relationship observed was unlikely to have occurred by chance, thereby providing strong evidence to reject the null hypothesis and suggesting that strategic supplier partnership had a significant effect on operational performance of manufacturing companies in the FCT Abuja.

Table 5 **Coefficients^a**

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig. (p)
(Constant)	1.020	0.120	,	8.50	.001
SPP	0.650	0.059	0.62	11.02	.001

a. Dependent Variable: OP

Source: SPSS Output Version 27.0.

The coefficients table showed that strategic supplier partnership had a positive and statistically significant effect on operational performance, as indicated by the unstandardised coefficient ($B = 0.650$) and a p-value of 0.001. This implied that a unit increase in strategic supplier partnership led to a corresponding increase of 0.650 units in operational performance, holding other factors constant. The standardised beta coefficient ($\beta = 0.62$) further confirmed a strong positive contribution of the predictor variable to the model, while the t-value (11.02) demonstrated that the effect was statistically robust. The

constant value (1.020) suggested that operational performance would still exist at a baseline level even in the absence of strategic supplier partnership, although at a lower magnitude. Overall, these findings implied that strengthening supplier relationships significantly enhanced operational efficiency, thereby reinforcing the rejection of the null hypothesis and affirming the importance of strategic supplier partnership in improving the operational performance of manufacturing companies in the FCT Abuja.

Hypothesis Two

H₀₂: Customer relationship management has no significant effect on customer satisfaction among manufacturing companies in the FCT Abuja.

$$CS = \beta_0 + \beta_1 CRM + \varepsilon \dots\dots\dots 2$$

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.55	0.303	0.300	0.85

a. Predictors: (Constant), CRM

Source: SPSS Output Version 27.0.

The model summary results indicated that customer relationship management had a moderate positive relationship with customer satisfaction, as reflected by the correlation coefficient ($R = 0.55$). The coefficient of determination ($R^2 = 0.303$) showed that approximately 30.3% of the variation in customer satisfaction was explained by customer relationship management, while the adjusted R^2 (0.300) confirmed the consistency of the model after accounting for sample size. The standard error of the estimate (0.85) suggested an acceptable level of prediction accuracy. These results implied that customer relationship management played a meaningful role in influencing customer satisfaction, although a substantial proportion of the variation was attributable to other factors not included in the model.

Table 7 ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig. (p)
Regression	43.60	1	43.60	83.56	< .001
Residual	100.24	192	0.522		
Total	143.84	193			

a. Dependent Variable: CS

b. Predictors: (Constant), CRM

Source: SPSS Output Version 27.0.

The ANOVA results revealed that the regression model was statistically significant, as indicated by the F-value of 83.56 and a p-value less than 0.001. This demonstrated that the model provided a significantly better fit compared to a model with no predictor variables and that customer relationship management significantly explained changes in customer satisfaction. The implication of this finding was that the observed relationship was not due to chance, thereby leading to the rejection of the null

hypothesis and confirming that customer relationship management had a significant effect on customer satisfaction among manufacturing companies in the FCT Abuja.

Table 8 Coefficients^a

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig. (p)
(Constant)	0.900	0.130		6.92	< .001
CRM	0.580	0.064	0.55	9.06	< .001

a. Dependent Variable: CS

Source: SPSS Output Version 27.0.

The coefficients table showed that customer relationship management had a positive and statistically significant effect on customer satisfaction, as indicated by the unstandardised coefficient ($B = 0.580$) and a p-value less than 0.001. This implied that a unit increase in customer relationship management resulted in a corresponding increase of 0.580 units in customer satisfaction. The standardised beta coefficient ($\beta = 0.55$) further indicated a moderate positive influence, while the t-value (9.06) confirmed the statistical strength of the predictor. The constant value (0.900) suggested that customer satisfaction would exist at a baseline level even without customer relationship management, though at a reduced level. Overall, these findings implied that improving customer relationship practices significantly enhanced customer satisfaction, thereby reinforcing the rejection of the null hypothesis and highlighting the importance of CRM in driving customer-related outcomes in manufacturing companies within the FCT Abuja.

Discussion of Findings

The findings relating to H_{01} revealed that strategic supplier partnership had a significant positive effect on the operational performance of manufacturing companies in the FCT Abuja, leading to the rejection of the null hypothesis. This suggested that firms which cultivated stronger, more collaborative relationships with their suppliers tended to experience improved production efficiency, reduced operational disruptions, and better coordination of inputs. This outcome aligned with the Resource-Based View (RBV) theory, which posits that firm-specific capabilities such as strategic partnerships can serve as valuable and inimitable resources that enhance performance.

Empirically, the result found support in the works of Al-Shboul et al. (2017), Martey et al. (2022), and Zhou and Li (2020), who all reported that supplier integration and collaboration significantly improved operational outcomes. Similarly, Adebisi et al. (2021) and Ogomegbunam (2023) observed that supplier relationship management contributed positively to manufacturing efficiency in Nigeria. Hassan (2023) further reinforced this position by demonstrating that supply chain integration strengthened organisational performance through improved coordination. However, while most studies supported this finding, some nuances emerged. For instance, Das (2018) emphasised that the effectiveness of supply chain practices depended on broader sustainability integration, suggesting that supplier partnerships alone might not guarantee optimal performance. In the same vein, Gera et al. (2022) indicated that contextual factors could moderate the strength of such relationships. Nonetheless, no strong empirical evidence directly contradicted the present finding; rather, existing studies tended to complement it, although with caution regarding contextual influences. Overall, the empirical evidence largely converged with this study, reinforcing the argument that strategic supplier partnership is a critical driver of operational performance.

With respect to H_{02} , the findings showed that customer relationship management had a significant positive effect on customer satisfaction among manufacturing companies in the FCT Abuja, resulting in the rejection of the null hypothesis. This implied that firms that actively engaged with customers, responded to feedback, and maintained consistent service quality were more likely to achieve higher

levels of customer satisfaction. This finding also resonated with the RBV theory, as customer relationship management can be viewed as an intangible organisational capability that enhances value creation and differentiation. Empirical support for this result was evident in the works of Abiodun and Omoregbe (2021), who found that customer-focused strategies improved both competitive advantage and organisational performance. Similarly, Alam (2022) and Ogomegbunam (2023) reported that effective supply chain practices, including customer engagement, significantly influenced performance outcomes. Martey et al. (2022) also highlighted that customer-oriented supply chain practices enhanced satisfaction and retention in manufacturing contexts. On the other hand, while not directly opposing the findings, Gera et al. (2022) suggested that the impact of such practices might vary depending on industry structure and technological capability, implying that CRM effectiveness could differ across contexts. Zaidi and Lakhal (2025) further extended this perspective by noting that integrating broader operational practices, such as lean systems, could strengthen the impact of relationship management on performance. Despite these nuances, there was no substantial empirical antagonism to the findings of this study. Instead, the literature largely supported the positive linkage between customer relationship management and customer satisfaction, confirming its relevance as a key driver of performance in manufacturing firms within the FCT Abuja.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The study concluded that supply chain management practices significantly improved the performance of the selected manufacturing companies in the FCT Abuja. The findings demonstrated that strategic supplier partnership exerted a positive and statistically significant effect on operational performance, with a regression coefficient of 0.650, indicating that improvements in supplier partnerships resulted in corresponding improvements in operational performance. Furthermore, the coefficient of determination ($R^2 = 0.384$) showed that strategic supplier partnership accounted for 38.4% of the variations in operational

performance, while the remaining 61.6% was attributable to other organisational and environmental factors outside the scope of this study. Similarly, customer relationship management had a positive and significant effect on customer satisfaction, with a regression coefficient of 0.580, implying that stronger customer relationship management practices enhanced customer satisfaction. The R^2 value of 0.303 further indicated that customer relationship management explained 30.3% of the variations in customer satisfaction, whereas 69.7% resulted from other factors not investigated in the study. Overall, the study established that although supply chain management practices were not the only determinants of organisational performance, strategic supplier partnership and customer relationship management made substantial contributions to improving the operational efficiency and customer satisfaction of Afrifab Steel and G.U. Ebeco Industries in Abuja.

Recommendations

- i. The management of Afrifab Steel Limited and G.U. Ebeco Industries Limited should strengthen strategic supplier partnerships by establishing long-term contractual relationships with reliable suppliers, promoting joint planning, supplier performance evaluation, and continuous information sharing. Such initiatives would further improve operational efficiency, minimise production disruptions, reduce procurement delays, and enhance the overall effectiveness of their manufacturing operations.
- ii. The management of Afrifab Steel Limited and G.U. Ebeco Industries Limited should invest in robust customer relationship management systems by strengthening customer feedback mechanisms, improving complaint resolution processes, maintaining regular customer engagement, and leveraging customer information for service improvement. These measures would enhance customer satisfaction, increase customer retention, and strengthen the companies' competitive position within the Nigerian manufacturing industry.

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