The Effect of Supply Chain Management on Organisational Performance in The Nigerian Manufacturing Industry

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Abstract- The objective of this study is to examine the effect of supply chain management on organisational performance, with a specific focus on Dangote Cement PLC in Lagos, Nigeria. The study focused on variables such as strategic supplier alliance, inventory management, and customer relationship management as the independent variable and organisational performance as the dependent variable. The study holds contemporary relevance due to the efforts made by firms to effectively manage market volatility, which requires them to take into account elements beyond just cost advantages. In order to effectively address the distinct requirements of market dynamics, it is imperative to employ strategies that prioritize timely responsiveness, exceptional product quality, and adaptability. To effectively accomplish the purpose of the study, three research questions and their accompanying hypotheses were established to guide the research process; this includes examining the effect of strategic supplier partnerships, inventory management, and customer relationship management on the overall performance of the business. In order to achieve these objectives, the utilization of Taro Yamane's formula was employed for the purpose of determining the appropriate sample size. Consequently, a total of 126 management personnel from the overall population of 186 were finally selected to serve as the sample. A closed-ended, self-structured questionnaire was employed to collect data from a sample of 126 participants; however, only 122 questionnaires were completed accurately and used for the analysis. The data analysis was performed solely using the SPSS software, employing basic regression analysis techniques, with a predetermined significance level of 0.05. As a result, any p-value above the indicated threshold of 0.05 was considered to be invalid. The study concluded that strategic partnerships, inventory management, and customer relationship management do affect the performance of an organisation. Hence, the study recommends that organisations should give priority to the development and reinforcement of strategic partnerships, allocate resources towards the efficient management of inventory, and adopt a customer relationship management (CRM) strategy. These initiatives are expected to enhance customer satisfaction, improve product quality, facilitate technological advancements and product enhancements, and enable the organisation to forecast market opportunities, ultimately enhancing organisational performance.

Indexed Terms- Strategic partner relationship, Customer relationship management, inventory management, Organisational Performance.

I. INTRODUCTION

1.1 Background to the Study

Supply chain management (SCM) encompasses all processes involved in transporting commodities from raw materials to final consumers (Quinn, 1997; Panwar et al., 2022). The manufacturing process includes procurement, creation, inventory management, order fulfillment, transportation, delivery, and monitoring operations through computerized databases. This approach offers benefits like improved operations, cost reduction, enhanced regulatory compliance, and faster processing (Stadtler, 2014). Many corporations recognize SCM's significance as value-generating demand-supply dynamics (Bustinza et al., 2013), since production can't be assigned to a single department (Ravi et al.,

2022). Effective SCM requires significant attention to achieve organizational performance (Borazon et al., 2022).

With increasing competition, the complexities of product transportation have intensified (Rosak-Szyrocka et al., 2023), requiring regular supply chain audits. Maintaining competitive advantage requires thorough understanding and implementation of SCM (Nureen et al., 2023). Effective SCM depends on strategic supplier alliances, customer relationship management, and inventory control (Madhani, 2020). Strategic supplier collaborations leverage technological advances and competencies to address inefficiencies (Ekpudu et al., 2013), while strategic SCM connects material and information operations across networks to enhance competitiveness (Jiang, 2019).

1.2 Statement of the Problem

The cement industry significantly contributes to Nigeria's economy through job creation and GDP. Companies now look beyond cost advantages to combat market volatility. Modern competition involves networks of cooperating businesses seeking market share throughout the supply chain (Untari & Satria, 2021). Effective SCM consolidates activities of all participants to maximize cost-effectiveness. Successful organizations have SCM teams with comprehensive understanding working collaboratively (Srinivasan & Swink, 2018).

Dangote Cement, one of Nigeria's most valuable firms with 32% of the Nigerian Stock Exchange's capitalization in 2016 (Akinyoade & Uche, 2017), operates in a large market with high consumption capacity. However, limited SCM implementation has created challenges including supplier shortages, poor customer management, inadequate order processing, insufficient outsourcing, production flow issues, recycling resource shortages, and transportation problems.

1.3 Aims and Objectives of the Study

This study aims to explore SCM's effect on organizational performance in Nigerian manufacturing, specifically: i. Examine strategic supplier alliances' effect on organizational performance ii. Evaluate inventory management's effect on organizational performance iii. Ascertain customer relationship management's effect on organizational performance

1.4 Research Questions

i. What is the effect of strategic supplier alliances on organizational performance? ii. What is the effect of inventory management on organizational performance? iii. How does customer relationship management affect organizational performance?

1.5 Research Hypotheses

i. Strategic supplier alliances have no significant effect on organizational performance ii. Inventory management has no significant effect on organizational performance iii. Customer relationship management has no significant effect on organizational performance

1.6 Scope and Delimitation of the Study

This study focuses on Dangote Cement in Lagos, collecting data from management staff. The exclusive focus on a single company may limit generalization. Participants were briefed on ethical considerations including privacy and confidentiality before completing surveys.

1.7 Significance of the Study

This research aims to contribute to Nigeria's cement industry by examining key determinants of competitive advantage. It will help enterprises identify SCM implementation obstacles and develop strategies to overcome them. The findings will benefit operations management stakeholders, help business leaders formulate optimal SCM strategies, and aid investors in assessing business viability.

1.8 Operational Definition of Terms

- Strategic supplier alliances: Long-term partnerships optimizing strategic and operational capabilities
- Inventory management: Process of ordering, storing, utilizing, and selling inventory
- Customer relationship management: Strategy emphasizing long-term, profitable customer relationships using detailed data
- Organizational Performance: Organization's ability to reach goals and optimize results

II. LITERATURE REVIEW

2.1 Preamble

This chapter provides an overview of the theoretical framework underlying the study, explains the variables through conceptual review, illustrates the hypothesized relationships between dependent and independent variables, and reviews relevant prior research to identify gaps in scholarly literature.

2.2 Theoretical Review
2.2.1 The Stakeholder Theory

The stakeholder theory proposes that organizations should establish and maintain relationships with individuals or groups whose actions may affect them (Freudenreich et al., 2020). Carroll (2021) defines stakeholders as persons or organizations demonstrating interest in or being impacted by organizational activities. Stakeholder influence can fluctuate over time based on business challenges (Wood et al., 2021), with empirical research showing stakeholders exert influence when demonstrating timeliness, authority, and credibility (Hagemann, 2023). This theory is significant as shareholders require businesses to consistently assess supply chain management strategies to improve effectiveness.

2.2.2 Strategic Choice Theory (SCT)

Strategic Choice Theory postulates a connection between managerial decision-making, organizational outcomes, and environmental interactions (Reder & Schunn, 2014). The theory suggests managerial actions significantly influence organizational performance, emphasizing performance optimization through organizational structure. Allocating responsibility for inventory management to executives can substantially affect organizational performance. The theory is relevant because it asserts managers influence decision-making and change processes (Fu et al., 2020).

2.3 Conceptual Review
2.3.1 Supply Chain Management

Supply chain management encompasses procuring inventory, producing goods, and distributing products through interconnected facilities (Lee & Billington, 1995). Its primary objective is optimizing performance by maximizing value while minimizing costs (Finch, 2006). Gunasekaran and McGaughey (2003) highlighted the significance of comprehensive integration in SCM, which plays a pivotal role in business success.

SCM faces challenges including inter-firm competition and executive complexity (Fawcett & Waller, 2008). These challenges stem from territorial conflicts, insufficient planning, trust deficits, lack of executive commitment, and limited understanding of SCM principles. Management must proactively address obstacles to enhance supply chain agility. Potential solutions include promoting customer-vendor collaboration, improving data transparency, enhancing IT infrastructure, implementing evaluation mechanisms, and adopting SCM strategies.

Benefits of effective SCM include enhanced inventory turnover, increased revenues, reduced costs, improved product availability, decreased order fulfillment time, increased flexibility, optimized capital utilization, accelerated market time, and reduced logistics expenses.

2.3.1.1 Strategic Supplier Alliances

Strategic alliances are collaborative efforts characterized by mutual planning, long-term relationships, commitment to quality, collective problem-solving, and innovative approaches (Young & Freytag, 2021). Hofman et al. (2020) define

strategic supplier alliances as partnerships between companies and supply chain collaborators. Their primary objective is enhancing mutual benefits by leveraging technological advances, expertise, and capabilities (Ekpudu et al., 2013).

Essential characteristics of successful alliances include achieving objectives, unwavering support, establishing commercial trust, promoting sustainable collaboration, and outstanding supplier performance (Best Group practice, 2021). Harrison et al. (2001) noted that learning effects increase productivity when partners share similar characteristics or complement each other's knowledge and resources, demonstrating a positive relationship between strategic supplier relationships and performance.

2.3.1.1.1 Rationales for Forming Strategic Alliances

Alliance advantages depend on cooperation requirements and economies of scale (Benjamin, 1996). Monczka et al. (1998) identified several motivating factors: cost reduction, market expansion, financial support, overcoming infrastructure limitations, navigating institutional constraints, and promoting market stability. Companies use strategic alliances to access challenging markets (Yuk, 2013) and expand business domains to combat market saturation (He et al., 2011).

2.3.1.2 Inventory Management

Inventory management is a strategic framework for supervising inventory holdings through systematic monitoring, evaluation, demand forecasting, and informed delivery decisions (Nirmala et al., 2022). Munyaka and Yadavalli (2022) describe it as an approach to organize, store, and replenish inventory while minimizing costs. Effective inventory management helps maintain adequate stock levels, reduce shortages, and preserve service quality (Atnafu & Balda, 2018).

Managers must determine the optimal balance between customer service and controlling inventory-related costs. Challenges in inventory management include accurately estimating customer demand (Coyle et al., 2003) and managing the proliferation of product variants.

2.3.1.3 Customer Relationship Management

Customer relationship management (CRM) is a strategy emphasizing customer-centricity, utilizing comprehensive insights to nurture profitable relationships (Yapanto et al., 2021). Krishna et al. (2022) describe it as a methodology for interacting with customers, addressing concerns, and enhancing customer experience. CRM facilitates diverse communications, eliminating periodic data collection needs (Eichorn, 2004).

Benefits of CRM implementation include:

- Customer benefits: Better service through up-to-date information, increased loyalty and satisfaction, and tailored services
- Staff benefits: Enhanced knowledge to provide quality service, effective addressing of client requirements, and increased productivity
- Company benefits: Improved decision-making, strategic alignment with customer needs, facilitated long-term relationships, accelerated financial development, and improved customer retention

2.4 Organizational Performance

Organizational performance refers to achieving desired outcomes through activities within a specific timeframe (Akroyd & Maguire, 2011). It's influenced by effectiveness, productivity, business model outcomes, leadership proficiency, and employee collaboration (Hoorn & Hoorn, 2011). Cho and Dansereau (2010) define it as assessment of accomplishments against pre-established goals, while Omaland and Jones (2015) describe it as quantifiable outcomes evaluated by predetermined objectives.

2.5 Empirical Review

2.5.1 Strategic Supplier Alliance and Organizational Performance

Multiple studies have examined this relationship with varied findings:

- Muthoka and Oduor (2014) found strong positive correlation between marketing partnerships and firm performance
- Muteshi and Awino (2018) found statistically insignificant association
- Mathu (2019) identified significant positive relationship in East African Community manufacturing firms
- Akewushola and Saka (2018) found significant correlation between strategic partnerships and firm performance
- Mong'are (2016) revealed significant effect on ICT companies' performance
- Talebi et al. (2017) demonstrated correlation in auto manufacturing SMEs
- Nwokocha and Madu (2020) found significant effects on SME performance in Enugu State

2.5.2 Inventory Management and Organizational Performance

Research consistently shows positive relationships:

- Agu et al. (2016) found significant positive correlation between inventory management and productivity
- Oballah et al. (2015) demonstrated positive impact of inventory investment and accurate records on performance
- Chebet and Kitheka (2015) revealed positive correlation between inventory level and firm performance
- Anichebe and Agu (2013) identified significant correlation between efficient inventory administration and performance

2.5.3 Customer Relationship Management and Organizational Performance

Studies demonstrate CRM's positive impact:

- Mohamad et al. (2014) found significant impact on business efficiency in food production companies
- Saka et al. (2014) showed CRM plays important role in evaluating performance
- Fahmi and Ahmad (2018) demonstrated positive and statistically significant impact on organizational performance

2.6 Conceptual Framework
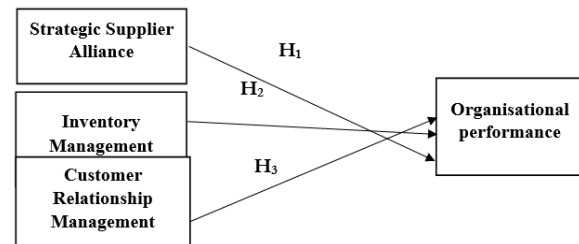
Source: Researcher (2023)

The research model depicts the study's components, with each arrow denoting a hypothesized association between the respective variables. It demonstrates an assumed correlation between the independent variables, namely strategic supplier alliance, inventory management, and customer relationship management, and the dependent variable; Organisational performance.

2.7 Gaps in Literature

Previous studies on supply chain management have predominantly focused on industrialized countries, analyzing distinct market characteristics from established and emerging perspectives. This makes it difficult to assume findings from developed regions would apply to emerging or undeveloped areas. Miguel and Brito (2011) found that SCM success is influenced by social, economic, cultural, and environmental factors that vary between countries.

While extensive research exists on the relationship between supply chain management and organizational

performance, results remain inconclusive. Some studies show positive influence, while others find no significant correlation or even adverse effects. Current research lacks comprehensive understanding of how SCM impacts different aspects of organizational performance with consistent measurement methods, creating difficulties in comparing results across studies. The findings from Samuel and Gabriel (2022) lack cohesion with Smith & Chang (2010) and Thoo (2011), while Mutimos (2014) contradicts conclusions by Adebiyi et al. (2021).

To make generalizations about the relationship between SCM and manufacturing enterprise success in developing countries like Nigeria, empirical study is essential. Therefore, this research examines the correlation between supply chain management and manufacturing enterprise performance in Nigeria, focusing specifically on supplier partnerships, inventory management, and customer relationship management.

III. METHODOLOGY

3.1 Preamble

This chapter explains the methodology used for data collection and analysis, providing an overview of research approaches, design, target population, sampling methods, sample size, data collection and processing techniques, validity and reliability assessment, and model description. This context supports using a quantitative approach to derive conclusions based on the study hypotheses.

3.2 Research Design

The study employed a cross-sectional methodology, collecting data from participants at a specific point in time. This method was chosen for its efficiency in terms of time and cost compared to alternative designs (Olsen & George, 2004). The study used a quantitative approach to enable systematic data collection and analysis using statistical techniques (Kadoya, 2020), making the procedure replicable and reducing the probability of errors and subjectivity (Bloomfield & Fisher, 2019). Descriptive statistics were incorporated for data presentation to accurately represent results

and directly address research questions (Bevan et al., 2023).

3.3 Population of the Study

The research focused on Dangote Cement PLC in Lagos, Nigeria, chosen for its extensive global reach and specialized knowledge in cement manufacturing and distribution (Dangote Cement, 2023). The study population consisted of managerial personnel at headquarters in Ikoyi and main offices at Isolo and Ikorodu, including office and on-site staff. This encompassed top-level, middle, first-line managers, and team heads across various departments: sales and marketing, operations, procurement, inventory, quality control, risk management, transportation, innovation, facility management, strategic planning, research, project management, materials management, and purchasing. According to the Human Resource Manager, the total managerial personnel as of January 2023 was 185.

3.4 Sample Size and Sampling Procedure

The research employed simple random sampling to ensure equal opportunities for all survey respondents (Sharma, 2017). This method was chosen for its ability to capture crucial demographic information about the population (Lynn, 2019) and ensure respondents had adequate topic knowledge, allowing researchers to make objective generalizations. The sample size was determined using Taro Yamane's (1967) formula, as the population was considered finite and well-defined.

$$n = \frac{N}{(1 + N(e)^2)}$$

Where n = sample size

N = population of the study

e = level of significance (5% level of significance)

Hence, applying the formula;

$$n = \frac{185}{1 + 185 \times 0.05^2}$$

$$n = \frac{185}{1.4625}$$

n= 126

The study comprised 126 participants who occupy managerial roles at Dangote Cement, Lagos.

3.5 Method of Data Collection

Data collection was conducted through an online survey instrument, ensuring timely and effective data gathering while reducing the likelihood of errors and biases (Fricker & Schonlau, 2002). This approach allowed respondents to independently select personally relevant responses without external influence. The survey employed a five-point Likert scale to evaluate participants' responses, with values ranging from 1 (high agreement) to 5 (high disagreement), including 2 for agreement, 3 for neutrality, and 4 for disagreement. The survey was structured in two discrete sections: demographic information and variables (dependent and independent).

3.6 Validity and Reliability of the Research Instrument

A preliminary study was conducted to enhance questionnaire quality and ensure clear responses from participants (Malmqvist et al., 2019). This involved distributing fifteen (15) questionnaires to facilitate the data collection procedure. The pilot study aimed to determine completion time requirements, evaluate question brevity, identify any ambiguities or exclusions, and assess the organization's clarity and appeal. The pilot questionnaires underwent rigorous examination to ensure questions were explicit and could be effectively answered. To address participation bias, survey respondents received explicit instructions to maintain anonymity and refrain from providing personal contact information.

Cronbach Alpha result

Reliability Statistics	
Cronbach's Alpha	N of Items
.718	4

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Strategic SupplierManagement	42.96	71.726	.326	.744
Inventory Management	46.17	61.334	.434	.895
Customer Relationship Management	44.12	48.191	.613	.785
OrganisationalPerformance	45.49	38.764	.699	.718

Based on the Cronbach alpha coefficient of 0.713, the questionnaire indicates a high degree of suitability in addressing the research inquiries. As stated by Lin (2010), a Cronbach alpha coefficient of 0.70 is considered acceptable for an investigation. As a result, the examined survey instrument was utilized to elicit the opinions of participants.

3.7 Method of Data Analysis

The collected data was analysed using the Statistical Package for the Social Sciences (SPSS) software. This tool was used because it enables users to analyse and comprehend data efficiently (Bryman and Cramer, 2009). A descriptive statistical analysis was performed to evaluate the extent of the response to individual variable components, and linear regression was used to test the study's hypotheses. The justification for selecting regression is its suitability for evaluating the investigated effect (Zhao & Ye, 2023). This methodology seeks to examine the existence of a statistical relationship between the dependent and

independent variables, quantify the strength of the relationship, and evaluate the viability of making predictions about one variable based on another.

3.8 Model Specification

The model examined the relationship between supply chain management and organisational performance in Dangote Cement, Lagos Nigeria. In line with the hypothesis stated, the following is a functional specification of the model required for the study.

Model
ORP = f(SCM)
$ORP = \beta_0 + \beta_1 SSA + \beta_2 IM + \beta_3 CRM + e$
Where;
ORP=Organisational performance
SCM= Supply Chain Management
SSA=Strategic Supplier Alliance
IM=Inventory Management
CRM=Customer Relationship Management
β_0=Intercept of the model (constant)
e = Error term
β_1-β_3 =Estimated coefficients

IV. DATA PRESENTATION AND ANALYSIS

4.1 Preamble
4.1 Overview

This chapter provides a thorough examination of data collected from participants, addressing the study questions and examining hypotheses. The chapter begins with a concise overview of response rates, followed by graphical representations of demographic variables including participants, age, marital status, educational degree, and years of work experience.

SPSS was utilized for all data analyses, including regression analysis and scatterplot graphs presented later in the chapter. The projected quantity of responses was 126; however, 122 questionnaires were accurately completed, representing 97% of the overall sample size. This high response rate was considered satisfactory for conducting quantitative analysis and indicates substantial participant engagement in the survey.

4.2 Demographic Data

This section presents demographic information regarding survey participants, including variables such as gender, age, educational attainment, marital status, and years of work experience.

Fig 4.1 Gender
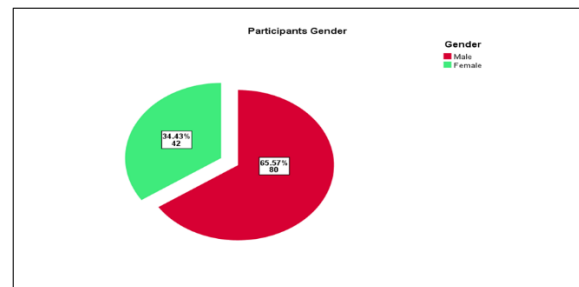
Source: Field Survey (2023)

Based on the data depicted in Figure 4.1, it can be observed that the gender distribution of the participants indicates that there were 80 male respondents, representing 65.5% of the total sample size. On the other hand, the total number of female respondents was 42, accounting for 34.4% of the overall responses. The results indicate that the study consisted of a greater percentage of male participants in comparison to female participants. However, the observation does not inherently indicate a larger presence of males in the organisation; rather, it implies that a greater number of males took part in the survey compared to females.

Fig 4.2 Marital Status
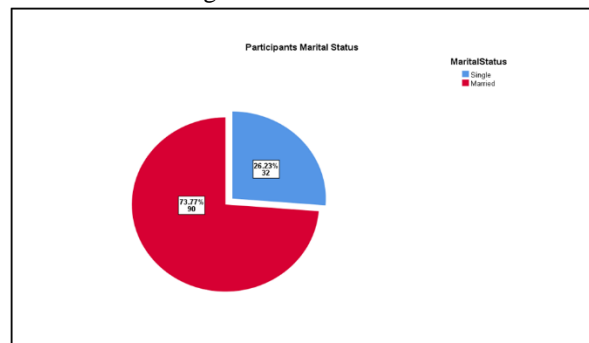
Source: Field Survey (2023)

According to the data in Figure 4.2, it can be observed that the marital distribution of the

participants indicates that a total of 90 persons, or approximately 73.8% of the total responses, were married, while the total number of respondents who identified as single was 32, accounting for 26.2% of all the responses. The results indicate that the study consisted of a greater percentage of married individuals compared to those who were single. However, this result does not necessarily indicate a higher number of married individuals in the business; rather, it implies that a greater number of married employees expressed interest in participating in the survey compared to their single counterparts.

Fig 4.3 Age Group
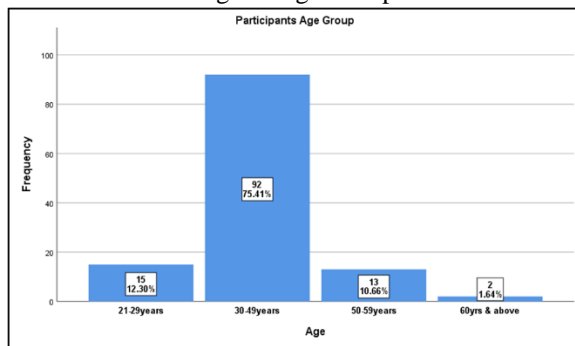
Source: Field Survey (2023)

Figure 4.3 shows the age distribution of the survey participants; it depicts that a proportion of 12.3% of the respondents fell within the age bracket of 21-29 years, with a total sample size of 15 individuals. The sample comprised 92 participants, accounting for 75.4% of the total population, who were aged between 30 and 49 years. Furthermore, the result included a total of 13 participants, constituting 10.7% of the overall sample, who were within the age range of 50-59 years. Additionally, there were 2 participants, representing 1.6% of the sample, who were 60 years or older. Hence, it is evident that a significant proportion of the participants fell between the age range of 30 to 49 years. This demographic is frequently believed as the segment of the labor force that exhibits greater levels of proactivity and productivity in an organisation.

Fig 4.4 Educational Qualification
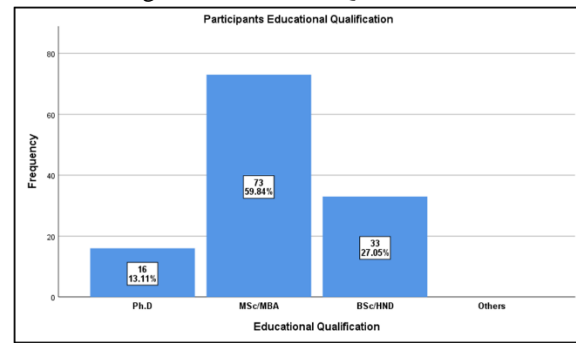
Source: Field Survey (2023)

Figure 4.4 presents a visual representation of the educational backgrounds of the participants, along with their corresponding percentages. Based on the data, a majority of the respondents, particularly 59.8% or 73 participants, held either a Master of Science (MSc) or Master of Business Administration (MBA) degree. Among the entire pool of participants, a subset of 16 individuals, constituting 13.11% of the sample, possessed a Doctor of Philosophy (PhD) degree. In contrast, a total of 33 individuals, constituting approximately 27% of the surveyed population, held a Bachelor of Science (BSc) or Higher National Diploma (HND) qualification. Therefore, the findings indicate that a majority of the participants possessed an advanced educational qualification, specifically a Master of Science (MSc) or Master of Business Administration (MBA) degree. This implies that a substantial number of participants have adequate comprehension skills to understand and provide relevant answers to the inquiries.

Fig 4.5 Work Experience
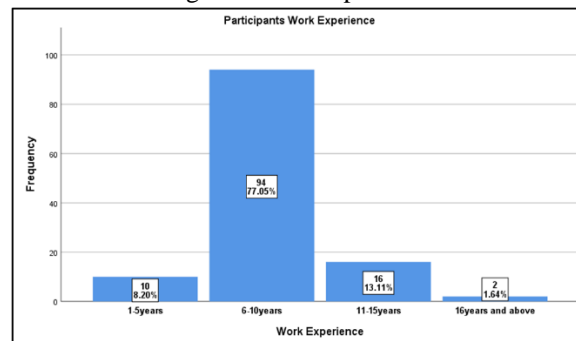
Source: Field Survey (2023)

The data in Figure 4.5 illustrates the duration of the participant's employment with the organisation, specifically measured in years. Based on the data gathered, it can be deduced that 8.2%, or a total of 10 persons, have work experience spanning from one to five years; a total of 94 respondents, accounting for 77% of the sample, indicated that they had been employed at the company for a period ranging from six to 10 years. In contrast, a smaller percentage of participants, specifically 13.11%, amounting to a total of 16 individuals, have reported having a tenure of eleven to fifteen years and fifteen years. Additionally, two participants, representing 1.64% of the sample, have worked in the organisation for 16 years or more. This finding indicates that a considerable percentage of the participants have maintained working with the organisation for a duration ranging from six to 10 years. Hence, it is evident that a significant proportion of the staff members know the operational procedures of the institution and can provide answers to the questionnaire.

4.3 Analysis According to Research Objectives

Table 4.3.1 Participants responses to the concept of Strategic Supplier Partnership

Statements		Count	Percentage
My company has formed mutually beneficial partnerships with key suppliers, which has resulted in a notable increase in productivity	Strongly Disagree	9	7.4%
	Disagree	4	3.3%
	Neutral	5	4.1%
	Agree	34	27.9%
	Strongly Agree	70	57.4%
	Total	122	100%
My company and its supply partners exchange germane and profitable information regarding logistics, inventory, transportation, and warehousing.	Strongly Disagree	5	4.1%
	Disagree	6	4.9%
	Neutral	10	8.2%
	Agree	42	34.4%
	Strongly Agree	59	48.4%
	Total	122	100%
My company and its strategic partners facilitate collaboration to discover innovative strategies for addressing and resolving challenges.	Strongly Disagree	1	0.8%
	Disagree	3	2.5%
	Neutral	6	4.9%
	Agree	43	35.2%
	Strongly Agree	69	56.6%

	Total	122	100%
My company collaborates with its supply partners to implement innovative methods for continually improving operations	Strongly Disagree	2	1.6%
	Disagree	3	2.5%
	Neutral	14	11.5%
	Agree	73	59.8%
	Strongly Agree	30	24.6%
	Total	122	100%

Source: Field Survey (2023)

Table 4.3.1 presents the answers provided by the respondents to the statements pertaining to Strategic Supplier Partnerships. The data reveals that a significant proportion of the participants, comprising 70 individuals or 57.4% of the sample, agreed that the company had established mutually advantageous partnerships with key suppliers; this collaborative effort has led to an enhancement in productivity. Additionally, a significant majority of 59 participants, accounting for 48.4% of the total, expressed strong agreement about the active involvement of the company and its supplier partners in the sharing of relevant and lucrative information pertaining to logistics, inventory management, transportation, and warehousing. Even so, a considerable percentage (69 or 57%) exhibit a substantial level of concurrence with the involvement of the organisation and its strategic partners in promoting collaboration to recognize inventive approaches for tackling and resolving challenges. In a similar vein, a higher portion, comprising 73 individuals or 59.8% of the participants, agreed with the company's practice of collaborating with its supplier partners to adopt creative strategies with the objective of consistently improving operational processes.

Table 4.3.2 Participants responses to the concept of Inventory Management

Statements		Count	Percentage
In my company, system and procedural controls are strategically deployed across the entire supply chain to prevent the occurrence of unauthorized purchases or order placement	Strongly Disagree	8	6.6%
	Disagree	15	12.3%
	Neutral	12	9.8%
	Agree	46	37.7%
	Strongly Agree	41	33.6%
	Total	122	100%
The company implements mechanisms to ensure that all materials purchased undergo thorough quality inspection before manufacturing	Strongly Disagree	2	1.6%
	Disagree	18	14.8%
	Neutral	5	4.1%

	Agree	47	38.5%
	Strongly Agree	50	41.0%
	Total	122	100%
The company tracks raw materials, work in progress (WIP), and finished goods to ensure maximum efficiency	Strongly Disagree	9	7.4%
	Disagree	13	10.7%
	Neutral	6	4.9%
	Agree	56	45.9%
	Strongly Agree	38	31.1%
	Total	122	100%
Discrepancies observed in the production process are thoroughly examined, and efforts are made to identify and address the underlying causes	Strongly Disagree	5	4.1%
	Disagree	3	2.5%
	Neutral	6	4.9%
	Agree	71	58.2%
	Strongly Agree	37	30.3%
	Total	122	100%

Source: Field Survey (2023)

Table 4.3.2 presents the responses regarding Inventory Management; the data reveals that a significant proportion of the sample, specifically 46 individuals or 37.7%, agreed that the company strategically deploys system and procedural controls throughout the supply chain to prevent unauthorized purchases or order placement. Fifty participants, or 41%, strongly agreed that the company implements mechanisms to ensure comprehensive quality inspection of all purchased materials prior to manufacturing. Additionally, a significant proportion of the respondents (56 or 45.9%) express strong agreement with the notion that the organisation diligently monitors the flow of raw materials, work in progress (WIP), and finished goods in order to optimize operational efficiency. Furthermore, a majority of the surveyed individuals, accounting for 71 or 58.2% of the sample, agreed that any discrepancies identified during the production process are subjected to comprehensive scrutiny, with concerted efforts to identify and rectify the root causes.

Table 4.3.3 Participants responses to the concept of Customer Relationship Management

Statements		Count	Percentage %
	Strongly Disagree	2	1.6%
	Disagree	12	9.8%

My company uses customer relationship management (CRM) software to supervise and manage all interactions with current and potential customers	Neutral	13	10.7%
	Agree	48	39.3%
	Strongly Agree	47	38.5%
	Total	122	100%
My company has a department set up mainly for customer relationship management	Strongly Disagree	4	3.3%
	Disagree	7	5.7%
	Neutral	10	8.2%
	Agree	58	47.5%
	Strongly Agree	43	35.2%
	Total	122	100%
The customer relations department demonstrates a commendable level of responsiveness in addressing and resolving customer complaints	Strongly Disagree	3	2.5%
	Disagree	10	8.2%
	Neutral	12	9.8%
	Agree	57	46.7%
	Strongly Agree	40	32.8%
	Total	122	100%
My company integrates all customer information into a single database accessible to all departments	Strongly Disagree	6	4.9%
	Disagree	8	6.6%
	Neutral	7	5.7%
	Agree	65	53.3%
	Strongly Agree	36	29.5%
	Total	122	100%

Source: Field Survey (2023)

Table 4.3.3 depicts participants' responses to the statements pertaining to Customer Relationship Management. The data reveals that a significant proportion of the sample, specifically 48 (39.3%), agreed that the company utilizes customer relationship management (CRM) software to oversee and regulate all engagements with existing and prospective customers. The majority, comprising 58 participants, or 47.5%, strongly agreed that the company has established a dedicated department specifically for managing customer relationships. Furthermore, a significant proportion (57 or 46.7%) strongly agreed on the commendable level of responsiveness exhibited by the customer relations department in effectively handling and resolving customer complaints.

Additionally, a majority of the surveyed individuals, comprising 65 or 53.2%, agreed that the company successfully consolidates all customer information into a unified database that is readily available to all divisions.

Table 4.3.4 Participants responses to the concept of Organisational Performance

Statements		Count	Percentage
My company has successfully maintained its position as a leader in cement production.	Strongly Disagree	7	5.7%
	Disagree	11	9.0%
	Neutral	8	6.6%
	Agree	59	48.4%
	Strongly Agree	37	30.3%
	Total	122	100%
My company consistently reports monthly increments in revenue and profit	Strongly Disagree	9	7.4%
	Disagree	8	6.6%
	Neutral	11	9.0%
	Agree	46	37.7%
	Strongly Agree	48	39.3%
	Total	122	100%
My company consistently reports a rise in its market share	Strongly Disagree	5	4.1%
	Disagree	8	6.6%
	Neutral	18	14.8%
	Agree	53	43.4%
	Strongly Agree	38	31.1%
	Total	122	100%
Our product exhibits significant differences compared to our competitors' offerings	Strongly Disagree	6	4.9%
	Disagree	10	8.2%
	Neutral	10	8.2%
	Agree	61	50.0%

Strongly Agree	35	28.7%
Total	122	100%

Source: Field Survey (2023)

4.3 Analysis of Responses on Organizational Performance

Table 4.3.4 presents replies pertaining to statements on organizational performance. The analysis findings indicate that a significant proportion of respondents—59 individuals (48.4%)—agreed that the company has successfully maintained its leadership status in the cement production industry.

Additionally, 48 participants (39.3%) strongly agreed that the company consistently shows monthly growth in both revenue and profit. A considerable percentage (53 participants or 43.3%) agreed that the company consistently reports rising market share, while a higher proportion (61 participants, accounting for 50%) agreed that the company's product exhibits noteworthy differentiations compared to competitors' offerings.

4.4 Test of Hypotheses

The data was encoded and analyzed using SPSS software to identify significant patterns and trends. The regression analysis yielded model description, analysis of variance (ANOVA), and coefficient tables.

A decision criterion was formulated whereby regression analysis results would indicate statistically significant association between independent variable(s) and the dependent variable when the p-value is less than the predetermined significance level (α) of 0.05.

The coefficient of determination (R^2) in the model summary quantifies the proportion of total observed variability in the dependent variable that can be explained by the independent variable. The correlation coefficient ranges from -1 to 1, where -1 indicates significant negative correlation and +1 indicates significant positive correlation.

The ANOVA test was employed to assess statistical associations among variables. Generally, when no statistically significant association exists between independent and dependent variables, the null hypothesis is accepted. Conversely, when a relationship is observed between variables, the alternative hypothesis is accepted.

Regression Analysis

Hypothesis 1

Strategic supplier alliances have no effect on organisational performance.
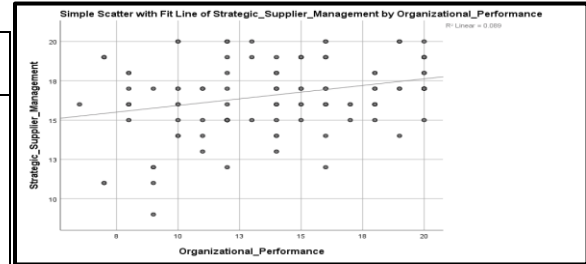
Table 4.4.1 Regression Analysis

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.298[a]	.089	.081	3.822	1.703
a. Predictors: (Constant), Strategic Supplier Alliances					
b. Dependent Variable: OrganisationalPerformance					

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	171.387	1	171.387	11.735	.001[b]
	Residual	1752.621	120	14.605		
	Total	1924.008	121			
a. Dependent Variable: OrganisationalPerformance						

b. Predictors: (Constant), Strategic Supplier Alliances

Coefficients[a]					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	5.355	2.573		2.081	.040
Strategic Supplier Alliances	.525	.153	.298	3.426	.001

a. Dependent Variable: OrganisationalPerformance

Source: Field Survey (2023)

Table 4.41 presents an overview of the regression analysis for hypothesis one; the model's summary table reveals that the R-value has a significance level of 0.298, signifying a robust relationship between the independent variable (Strategic supplier alliance) and the dependent variable (Organisational Performance). However, the R-squared score of 0.089 implies that strategic supplier alliance explains merely 8.9% of the variability in organisational performance. The ANOVA table presents evidence of a link between the variables, indicating that the p-value of 0.001 indicates statistical significance, as it is lower than the predetermined threshold of 0.05. Furthermore, the p-value of 0.001 provides further evidence of the existence of a statistically significant relationship between the variables. In summary, since the p-value of 0.001 is below the predetermined significance level of 0.05, it leads to the acceptance of the alternative hypothesis and the rejection of the null hypothesis. Consequently, it can be concluded that strategic supplier alliances have an effect onorganisational performance.

Fig 4.6Strategic Supplier Alliance and Organisational Performance

Source: Field Survey (2023)

The scatterplot's value, located in the upper right corner of the graph, is 0.089, which is equivalent to the value of R2 shown in the model summary table of the regression analysis. This finding indicates and provides additional evidence that Strategic supplier alliance has an effect on organisational performance.

Hypothesis 2
Inventory management has no effect on organisational performance

Table 4.4.2 Regression Analysis

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.503[a]	.253	.247	3.461	2.013

a. Predictors: (Constant), Inventory Management

b. Dependent Variable: OrganisationalPerformance

ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	Sig.

1	Regression	486.917	1	486.917	40.659	.000[b]
	Residual	1437.091	120	11.976		
	Total	1924.008	121			
a. Dependent Variable: OrganisationalPerformance						
b. Predictors: (Constant), Inventory Management						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.795	1.491		3.216	.002
	Inventory Management	.693	.109	.503	6.376	.000
a. Dependent Variable: OrganisationalPerformance						

Source: Field Survey (2023)

In Table 4.4.2, the R-value of 0.503 indicates a statistically significant relationship between the two variables (inventory management and organisational performance). The R-squared score of 0.253 indicates that inventory management explains 25.3% of the variability observed in organisational effectiveness. Additionally, the analysis of variance (ANOVA) table indicates a p-value of 0.000, and the coefficient table

also shows a p-value of 0.000, which is lower than the predetermined significance level of 0.05. This finding provides additional support for the presence of a statistically significant association between the variables. In conclusion, since the p-value (0.000) falls below the preset significance level of 0.05, the alternative hypothesis is accepted, and the null hypothesis is rejected. Therefore, it can be inferred that the management of inventory has an effect on the performance of an organisation.

Fig 4.7 Inventory Management and Organisational Performance
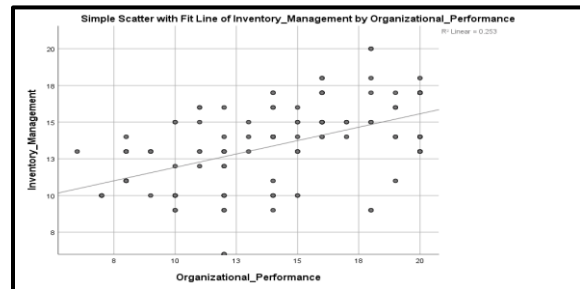
Source: Field Survey (2023)

The scatterplot value depicted in the upper right corner of the graph (0.253) is congruent with the R2 value reported in the model summary; this finding indicates and reinforces that inventory management has an effect on organisational performance.

Hypothesis 3
Customer relationship management has no effect on organisational performance

Table 4.4.3 Regression Analysis

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.644[a]	.415	.410	3.063	1.520
a. Predictors: (Constant), Customer Relationship Management					

b. Dependent Variable: OrganisationalPerformance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	798.538	1	798.538	85.142	.000[b]
	Residual	1125.471	120	9.379		
	Total	1924.008	121			

a. Dependent Variable: OrganisationalPerformance

b. Predictors: (Constant), Customer Relationship Management

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.563	1.280		2.003	.047
	Customer Relationship Management	.746	.081	.644	9.227	.000

a. Dependent Variable: OrganisationalPerformance

Source: Field Survey (2023)

Table 4.4.3 shows an R-value of 0.644, indicating a statistically significant association between customer relationship management (CRM) and organisational performance. The R-squared value of 0.415 suggests that approximately 41.5% of the variance in organisational performance is attributed to the implementation of CRM. The ANOVA table indicates a p-value of 0.000, while the coefficients table likewise reveals a p-value of 0.000; both of these p-values are lesser than the predetermined threshold of 0.05, providing further support for the existence of a statistical relationship between the variables. Given that the p-value of 0.000 is below the predetermined significance level of 0.05, the alternative hypothesis is accepted, leading to the rejection of the null hypothesis. Consequently, it is asserted that customer relationship management has an effect on organisational performance.

Fig 4.8 Fig 4.3 Customer Relationship Management and Organisational Performance

Source: Field Survey (2023)

The scatterplot's value of 0.415 is equivalent to the value of R2 obtained from the model summary table; this lends credence to the idea that effective CRM implementation has an effect on company performance.

4.5 Discussion of Findings

Hypothesis 1: Strategic supplier alliances has no effect on organisational performance.

The results reveal that strategic supplier alliances have a significant effect on organisational performance with a p-value of 0.001. These findings align with Muthoka and Oduor (2014), who examined the influence of strategic alliances on organisational efficiency using a correlational approach with five major firms. Their multiple regression analysis indicated a statistically significant correlation between strategic alliances and

performance, implying that strategic partnerships positively impact business performance.

Hypothesis 2: Inventory Management has no effect on organisational performance.

The study found that inventory management significantly affects organisational performance, demonstrated by a p-value of 0.000. These results are consistent with Agu, Obi-Anike, and Eke (2016), who investigated inventory management's impact on manufacturing firms' operational performance. Using Pearson correlation and simple linear regression with a sample of 285 from a population of 996, they demonstrated a statistically significant and favorable link between inventory management and productivity within manufacturing firms.

Hypothesis 3: Customer relationship management has no effect on organisational performance.

The findings indicate that customer relationship management significantly affects organisational success. This aligns with Mohamad, Othman, Jabar, and Majid (2014), who examined CRM strategies' impact on operational efficiency using data from 369 organisations. Their study concluded that CRM approaches substantially influence organisational efficiency, and that establishing and maintaining consumer interactions plays a vital role in overall enterprise performance.

V. SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Preamble

This chapter presents a comprehensive overview of research outcomes and conclusions reached through examination of research questions and hypotheses. It explores the study's contribution to knowledge and provides recommendations for future research.

5.2 Summary of Findings

i. There is a significant and positive relationship between strategic supplier alliances and organisational performance. ii. There is a significant and positive relationship between inventory management and organisational performance. iii. There is a significant and positive relationship between customer relationship management and organisational performance.

5.3 Conclusions

The findings indicate that supply chain management—encompassing strategic supplier alliances, inventory management, and customer relationship management—significantly affects organisational performance. Well-managed supply chains reduce costs related to inventory, transportation, production, and warehousing while improving coordination among stakeholders, enhancing operational effectiveness, and expediting delivery.

Effective supply chain management enhances customer satisfaction through timely delivery, adherence to specifications, and consistent product quality, resulting in improved customer retention and positive recommendations. It also enables organizations to identify and mitigate potential risks through supplier diversification, contingency planning, and monitoring, contributing to organizational resilience.

Furthermore, effective supply chain management improves organizational adaptability to changing market dynamics, fostering collaboration with suppliers and partners while promoting innovation in product design and delivery. Organizations that quickly adapt to changing client needs maintain competitive advantage. Incorporating environmentally conscious methodologies into supply chain management enhances sustainability objectives through optimized transportation, eco-friendly packaging, and ethical sourcing.

5.4 Recommendations

i. Management should establish and enhance strategic partnerships to leverage shared objectives, enduring relationships, enhanced product quality, and innovative approaches to product development.

ii. Organizations should allocate resources toward implementing inventory management strategies like Economic Order Quantity, stock projection analysis, and Just-in-Time procedures to enhance product quality and boost organizational performance.

iii. Firms should establish and implement customer relationship management strategies to prioritize enhancing and sustaining customer satisfaction, allowing effective response to changing client demands.

5.5 Contribution to Knowledge

While previous research examined supply chain management's influence on organizational performance through variables like product quality, total quality management, benchmarking, and organizational framework, this study integrated distinctive factors: strategic supplier relationships, inventory management, and customer relationship management.

5.6 Suggestion for Further Studies

Future research should consider additional variables such as quality control, assessment, and logistics integration. Research should also be broadened to encompass a wider array of industries and sectors beyond manufacturing, including commerce, financial services, construction, education, and professional services. Additionally, as this study focused solely on Lagos, comparative research across various nations would enhance generalizability. Future studies should also consider qualitative approaches or hybrid methodologies that combine quantitative and qualitative techniques to acquire more precise and thorough data.

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