

SUPPLY CHAIN MANAGEMENT AND ORGANIZATIONAL EFFICIENCY

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**BEING A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF
BUSINESS ADMINISTRATION, IN PARTIAL FULFILMENT OF THE
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DECLARATION

I, **ALOIYE MARVELLOUS OSIKPEMHI** with **MAT NO: MGS2104791**, do hereby declare that this project was based on a study undertaken by me in the Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City, under the supervision of Dr. O. L. Dimowo. This work had not been previously submitted for the award of Bachelor of Science Degree in Business Administration, to the best of my knowledge. All ideas and views were a product of my personal research; and where the views of others been expressed, have been duly acknowledged.

ALOIYE MARVELLOUS OSIKPEMHI
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CERTIFICATION

We, the undersigned, certify that this project was carried out by **ALOIYE MARVELLOUS OSIKPEMHI** with matriculation number **MG2104791** of the Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria; the work has not be presented in part or full in any diploma or Degree awarding institution and the work is adequate in scope and quality in partial fulfilment of the requirements for the award of B.Sc. Degree in Business Administration, Faculty of Management Sciences, University of Benin, Benin City, Nigeria.

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DEDICATION

This work is dedicated to God Almighty, the Creator of the heavens and earth. The work is also dedicated to my beloved parents, Mr. and Mrs. Isah Aloiyé.

ACKNOWLEDGEMENTS

My deepest gratitude goes to God Almighty for making this work a success. My sincere appreciation also goes to my project supervisor, Dr. O. L. Dimowo, whose insightful guidance enhanced the quality and success of this project.

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I wish to extend my profound gratitude to my wonderful brothers, Miracle, Meekness, and Mishael, whose care, encouragement, and prayers have been a great source of strength during my time in this institution. Thank you for your unwavering support and presence in my life.

I am profoundly delighted to express my gratitude to my wonderful friends, Eugene, Matthew, Praise, Isaac, and Alexious, whose friendship, unity, and support added great value to my time in school. Your companionship has been both inspiring and rewarding. I equally extend my sincere appreciation to all my IMPREGNABLE course mates for their cooperation and for being an integral part of the memorable experiences I had at the University of Benin.

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ABSTRACT

The study investigated supply chain management and organizational efficiency. To achieve the purpose of the study, three research questions were raised and answered.

The research design adopted for this study is the cross-sectional research design. The population for this study was made up of all 75 staff members of the University of Benin (UNIBEN) Table Water Factory, Benin City. The sample size for this study is 75, representing the entire population of staff at the University of Benin (UNIBEN) Table Water Factory. The data collected for this study were analyzed using linear regression analysis. Furthermore, descriptive statistics, such as frequency distributions and percentages, were employed to provide a preliminary summary of the respondents' demographic characteristics and response patterns.

Findings from the study revealed that that supply chain management serves as a critical strategic component in improving organizational performance. It was concluded that that effective supply chain management is a transformative tool for achieving cost efficiency, operational improvement, and strategic advancement. Based on the findings, it was recommended that businesses should adopt lean supply chain principles to eliminate waste and enhance productivity while maintaining flexibility to respond to market changes. This dual approach will increase operational responsiveness, lower costs, and improve customer satisfaction.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Supply chain management plays a crucial role in the operational success of modern organizations, ensuring the seamless flow of goods, services, and information across various stakeholders. Nuhu (2023) asserted that an effective supply chain management enhances an organization's efficiency by reducing operational costs, minimizing lead times, and improving customer satisfaction. In the contemporary business landscape, organizations face mounting pressures to optimize their supply chain networks due to globalization, technological advancements, and market competition. Efficient supply chain practices, therefore, serve as a critical determinant of organizational performance, allowing firms to gain a competitive edge in both local and international markets. Moreover, with the increasing complexities in business environments, organizations that fail to adopt strategic supply chain management practices risk inefficiencies that could undermine their overall productivity and profitability (Adebayo, 2021).

The significance of supply chain management in enhancing organizational efficiency has been widely recognized, particularly in the manufacturing and service industries. Eze (2022) posited that a well-integrated supply chain promotes agility, responsiveness, and adaptability, which are essential in today's dynamic business

environment. Organizations that align their supply chain strategies with their corporate objectives can effectively manage risks, reduce wastage, and improve overall service delivery. Furthermore, the adoption of digital technologies, such as blockchain, artificial intelligence, and big data analytics, has revolutionized Supply Chain Management, enabling organizations to track inventory, forecast demand, and streamline logistics operations. Consequently, the effective implementation of supply chain management strategies can lead to improved efficiency, cost savings, and enhanced customer satisfaction (Okonkwo, 2020).

A major challenge confronting organizations in supply chain management is the disruption of supply chains due to unpredictable factors such as economic instability, natural disasters, and political uncertainties. Oladimeji (2021) observed that supply chain disruptions often result in operational delays, increased costs, and loss of competitive advantage. In Nigeria, supply chain inefficiencies are exacerbated by poor infrastructure, inadequate transportation systems, and regulatory bottlenecks, which hinder the smooth movement of goods and services. Additionally, issues such as inventory mismanagement and supplier unreliability contribute to inefficiencies, leading to financial losses and customer dissatisfaction. Addressing these challenges requires organizations to adopt robust supply chain resilience strategies, including supplier diversification, technological integration, and risk management frameworks (Uchenna, 2023).

Collaboration and integration among supply chain partners have been identified as key enablers of organizational efficiency. Musa (2023) emphasized that strong relationships among suppliers, manufacturers, and distributors enhance coordination, reduce delays, and improve service delivery. Strategic partnerships enable firms to leverage shared resources, expertise, and technologies to create value and drive operational excellence. Moreover, organizations that foster transparency and trust within their supply chains are better positioned to navigate uncertainties and sustain long-term success. Effective communication, joint decision-making, and information-sharing mechanisms further strengthen supply chain networks, fostering greater efficiency and innovation (Obi, 2020).

Sustainability and ethical considerations have become integral aspects of modern supply chain management, influencing organizational efficiency and corporate reputation. Adekunle (2022) argued that sustainable Supply Chain Management practices, such as eco-friendly packaging, ethical sourcing, and waste reduction, contribute to cost efficiency and environmental conservation. In Nigeria, organizations are increasingly embracing green supply chain initiatives to minimize their carbon footprint and comply with environmental regulations. Moreover, ethical supply chain practices, including fair labour policies and responsible procurement, enhance organizational credibility and stakeholder trust. As consumers become more environmentally conscious, businesses that integrate sustainability into their Supply Chain Management strategies gain a competitive advantage while improving overall efficiency (Chukwu, 2021).

Supply chain management remains a critical factor in driving organizational efficiency, competitiveness, and sustainability. Yusuf (2023) stated that organizations that adopt innovative and strategic Supply Chain Management practices can enhance their operational performance, reduce costs, and improve service delivery. Despite the numerous challenges associated with supply chain disruptions, inadequate infrastructure, and regulatory hurdles, firms can mitigate these issues through technological advancements, collaboration, and sustainable practices. By prioritising efficiency, agility, and resilience in their supply chains, organizations can position themselves for long-term success in an ever-evolving business environment (Ogundele, 2022).

1.2 Statement of the Research Problem

In contemporary times, preliminary observations have shown that inefficiencies in supply chain management significantly impact organizational performance, leading to disruptions, increased operational costs, and reduced customer satisfaction. Many organizations struggle with poor coordination between suppliers, manufacturers, and distributors, which often results in delays, inventory shortages, and wastage of resources (Usije, 2022). The lack of integrated supply chain systems and real-time tracking mechanisms further exacerbates inefficiencies, making it difficult for organizations to meet market demands effectively (Okonkwo & Adebayo, 2021). Moreover, supply chain disruptions caused by external factors such as geopolitical instability, economic downturns, and global pandemics have further exposed vulnerabilities within supply chain networks, leaving many organizations struggling to maintain seamless operations

and competitive advantage. Without effective supply chain management strategies, organizations risk financial losses, operational setbacks, and diminished customer trust, ultimately affecting their overall efficiency and sustainability (Kola, 2020).

The role of supply chain management in enhancing organizational efficiency continues to generate extensive debate among scholars and industry practitioners. While some researchers, such as Emenike, Okafor, and Erhiyo (2021), argue that technology-driven supply chain integration enhances operational efficiency, others, including Bello and Riwane (2022), contend that factors such as human resource competency, supplier reliability, and regulatory frameworks play a more significant role in improving efficiency. Additionally, empirical evidence remains inconclusive on whether supply chain management directly influences overall organizational performance or if other moderating variables, such as organizational culture and leadership, have a more substantial impact (Nwankwo & Agbaje, 2023). Given these divergent perspectives, there is a need for further investigation into the extent to which effective supply chain management strategies contribute to organizational efficiency. Therefore, this study seeks to bridge the gap in literature by examining the relationship between supply chain management and organizational efficiency, providing empirical insights that can guide business decision-making and policy formulation.

1.3 The Research Questions

The following research questions will be addressed in the study:

1. What is the effect of supply chain management on cost reduction?
2. What is the role of logistics in enhancing operational efficiency?
3. What is the impact of supplier relationships on business performance?

1.4 The Objectives of the Study

The broad objectives of the study is to investigate on supply chain management and organizational efficiency. The specific objectives of the study are;

1. To assess the effect of supply chain management on cost reduction.
2. To analyze the role of logistics in enhancing operational efficiency.
3. To examine the impact of supplier relationships on business performance.

1.5 The Research Hypotheses

In order to answer the research questions and achieve the objectives, the following hypotheses were hereby formulated and stated in the null form:

HO₁: Supply chain management has no significant effect on cost reduction.

HO₂: Logistics does not play a significant role in enhancing operational efficiency.

HO₃: Supplier relationships do not have a significant impact on business performance.

1.6 Scope of the Study

The scope of this study is limited to the University of Benin (UNIBEN) Table Water Factory, Benin City. The study focuses on supply chain management and organizational efficiency, examining key aspects such as cost reduction, logistics, and supplier relationships. However, the research will be restricted to the operations of the UNIBEN Table Water Factory, analyzing how its supply chain management strategies influence overall efficiency. The participants for the study will include management staff, supply chain personnel, and other key stakeholders involved in the factory's operations.

1.7 Significance of the Study

This study will be of immense significance to business owners and managers, particularly those in the manufacturing sector, as it will provide insights into how effective supply chain management contributes to cost reduction and operational efficiency. By understanding the role of logistics and supplier relationships in enhancing business performance, organizations can develop better strategies to optimize their supply chain processes, reduce unnecessary costs, and improve overall productivity.

The study will be valuable to supply chain professionals and logistics managers, as it will highlight best practices for managing supply chain operations within the context of a university-owned manufacturing enterprise. By analyzing the case of the UNIBEN Table Water Factory, this study will offer practical recommendations for improving

supply chain coordination, reducing delays, and ensuring seamless production and distribution.

Students and researchers in business administration, operations management, and supply chain studies will also benefit from this research. It will serve as an academic resource that bridges theoretical supply chain concepts with real-world applications. The study's findings will contribute to the existing body of knowledge on supply chain management and organizational efficiency, providing a foundation for further research.

The study will be of relevance to policymakers and institutional administrators, particularly those overseeing university-owned businesses. By examining the supply chain challenges and opportunities within the UNIBEN Table Water Factory, the research will provide useful recommendations for improving the efficiency of similar ventures. This can aid in policy formulation aimed at enhancing the management of university-owned enterprises for sustainability and profitability.

This study will contribute to the growing literature on supply chain management in Nigeria. As supply chain disruptions continue to pose challenges to organizations, the findings from this research will offer valuable insights into how businesses can build more resilient supply chains. It will also provide guidance for future studies on optimizing supply chain strategies in different sectors of the economy.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter presents a comprehensive review of the literature on supply chain management and its impact on organizational efficiency. It starts with a detailed analysis of the concept of supply chain management, exploring its key principles and strategies. The chapter then delves into the significant role that effective supply chain management plays in cost reduction, discussing various techniques and approaches that contribute to lowering operational expenses. Additionally, the chapter highlights the importance of logistics in enhancing operational efficiency, examining how streamlined logistics processes can improve overall performance. Finally, the chapter concludes by examining the critical impact that supplier relationships have on business performance, discussing how strong and collaborative partnerships with suppliers can drive growth and competitive advantage. Through these analyses, the chapter provides a holistic understanding of how supply chain management influences organizational success.

2.2 Organizational Efficiency

Organisational efficiency refers to the ability of an organisation to maximise output with minimal input while maintaining quality standards. Udoka and Saraki (2023) asserted that organisational efficiency involves streamlining internal processes, reducing redundancy, and aligning resources to organisational goals. Efficiency is not merely about cost-cutting but about achieving more with less through proper planning, execution, and monitoring. It also requires clarity in roles, effective communication, and performance evaluation mechanisms. In Nigeria, many institutions—both private and public—are recognising that without a focus on efficiency, long-term sustainability may be elusive. The efficient use of time, labour, and capital ensures not only profitability but also relevance in a competitive environment. This is particularly vital in the face of economic challenges, fluctuating policies, and high operating costs. Therefore, the quest for organisational efficiency must remain a top priority in the evolving Nigerian business landscape (Danbaki, 2022).

Technology and innovation play an indispensable role in enhancing organisational efficiency. Ogundipe (2022) noted that automation, data analysis, and digital communication systems can streamline operations, reduce manual errors, and promote faster decision-making. The integration of technology helps organisations to reduce operational costs while improving service delivery. For example, Nigerian banks have embraced mobile platforms to reduce congestion in physical branches, thereby improving efficiency. However, the success of these technological adoptions largely depends on employee competence and willingness to adapt. Organisations must, therefore, invest in

training and digital literacy to fully benefit from technological tools. Furthermore, technological upgrades should be aligned with organisational goals and customer needs to be effective. In Nigeria, where access to reliable power and internet can be a limitation, organisations must innovate locally-relevant solutions to remain efficient and productive (Amadi, 2023).

Efficient leadership and management are central to achieving organisational efficiency in any setting. Ikpigbi (2021) argued that leaders must establish a clear vision, define strategic objectives, and foster a culture of accountability and excellence. A strong leadership framework ensures that all departments within an organisation work harmoniously towards set goals. In Nigeria, where leadership instability often affects organisational performance, there is a growing need for competent and ethical leaders. Effective managers also understand the importance of delegating tasks appropriately, setting realistic targets, and monitoring progress through feedback mechanisms. Additionally, leadership style influences staff morale, innovation, and productivity, all of which contribute to overall efficiency. Hence, Nigerian organisations that invest in leadership development often experience improved coordination, reduced conflicts, and better results in the long run (Tariye & Ibrahim, 2022).

Human capital development is a cornerstone of organisational efficiency. Gureje (2020) maintained that employees who possess the right skills, attitudes, and motivation can significantly enhance productivity and service delivery. Skilled workers reduce error

rates, improve turnaround time, and contribute innovative ideas to solve problems. In Nigeria, many organisations face challenges due to poorly trained or underutilised staff, leading to inefficiencies and wasted resources. Addressing this gap involves continuous staff training, mentoring programmes, and performance incentives. Efficient organisations make strategic efforts to match staff roles with their competencies to ensure maximum output. Additionally, maintaining a healthy work environment, promoting teamwork, and offering opportunities for career growth can boost employee commitment and organisational efficiency. Therefore, improving human capital is not a luxury but a necessity for any organisation aiming for long-term success in Nigeria's competitive landscape (Nwankwo, 2023).

The external environment also plays a significant role in shaping organisational efficiency. Balogun (2021) emphasised that economic conditions, government policies, and market dynamics can either enable or hinder operational efficiency. In Nigeria, fluctuating exchange rates, inconsistent regulations, and infrastructural deficits often present serious obstacles. Efficient organisations must remain adaptable, conducting regular environmental scans to anticipate changes and adjust accordingly. This includes developing contingency plans, diversifying resources, and fostering partnerships that buffer against external shocks. Additionally, a good understanding of the regulatory framework helps organisations to avoid legal complications and delays. The ability to operate efficiently amidst external pressures is a testament to an organisation's strategic planning and resilience. Nigerian organisations that actively monitor their environment

and act proactively often outperform their counterparts in terms of efficiency and sustainability (Toyosi & Yakubu, 2023).

2.2.1 Supply Chain Management

Supply chain management refers to the strategic coordination of all parties involved in the creation and delivery of a product or service, from raw materials to the final consumer. Bianite (2023) asserted that supply chain management integrates suppliers, manufacturers, logistics providers, retailers, and customers into one interconnected system aimed at efficiency and responsiveness. This management approach ensures that goods, services, and information flow smoothly and without unnecessary interruption or waste. It covers the planning and execution of supply chain activities such as sourcing, production, inventory control, and delivery. The goal is to create value for customers while maintaining competitive advantage and reducing operational costs. Companies that adopt efficient supply chain management can adapt quickly to market changes and optimise resources effectively. In today's global economy, supply chain management has become a vital tool for achieving both operational excellence and customer satisfaction (Tunkari, 2022).

Supply chain management involves the integration of various business functions including procurement, production planning, logistics, and distribution to ensure smooth operations. Edeh (2022) explained that the concept of supply chain management is broader than traditional logistics because it involves long-term strategic planning across

the entire network. This management approach enables businesses to respond effectively to dynamic market conditions by fostering coordination and visibility throughout the supply process. Companies use supply chain management to manage interdependencies between departments and external partners, ensuring that goods and services reach customers in a timely and cost-effective manner. The ability to align production with demand patterns and streamline resource utilisation gives firms a strong competitive edge. As businesses expand their reach across borders, supply chain management becomes even more crucial in maintaining efficiency and consistency in service delivery. Through proper supply chain management, organisations can better withstand disruptions and capitalise on growth opportunities (Ayoola, 2023).

Technology plays a significant role in modern supply chain management by enabling real-time data sharing and decision-making. Alade (2020) noted that innovations such as blockchain, cloud computing, and Radio Frequency Identification have transformed how businesses plan and manage their supply chains. These technologies allow for better forecasting, improved transparency, and enhanced tracking of goods as they move through the supply network. In today's digital economy, the success of supply chain management depends largely on the ability to collect, analyse, and act on data quickly and efficiently. Through digital tools, businesses can anticipate customer demands, reduce lead times, and mitigate risks more effectively. Technology also facilitates integration among supply chain partners, leading to enhanced collaboration and operational efficiency. For Nigerian firms facing infrastructural limitations, embracing

technology in supply chain management can lead to significant improvements in productivity and service delivery (Uduji, 2021).

An essential component of supply chain management is the collaboration and coordination among all stakeholders involved in the supply chain process. Iduwe (2023) maintained that mutual trust, open communication, and shared objectives are foundational to building strong supply chain partnerships. Effective collaboration among suppliers, manufacturers, and logistics providers reduces operational risks and enhances adaptability, particularly during disruptions. It also allows for the joint resolution of challenges such as supply delays, inventory shortages, and changes in consumer preferences. When supply chain partners align their goals and strategies, they create a more resilient and agile system. In Nigeria, where supply chains often face external pressures such as inconsistent power supply and transportation issues, cooperation among stakeholders is vital for smooth operation. By fostering collaborative relationships, companies can ensure continuity, reduce conflicts, and deliver consistent value to customers across the supply network (Onyebuchi, 2022).

Sustainability is increasingly becoming a core aspect of supply chain management, as organisations are expected to operate in environmentally and socially responsible ways. Fajana (2021) observed that sustainable supply chain management encourages ethical sourcing, energy efficiency, waste reduction, and fair labour practices. Companies that adopt this approach not only contribute to environmental protection but also improve

their brand reputation and customer loyalty. Sustainable supply chain management requires assessing the environmental impact of each stage in the supply chain and making necessary adjustments to align with sustainability goals. This includes using recyclable materials, reducing emissions in transportation, and ensuring compliance with local and international labour laws. In Nigeria, many businesses are beginning to recognise the importance of embedding sustainability into their supply chain management strategies to attract investors and meet global standards. This shift is critical in promoting long-term economic and environmental stability (Omorogbe, 2023).

Supply chain management is an evolving discipline that demands adaptability, strategic thinking, and continuous improvement. Enefe (2022) asserted that with global markets becoming more unpredictable, companies must regularly review and refine their supply chain strategies. This includes identifying potential disruptions, investing in training, and implementing systems that enhance responsiveness and flexibility. Developing competencies in supply chain management allows organisations to innovate, meet customer expectations, and manage risks proactively. Education and capacity building are essential to produce professionals with the technical and managerial skills needed in today's competitive environment. In Nigeria, the increasing complexity of business operations calls for more attention to professional supply chain management practices to ensure sustainable growth. Organisations that embrace continuous learning and invest in supply chain excellence are more likely to thrive amid economic and logistical challenges (Shehu, 2023).

2.2.2 Effect of Supply Chain Management on Cost Reduction

Supply chain management plays a pivotal role in reducing operational costs across various industries. Chukwudi (2023) asserted that effective supply chain management strategies streamline procurement, logistics, and production processes, allowing businesses to minimise waste and redundancies. By integrating suppliers, manufacturers, and distributors into a seamless network, organisations can significantly cut down on lead times and inventory holding costs. This integration also promotes real-time decision-making, which curtails the financial losses associated with delayed responses and excess stock. In addition, technological tools such as enterprise resource planning systems and inventory management software further enhance cost-efficiency by automating repetitive tasks and reducing human error. Proper supply chain management not only reduces operational expenses but also ensures customer satisfaction through prompt delivery and service efficiency. The cumulative effect of these advantages contributes greatly to improved profitability and competitiveness in the marketplace (Ogunyemi, 2021).

Strategic supplier relationship management is another vital component of supply chain management that contributes to cost reduction. Garba (2022) emphasised that nurturing long-term partnerships with reliable suppliers fosters trust, encourages

transparency, and leads to favourable pricing and credit terms. Collaborative relationships enable bulk purchasing, joint forecasting, and shared transportation, all of which drive significant cost savings. In Nigeria, where economic instability and fluctuating inflation often disrupt business operations, maintaining strong supplier relationships helps to stabilise prices and minimise procurement-related risks. Furthermore, effective communication between companies and suppliers leads to faster delivery times and reduced quality-related issues, which in turn lowers rework and warranty costs. These practices not only ensure consistent supply but also support a resilient and responsive supply chain. Ultimately, strategic supplier relationship management promotes cost-efficiency and strengthens the entire supply chain structure (Iheanacho, 2020).

Inventory management under the framework of supply chain management plays a crucial role in minimising operational costs. Egunjobi (2021) noted that practices such as Just-in-Time inventory help businesses maintain optimal stock levels, reducing storage costs and minimising inventory obsolescence. Excessive inventory ties up capital and may result in waste due to spoilage or theft, while too little inventory leads to stockouts and lost sales. Advanced forecasting techniques and demand-driven inventory systems allow companies to achieve balance, which enhances overall cash flow and operational efficiency. In Nigeria, many businesses have recorded improved outcomes by adopting inventory strategies that reduce holding costs and maximise turnover rates. Such inventory systems also support lean production and quick adaptation to market demands.

When properly managed, inventory becomes a strategic asset rather than a liability, enabling consistent supply and cost-effective operations (Gbenu, 2023).

Another important way in which supply chain management contributes to cost reduction is through optimised transportation and logistics. Nwankwo (2022) pointed out that by analysing delivery routes, consolidating shipments, and partnering with third-party logistics providers, companies can significantly reduce transportation costs. Efficient logistics planning reduces expenses related to fuel, vehicle maintenance, and labour, while also minimising delivery times. Nigerian firms, particularly those operating in regions with infrastructural challenges, benefit greatly from logistics optimisation as it reduces delays and enhances distribution efficiency. Technologies such as GPS tracking and route optimisation systems improve delivery reliability and reduce the cost associated with failed or late deliveries. These improvements make a notable difference in overall operational expenses and customer satisfaction levels. Logistics efficiency thus becomes a competitive advantage and a means of sustaining profitability in dynamic markets (Oluwole, 2020).

The adoption of technology and automation within supply chain management also significantly drives cost reduction. Fakolade (2021) explained that tools such as artificial intelligence, machine learning, and blockchain technology improve transparency, eliminate redundancies, and increase process accuracy. These innovations enhance forecasting, streamline procurement, and monitor supplier performance in real-time,

reducing manual errors and associated costs. Nigerian businesses that have invested in digital supply chain solutions have reported better resource allocation, improved decision-making, and lowered administrative expenses. Automated systems also facilitate seamless communication among supply chain partners, making the entire process more agile and responsive to changes in demand or supply conditions. Furthermore, digitalisation ensures faster problem resolution, minimising downtime and related costs. The long-term benefit is a scalable, resilient, and efficient supply chain structure capable of supporting organisational growth (Iroegbu, 2022).

Sustainable supply chain management also contributes meaningfully to long-term cost reduction while promoting environmental responsibility. Balogun and Dokunbor (2023) observed that implementing sustainable practices, such as reducing packaging waste, sourcing locally, and optimising energy use, results in both financial savings and reduced environmental impact. Companies that integrate sustainability into their supply chains often enjoy regulatory incentives, tax reliefs, and enhanced brand loyalty, all of which translate to financial benefits. In Nigeria, increasing awareness about environmental concerns and pressure from stakeholders have led companies to embrace greener supply chain strategies. These include recycling, the use of biodegradable materials, and investments in renewable energy. Sustainable supply chain management encourages resource conservation, lowers waste management costs, and reduces long-term environmental liabilities. Ultimately, it positions businesses for success in a future where cost-efficiency and sustainability are closely intertwined (Okafor, 2021).

2.2.3 Role of Logistics in Enhancing Operational Efficiency

Logistics plays a crucial role in boosting the operational efficiency of organisations by ensuring that the movement, storage, and delivery of goods and services are effectively managed. Fadegbe (2023) asserted that logistics is the backbone of supply chain operations, allowing firms to coordinate procurement, production, and distribution with minimal disruption. Efficient logistics helps reduce lead times, eliminate unnecessary inventory, and improve service delivery. This smooth coordination is essential in today's competitive business environment, where customers demand timely and accurate deliveries. With effective logistics, companies can streamline their operations and reduce delays, improving customer satisfaction and loyalty. It also ensures better use of resources, enhances planning, and facilitates growth. Businesses that leverage strategic logistics often experience improved productivity, reduced costs, and stronger market positioning, which are key indicators of operational efficiency (Dibofu, 2021).

Technology has significantly transformed the role of logistics, enhancing operational efficiency through real-time monitoring and automation. Salako (2022) emphasised that digital tools such as fleet tracking systems, inventory management software, and enterprise resource planning (ERP) platforms enable businesses to improve visibility and control across supply chains. These tools reduce human error and allow for faster, data-driven decision-making. The integration of artificial intelligence and machine learning has further enhanced logistics by enabling predictive analytics, route

optimisation, and automated restocking. Such advancements not only increase speed and accuracy but also lower operational costs. Companies can now manage their supply chains with agility, adapting quickly to market changes and customer needs. In this way, logistics becomes a strategic driver of business success, supporting innovation and sustainability in operations (Ikpogri, 2020).

A major function of logistics in operational efficiency lies in effective cost management and resource optimisation. Tella (2021) noted that logistics helps organisations minimise expenses through route optimisation, bulk shipments, and warehouse space utilisation. When logistics functions are aligned with business goals, they eliminate inefficiencies and ensure resources are allocated precisely where needed. This results in lower transportation costs, reduced waste, and better inventory turnover. Efficient logistics planning also prevents stockouts and overstocking, which can significantly impact cash flow and service delivery. For organisations facing budget constraints, a well-managed logistics system is a key enabler of financial stability and operational performance. Furthermore, logistics enables accurate forecasting, allowing companies to plan production and distribution with greater precision (Gidado, 2023).

Effective logistics also contributes to enhanced customer service, which is a crucial component of operational efficiency. Fashola (2022) stated that customers value timely deliveries and reliable service, both of which depend on logistics capabilities. By implementing reliable delivery systems, responsive warehousing, and consistent

communication channels, companies can meet customer expectations more effectively. Real-time tracking of shipments enables transparency, reducing customer anxiety and complaints. Logistics also plays a key role in handling returns and exchanges, which are vital to maintaining customer trust. A smooth and efficient logistics system allows companies to respond quickly to inquiries, resolve issues, and fulfil orders without delay. Consequently, this strengthens customer loyalty and helps build a strong market reputation, which is essential for long-term success (Ezeaku, 2021).

The strategic integration of logistics within business planning fosters improved coordination across departments, boosting overall operational efficiency. Daramola (2023) pointed out that when logistics aligns with procurement, production, and sales, organisations achieve a unified approach to achieving targets. Cross-functional collaboration ensures that each department understands and supports logistics goals, reducing duplication of efforts and facilitating better communication. With logistics embedded in strategy, businesses can react swiftly to disruptions, such as supplier delays or market demand fluctuations. This agility improves risk management and allows companies to innovate continuously. Furthermore, logistics contributes to the design of scalable processes that support expansion into new markets or product lines. As businesses face increasing global competition, logistics provides the operational backbone to maintain speed, quality, and cost control across multiple channels (Zawadi, 2022).

Logistics is also instrumental in driving environmental sustainability, which enhances operational efficiency while supporting corporate responsibility. Urhieme (2020) observed that logistics practices such as green warehousing, energy-efficient transportation, and recyclable packaging contribute to reducing the environmental footprint of operations. Businesses that adopt sustainable logistics not only save on fuel and material costs but also comply with environmental regulations. Efficient logistics planning can lead to fewer vehicle trips, lower emissions, and optimal use of storage facilities. Additionally, many consumers today prefer to support eco-conscious companies, so sustainability in logistics can improve brand image and attract loyal customers. By embracing environmentally friendly logistics, organisations reduce waste, enhance efficiency, and align their operations with global sustainability goals. These advantages make logistics a vital tool for achieving both environmental and economic performance (Bako, 2021).

2.2.4 Impact of Supplier Relationships on Business Performance

Strong supplier relationships are vital to the overall success and performance of any business. Kalu (2023) asserted that a dependable supplier network helps maintain uninterrupted production by ensuring the timely delivery of raw materials. Consistent supply reduces production delays, enhances workflow, and increases output. When businesses and suppliers communicate openly and regularly, issues such as delivery disruptions or quality concerns can be identified early and resolved swiftly. Moreover,

strong relationships with suppliers often lead to flexible payment arrangements and better service quality. In competitive markets, businesses with supportive supplier alliances can respond more efficiently to customer demands. These relationships also foster mutual growth, as suppliers are more likely to prioritise loyal clients during high-demand periods. In Nigeria, firms that invest in supplier engagement strategies often report improved productivity and customer satisfaction (Edafe, 2021).

Effective supplier relationships play a critical role in cost control and enhancing business financial performance. Nwosu (2022) explained that businesses with established supplier connections often enjoy better pricing, bulk discounts, and favourable payment terms. Such cost benefits allow firms to reduce their operational expenditure and improve profit margins. Furthermore, collaboration with suppliers on production planning and inventory management reduces waste and lowers storage costs. Suppliers who understand a company's operational model are better positioned to offer cost-effective solutions. These advantages strengthen the business's financial stability and competitive positioning. In an economy like Nigeria's, where inflation and supply chain disruptions are prevalent, maintaining cost-effective supplier relationships is crucial to staying afloat. Numerous Nigerian companies attribute their survival and growth, even during economic downturns, to proactive supplier collaborations (Utuoma, 2023).

Strong supplier relationships contribute significantly to product quality and consistency, which are crucial for long-term customer retention. Ibong (2021) observed

that suppliers who work closely with businesses are more attuned to their quality expectations and are willing to adopt specific standards. With continuous communication and mutual understanding, companies can ensure that raw materials meet the required specifications. Reliable suppliers help avoid quality fluctuations, reducing the risk of customer dissatisfaction. Quality consistency also minimises returns, warranty claims, and reputational damage. Suppliers invested in long-term partnerships are more open to quality audits and continuous improvement initiatives. In regulated industries such as food and pharmaceuticals, dependable supplier relationships are necessary to comply with health and safety standards. Nigerian companies operating in such sectors have relied on close supplier collaborations to maintain quality and ensure compliance with industry regulations (Bahitu, 2022).

Trust and transparency in supplier relationships greatly enhance the reliability of a company's supply chain. Gbenga (2023) noted that trusted suppliers are more likely to provide timely updates regarding delivery schedules, price changes, or shortages. This transparency allows businesses to anticipate disruptions and make informed adjustments, reducing uncertainty. When mutual trust exists, companies can share sensitive data with suppliers to optimise logistics and production planning. Moreover, a transparent relationship reduces the likelihood of fraud, supply chain errors, and miscommunication. This reliability creates stability in the procurement process and enhances the firm's reputation for dependability. In the Nigerian business environment, where logistical challenges are frequent, trust-based supplier relationships have helped companies

navigate bottlenecks more effectively and avoid significant losses. Many businesses have improved their operational efficiency and forecasting accuracy through formal supplier trust-building strategies (Tajudeen, 2021).

Innovation and continuous improvement are other important outcomes of strong supplier partnerships. Fashiku (2022) highlighted that suppliers involved in long-term collaborations are more willing to share industry innovations, new technologies, and process enhancements. These innovations can lead to more efficient production, cost savings, or the development of new products. When suppliers and businesses co-create solutions, the result is often a competitive advantage. Innovation also includes adopting environmentally friendly materials and methods, which align with global sustainability goals. Suppliers engaged in collaborative relationships are better positioned to support such transitions. In Nigeria's evolving industrial sector, businesses that maintain close ties with suppliers have accelerated their digital transformation and improved product offerings. These collaborative efforts not only boost business performance but also stimulate growth across entire supply chains (Taokebe, 2023).

Long-term supplier relationships help businesses manage risks and improve strategic resilience in times of uncertainty. Kolawole (2023) stressed that companies with reliable suppliers can better withstand crises such as raw material shortages or international trade disruptions. These suppliers often prioritise established clients during emergencies, ensuring continuity of operations. Reliable relationships also reduce the risk

of fraud and errors, as there is a deeper understanding between parties. Additionally, businesses avoid the cost and risk of frequently changing suppliers, which can disrupt production. In industries with tight regulatory controls, supplier familiarity with compliance expectations can prevent costly delays. Within Nigeria, where businesses often face unpredictable challenges such as fluctuating exchange rates or fuel scarcity, strong supplier ties have enabled firms to maintain consistent service delivery and recover more quickly from shocks (Ekeh, 2022).

2.3 Theoretical Review

The study is grounded in the Lean Supply Chain Management Theory, which was propounded by Taiichi Ohno in 1959.

2.3.1 Lean Supply Chain Management Theory

Lean Supply Chain Management Theory is based on the principle of optimizing efficiency by eliminating waste and improving the flow of materials and information across the supply chain. The theory originated from the Toyota Production System, which emphasized minimizing non-value-adding activities while focusing on improving the quality and speed of production. In the context of supply chain management, the goal is to streamline operations from procurement to final delivery, ensuring that each step adds value without unnecessary costs. This is particularly relevant in modern businesses that face increasing pressure to reduce costs, improve customer satisfaction, and stay competitive in a globalized market. By applying Lean principles, organizations can

reduce inefficiencies such as excess inventory, overproduction, waiting times, and transportation costs, which in turn contributes to greater organizational efficiency.

The core principles of Lean Supply Chain Management theory are rooted in waste reduction and value maximization. A fundamental concept is the identification and elimination of the "Seven Wastes" in supply chain activities: overproduction, waiting, defects, unnecessary transportation, excess inventory, unnecessary motion, and underutilized talent. By focusing on reducing or eliminating these wastes, organizations can achieve smoother operations, faster response times, and lower operational costs. Another key principle of Lean supply chains is "Just-in-Time" (JIT) production, which ensures that products are made available only when needed and in the quantity required. This minimizes inventory costs and storage space, while also reducing the risk of obsolescence. By implementing these principles, companies create a supply chain that is not only more efficient but also more responsive to customer needs.

The theory propose that with the elimination of wasteful practices, companies can achieve higher throughput with fewer resources. Lean practices encourage a continuous improvement mindset, known as "Kaizen," where small, incremental changes are made regularly to enhance efficiency and quality. This approach fosters a culture of constant evaluation and optimization within an organization, ensuring that supply chain operations are always improving. Additionally, Lean management practices enhance the coordination between different functions in an organization, such as procurement,

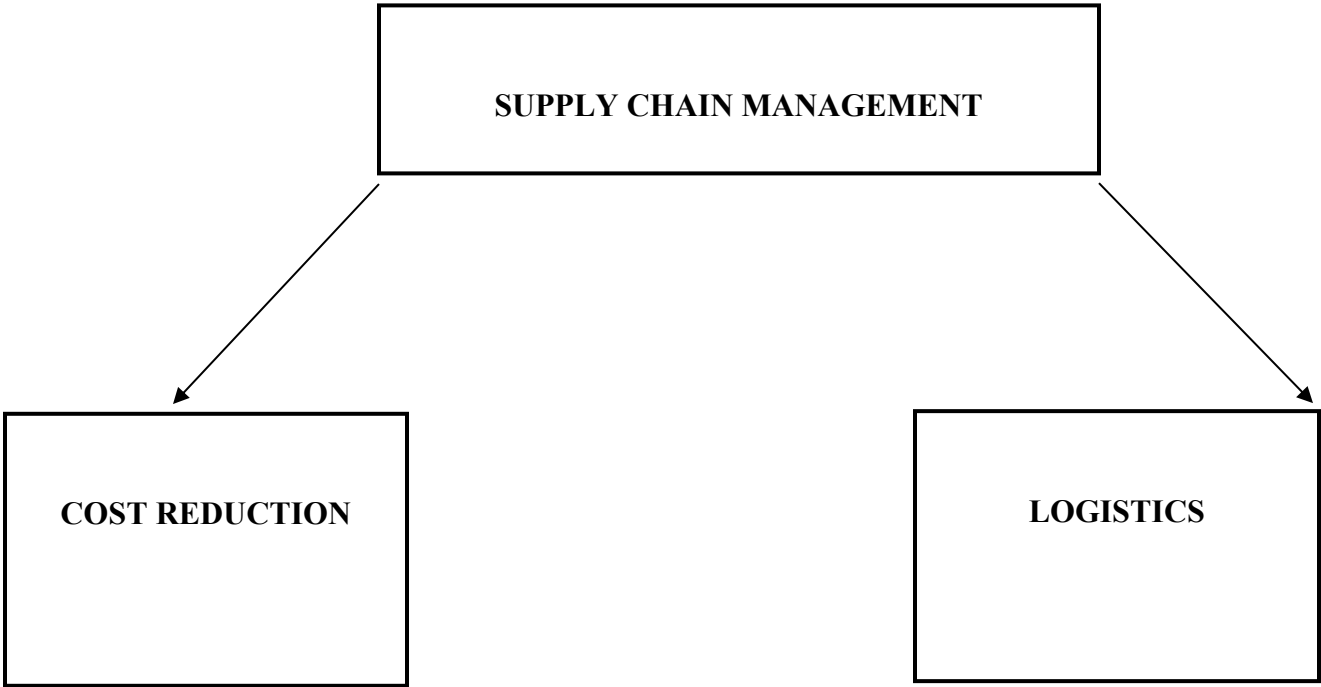
production, and distribution, thereby creating a seamless flow of goods and information. By improving this coordination, Lean principles help organizations avoid bottlenecks, reduce lead times, and improve overall efficiency, which ultimately enhances profitability and customer satisfaction.

The theory is based on the notion that employees and managers may be accustomed to traditional ways of doing business and might be hesitant to adopt new practices that require altering workflows or investing in new technologies. Furthermore, implementing Lean requires a significant commitment to training and education, as it demands that all stakeholders understand the principles and practices involved. Another challenge is ensuring that Lean practices are tailored to the specific needs of the organization. What works for one company may not be applicable to another, so the principles must be adapted to the unique context of each organization. Additionally, in global supply chains, managing Lean principles across multiple suppliers and stakeholders with different operational practices can be complex, requiring strong collaboration and communication channels.

The theory is related to the study as it help offers a robust framework for organizations seeking to improve their efficiency and reduce operational costs. By eliminating waste, optimizing processes, and focusing on continuous improvement, organizations can create supply chains that are more responsive, cost-effective, and customer-centric. However, successful implementation requires overcoming challenges

such as resistance to change, training requirements, and the need for tailored approaches. When implemented effectively, Lean principles can transform an organization's supply chain into a competitive advantage, contributing significantly to the overall efficiency and success of the business. In an increasingly dynamic and competitive business environment, adopting Lean Supply Chain Management is an essential strategy for companies aiming to thrive in the global marketplace.

2.4 Conceptual Framework



ORGANIZATIONAL EFFICIENCY

Source: Researcher's Illustration (2025)

2.5 Empirical Review

Shekpaduku and Diodemise (2021) conducted a study to examine the impact of supply chain integration on organizational efficiency in selected manufacturing firms in Ogun State, Nigeria. The research adopted a descriptive survey design, with a sample of 420 respondents drawn from procurement, logistics, and production departments of ten major manufacturing companies. Data were collected using structured questionnaires, and the results were analyzed using regression analysis. The findings revealed a strong positive relationship between supply chain integration (including supplier coordination, internal integration, and customer relationship) and organizational efficiency, particularly in terms of reduced lead time, cost minimization, and product quality. The study further highlighted that firms with high levels of integration with their suppliers and customers enjoyed more consistent production flows and quicker response to market demand. The researcher recommended that manufacturing firms should invest in ICT infrastructure to strengthen integration with supply chain partners.

Emesi and Ariyo (2020) explored the role of logistics management in improving operational efficiency among retail companies in Lagos State. Using a sample size of 350 employees from logistics and warehouse departments, the study employed a cross-sectional survey method and analyzed data through structural equation modeling (SEM). The findings showed that effective logistics practices, including inventory management, transportation coordination, and warehousing efficiency, had a significant positive influence on the operational performance of retail businesses. Specifically, companies that implemented just-in-time (JIT) inventory systems and optimized delivery schedules recorded reduced operational costs and increased customer satisfaction. However, the study also found that infrastructural challenges such as poor road networks and unreliable transport systems impeded the logistics performance of these firms. The researcher concluded that government investment in infrastructure and private sector adoption of smart logistics technologies were key to achieving efficiency.

Mohammed and Salami (2022) examined the effect of information and communication technology (ICT) on supply chain performance and organizational efficiency in the Nigerian oil and gas sector. The study targeted 300 staff across ten upstream and downstream firms, utilizing both primary and secondary data sources. Data analysis was conducted using multiple regression analysis. Results indicated that ICT tools such as Enterprise Resource Planning (ERP), Supply Chain Management Software (SCMS), and Customer Relationship Management (CRM) systems significantly enhanced the visibility, coordination, and responsiveness of supply chain operations. The

improved supply chain performance subsequently translated into higher organizational efficiency, particularly in terms of faster service delivery and reduced operational delays. The authors recommended that oil and gas firms should prioritize ICT investment and employee training to harness the full potential of digital supply chain solutions.

In another empirical investigation, Nnaji (2021) studied the relationship between supplier relationship management (SRM) and efficiency outcomes in Nigerian food processing firms. The study used a sample of 280 respondents from procurement and quality control departments, employing a survey research method and Pearson correlation analysis. Findings showed that firms with strong supplier relationship practices—such as trust, regular communication, joint problem-solving, and supplier development programs—experienced improved efficiency in procurement cycles, product consistency, and customer satisfaction. The study also discovered that weak supplier management often led to supply disruptions and increased production costs. It was recommended that firms should build long-term relationships with key suppliers and establish performance monitoring systems to enhance supply chain reliability and organizational performance.

Ukobi (2023) investigated the role of strategic sourcing in enhancing the efficiency of pharmaceutical companies in Abuja. The study used a quasi-experimental design involving 200 participants from six pharmaceutical firms. Data were gathered through structured interviews and surveys, and analyzed using Analysis of Variance (ANOVA) and factor analysis. The study revealed that strategic sourcing—defined as the

systematic assessment and selection of suppliers based on cost, quality, and reliability—significantly improved organizational efficiency by reducing procurement lead time, minimizing wastage, and enhancing inventory accuracy. However, the study also noted that inconsistent supplier performance and price volatility posed threats to sustained efficiency. The researcher recommended the institutionalization of supplier performance reviews and the adoption of multi-sourcing strategies to mitigate supplier-related risks.

Chidiebere and Eze (2022) explored the challenges facing effective supply chain management in Nigerian small and medium enterprises (SMEs), with a focus on its impact on organizational efficiency. The study sampled 370 SMEs across different sectors using a mixed-methods approach, combining survey questionnaires with key informant interviews. The results, analyzed through thematic content analysis and regression modeling, indicated that poor access to supply chain financing, lack of skilled SCM personnel, and weak infrastructure were major barriers to efficient supply chain practices. The study further demonstrated that SMEs that overcame these challenges—by forming cooperative clusters and leveraging digital tools—achieved better inventory turnover and customer satisfaction. The authors concluded that improving supply chain education, digital adoption, and financing access were essential for boosting organizational efficiency among SMEs.

In a study by Ayodele and Adedeji (2023), the impact of supply chain risk management on organizational efficiency in Nigerian construction firms was explored.

Using a sample of 250 employees from procurement, logistics, and operations departments of various construction firms, the study employed a mixed-methods approach combining structured surveys and in-depth interviews. Data were analyzed using descriptive statistics and regression analysis. The findings indicated that firms that implemented effective risk management strategies, such as contingency planning, risk assessment frameworks, and supplier diversification, were able to minimize disruptions in their supply chains and maintain higher levels of efficiency. The study further revealed that a lack of risk management preparedness often led to project delays, cost overruns, and decreased stakeholder confidence. The researchers recommended that construction firms invest in robust risk management training programs and adopt more proactive risk mitigation strategies to enhance overall efficiency.

Saraki (2021) conducted a study on the influence of inventory management practices on organizational efficiency in the fast-moving consumer goods (FMCG) sector. The study surveyed 400 employees from supply chain and inventory management departments of selected FMCG companies in Lagos State, Nigeria. Data were collected using structured questionnaires and analyzed through factor analysis and path modeling. The results revealed that effective inventory management practices, such as accurate demand forecasting, safety stock management, and periodic stock audits, significantly improved organizational efficiency by reducing stockouts, minimizing overstocking, and optimizing warehouse operations. However, the study also highlighted the challenges of managing inventory in an environment with fluctuating demand and supply chain

uncertainties. The researcher recommended that FMCG companies should adopt advanced inventory management systems that leverage data analytics and artificial intelligence to improve decision-making and boost operational efficiency.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presented a comprehensive overview of the research methodology adopted for the study. It began by detailing the research design, which served as the foundational framework guiding the investigation and addressing the research questions. Furthermore, it clearly delineated the target population, the sample size drawn from this population, and the specific sampling techniques employed to ensure a representative selection of participants. The research instrument utilized for data collection was thoroughly discussed, with emphasis on the procedures undertaken to establish its validity and reliability. The chapter also distinguished between the sources of data, specifying whether the data were derived from primary or secondary sources. Lastly, it outlined the methods of data analysis that were applied to systematically organize, process, and interpret the collected information.

3.1 Research Design

The study employed a cross-sectional survey research design. In cross-sectional research, data were collected once rather than over a period of time. This design was used to study the prevalence of behaviors, attitudes, or conditions within a specific group. It was widely used in fields such as education, health, and social sciences due to its simplicity and cost-effectiveness.

3.2 Population of the Study

The population for the study comprised all 75 staff members of the University of Benin (UNIBEN) Table Water Factory, Benin City, including production supervisors, logistics personnel, quality control officers, administrative staff, and other operational workers directly involved in the supply chain processes and overall organizational activities of the factory (Source: UNIBEN Table Water Factory Administrative Records, 2025).

3.3 Sample and Sampling Methods

The sample size for the study was 75, representing the entire population of staff at the University of Benin (UNIBEN) Table Water Factory.

3.4 Method of Data Collection

The study relied on primary data that were collected through the administration of carefully structured questionnaires. The researcher personally administered the questionnaires to respondents to ensure clarity and accuracy in their responses. This

direct approach helped to minimize misunderstandings and enhanced the reliability of the data collected, thereby improving the overall quality of the research findings.

3.5 Research Instrument

The instrument for data collection for the study was a structured questionnaire developed by the researcher. The questionnaire was divided into three sections: A, B, and C. Section A focused on the effect of supply chain management on cost reduction. Section B gathered information on the role of logistics in enhancing operational efficiency, while Section C ascertained the impact of supplier relationships on business performance.

3.6 Validity of the Instrument

The questionnaire that was developed was submitted to the project supervisor for thorough evaluation to confirm its content validity. Any suggested amendments were carefully incorporated prior to distributing the finalized version to the participants for completion.

3.7 Reliability of Instrument

To ensure the reliability of the questionnaire, a pilot study was conducted with a small sample of respondents similar to the target population. The results from the pilot study were analyzed using the Cronbach's alpha reliability test to determine the internal

consistency of the instrument. The Cronbach’s alpha values for the different variables of the study are presented in Table 3.1:

Table 3.1: Reliability Test Result

Variables	Cronbach’s Alpha Reading	Remark
Cost Reduction	0.81	Reliable
Logistics	0.84	Reliable
Supplier Relationship	0.83	Reliable
Organizational Efficiency	0.82	Reliable
Overall Scale	0.82	Reliable

The reliability test indicated that each construct in the study demonstrated strong internal consistency. Specifically, the construct on Cost Reduction yielded a Cronbach’s alpha reading of 0.81, Logistics produced an alpha value of 0.84, Supplier Relationship recorded a Cronbach’s alpha of 0.83, while Organizational Efficiency showed an alpha coefficient of 0.82. Overall, the entire scale recorded a reliability coefficient of 0.82, which demonstrated that the questionnaire was dependable and suitable for use in the research.

3.8 Method of Data Analysis

The data gathered for the research were examined through linear regression analysis. This method was utilized to explore the relationship between the independent and dependent variables, aiming to identify whether variations in the independent variable significantly predicted or affected changes in the dependent variable. Additionally, descriptive statistics, including frequency distributions and percentages, were applied to offer an initial overview of the respondents' demographic profiles and response patterns.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSES OF RESULTS

4.1 Introduction

This chapter presents and analyzes the responses gathered from the administered questionnaires. The data are organized using frequency distribution tables and simple percentages, followed by a comprehensive analysis using frequency counts, simple percentages and linear regression analysis. The primary data source is the completed questionnaires. A total of 75 questionnaires were distributed to 75 respondents, all of which were fully returned. The analysis is based on these 75 retrieved questionnaires.

4.1.2 Presentation of the Bio-Data of the Respondents

The section starts with the demographic data of respondents such as gender, age, educational qualification and years of work experience which are all aimed to give a concise understanding on supply chain management and organizational efficiency.

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	29	38.7%
Female	46	61.3%
Total	75	100%

Researcher’s Field Work, 2025

Table 1 shows the distribution of respondents according to gender. As shown in the table above, male respondents constituted 38.7% while female respondents accounts for 61.3%. This indicates that majority of the respondents were females.

Table 2: Distribution of Respondents by Age

Age Range	Respondents	Percentages
18-25	16	21.3%
26-30	34	45.3%
31-35	14	18.7%
35 years and above	11	14.7%
Total	75	100%

Researcher’s Field Work, 2025

Table 2 presents the distribution of respondents by age. The age range of 18–25 accounts for 21.3% of respondents, while the largest group, aged 26–30, makes up 45.3%. Those aged 31–35 represent 18.7%, and respondents aged 35 years and above form the smallest category at 14.7%. This indicates that majority of the respondents are those within the age range of 26-30 years.

Table 3: Distribution of Respondents by Qualifications

Qualifications	Respondents	Percentages
SSCE	11	14.7%
OND	13	17.3%
HND/B.Sc.	44	58.7%
M.Sc. and above	7	9.3%
Total	75	100%

Researcher’s Field Work, 2025

Table 3 shows that 14.7% of the respondents hold an SSCE qualification. Those with an OND qualification make up 17.3%. The majority, 58.7%, possess an HND/B.Sc., indicating that most respondents have a higher education degree, while the smallest group, 9.3%, have an M.Sc. or higher qualifications. This distribution highlights a well-educated sample, with the largest concentration at the HND/B.Sc. level.

Table 4: Distribution of Respondents by Years of Work Experience

Years	Respondents	Percentages
0-5yrs	26	34.7%
5-10yrs	38	50.7%
11-15yrs	7	9.3%
15 years and above	4	5.3%
Total	75	100%

Researcher’s Field Work, 2025

Table 4 shows that 34.7% of the respondents have 0-5 years of work experience. The majority, 50.7%, have 5-10 years of experience. Those with 11-15 years of work experience constituted 9.3%, while the smallest group, 5.3%, have 15 years and above of

work experience. This indicates that majority of the respondents are those with 5-10 years of work experience.

4.2 DATA PRESENTATION

Research Question 1: What is the effect of supply chain management on cost reduction?

Table 5: Distribution of Responses on Effect of Supply Chain Management on Cost Reduction

S/N	Items	SA	A	N	D	SD
1	Effective supply chain management has helped reduce production costs in UNIBEN Table Water Factory.	46 (61.3%)	25 (33.3%)	1 (1.3%)	1 (1.3%)	2 (2.7%)
2	Procurement practices at the factory contribute significantly to overall cost savings	51 (68.0%)	17 (22.7%)	2 (2.7%)	3 (4.0%)	2 (2.7%)
3	Proper inventory management	44 (58.7%)	25 (33.3%)	1 (1.3%)	2 (2.7%)	3 (4.0%)

	has minimized waste and reduced operating expenses					
4	Timely delivery of materials from suppliers reduces emergency procurement costs	52 (69.3%)	14 (18.7%)	2 (2.7%)	5 (6.7%)	2 (2.7%)
5	The factory has adopted cost-effective sourcing strategies through supply chain optimization	40 (53.3%)	23 (30.7%)	3 (4.0%)	4 (5.3%)	5 (6.7%)

Source: Field Work, 2025

The data in Table 5 presents an analysis of respondents' views on the effect of supply chain management on cost reduction at the UNIBEN Table Water Factory. For item 1, a strong majority (61.3% strongly agree and 33.3% agree) believe that effective supply chain management has reduced production costs, resulting in 94.6% overall agreement, while only 1.3% are neutral and a combined 4% disagree. In item 2, 68% of respondents strongly agree and 22.7% agree that procurement practices significantly contribute to cost savings, making up 90.7% total agreement, while just 2.7% are neutral and 6.7% disagree. Item 3 shows that proper inventory management is seen as a key factor in minimizing waste and reducing expenses, with 58.7% strongly agreeing and 33.3% agreeing—totaling 92% support, while 1.3% are neutral and 6.7% disagree. In item 4, 69.3% strongly agree and 18.7% agree that timely delivery from suppliers reduces emergency procurement costs, adding up to 88% agreement, whereas 2.7% are neutral and 9.4% disagree. Lastly, for item 5, 53.3% strongly agree and 30.7% agree that the factory uses

cost-effective sourcing strategies, making a total of 84% agreement, while 4% are neutral and 12% disagree. Overall, the data strongly suggests that various components of supply chain management—ranging from procurement to timely delivery—are widely recognized by respondents as instrumental in achieving cost reduction in the factory.

Results of Research Question 2

Research Question 2: What is the role of logistics in enhancing operational efficiency?

Table 6: Distribution of Responses on Role of Logistics in Enhancing Operational Efficiency

S/N	Items	SA	A	N	D	SD
1	The logistics system in the factory ensures timely distribution of table water	45 (60%)	24 (32%)	2 (2.7%)	2 (2.7%)	2 (2.7%)
2	Transportation arrangements for delivery of finished products are well-coordinated and efficient	49 (65.3%)	20 (26.7%)	1 (1.3%)	3 (4.0%)	2 (2.7%)

3	Warehousing and storage facilities support smooth operational flow	43 (57.3%)	26 (34.7%)	2 (2.7%)	1 (1.3%)	3 (4.0%)
4	The use of technology in logistics (e.g., tracking systems) enhances efficiency	50 (66.7%)	16 (21.3%)	2 (2.7%)	5 (6.7%)	2 (2.7%)
5	Inefficiencies in the logistics process lead to delays and affect customer satisfaction	41 (54.7%)	22 (29.3%)	4 (5.3%)	5 (6.7%)	3 (4.0%)

Source: Field Work, 2025

The data in Table 6 presents an analysis of respondents' views on the role of logistics in enhancing operational efficiency at the UNIBEN Table Water Factory. For item 1, a significant 60% strongly agree and 32% agree that the logistics system ensures timely distribution of table water, amounting to 92% overall agreement, while 2.7% each are neutral, disagree, or strongly disagree. In item 2, 65.3% strongly agree and 26.7% agree that transportation arrangements for delivering finished products are well-coordinated and efficient, resulting in 92% agreement, with only 1.3% neutral and 6.7% disagreeing. Item 3 shows that warehousing and storage facilities are perceived as supportive of smooth operations, with 57.3% strongly agreeing and 34.7% agreeing, totaling 92% agreement, while 2.7% are neutral and 5.3% disagree. In item 4, 66.7% strongly agree and 21.3% agree that the use of logistics technologies such as tracking systems enhances efficiency, making up 88% agreement, while 2.7% are neutral and 9.4% disagree. Finally, item 5 indicates that inefficiencies in logistics can lead to delays and affect customer

satisfaction, with 54.7% strongly agreeing and 29.3% agreeing, totaling 84% agreement, whereas 5.3% are neutral and a combined 10.7% disagree. Overall, the data indicates a strong consensus among respondents that various elements of logistics—including transportation, warehousing, technology, and timely distribution—play a vital role in improving operational efficiency in the factory.

Results of Research Question 3

Research Question 3: What is the impact of supplier relationships on business performance?

Table 7: Distribution of Responses on Impact of Supplier Relationships on Business Performance

S/N	Items	SA	A	N	D	SD
1	Maintaining good relationships with suppliers contributes to consistent supply of	47 (62.7%)	23 (30.7%)	2 (2.7%)	1 (1.3%)	2 (2.7%)

	raw materials					
2	The factory regularly evaluates supplier performance to ensure quality and reliability	50 (66.7%)	19 (25.3%)	2 (2.7%)	2 (2.7%)	2 (2.7%)
3	Suppliers are involved in collaborative planning and forecasting activities	45 (60.0%)	24 (32.0%)	1 (1.3%)	2 (2.7%)	3 (4.0%)
4	Strong supplier partnerships enhance the overall competitiveness of the factory	53 (70.7%)	13 (17.3%)	2 (2.7%)	5 (6.7%)	2 (2.7%)
5	Delays or issues with suppliers directly affect the factory's performance and reputation	42 (56.0%)	21 (28.0%)	3 (4.0%)	4 (5.3%)	5 (6.7%)

Source: Field Work, 2025

The data in Table 7 presents an analysis of respondents' views on the impact of supplier relationships on business performance at the UNIBEN Table Water Factory. For item 1, a strong majority of respondents (62.7% strongly agree and 30.7% agree) believe that maintaining good relationships with suppliers ensures a consistent supply of raw materials, resulting in 93.4% overall agreement, with only 2.7% neutral and a combined 4% disagree. In item 2, 66.7% strongly agree and 25.3% agree that the factory regularly evaluates supplier performance to guarantee quality and reliability, leading to 92% agreement, while 2.7% are neutral and 5.4% disagree. For item 3, 60% strongly agree and

32% agree that suppliers are involved in collaborative planning and forecasting, yielding 92% agreement, with only 1.3% neutral and 6.7% disagree. In item 4, 70.7% strongly agree and 17.3% agree that strong supplier partnerships enhance the factory's competitiveness, totaling 88% agreement, while 2.7% are neutral and 9.4% disagree. Lastly, item 5 shows that 56% strongly agree and 28% agree that supplier-related delays or issues negatively affect the factory's performance and reputation, resulting in 84% agreement, with 4% neutral and 12% disagreement. Overall, the data indicates a clear consensus that positive supplier relationships—through collaboration, evaluation, and trust—play a vital role in sustaining raw material supply, enhancing competitiveness, and improving the factory's overall business performance.

4.3 TEST OF HYPOTHESES

Hypothesis 1:

HO₁: Supply chain management has no significant effect on cost reduction.

Table 8: Linear Regression Analysis of Supply Chain Management and Cost Reduction

Variable	R	R ²	Adjusted R ²	F(df)	β (SCM)	t-value	p-value	Remark
Supply Chain Management	0.762	0.581	0.575	F(1,73) = 101.432, p < .001	0.747	10.071	0.000	Significant

The result of the linear regression analysis reveals a significant and positive effect of supply chain management on cost reduction ($\beta = 0.747$, $t = 10.071$, $p < 0.001$). The R-value of 0.762 indicates a strong correlation, while the R² value of 0.581 shows that approximately 58.1% of the variation in cost reduction can be explained by supply chain management practices. The F-value of 101.432 confirms that the model is statistically significant. Since the p-value is less than the 0.05 threshold, the null hypothesis (H_{01}) is not accepted. This implies that effective supply chain management strategies significantly help businesses minimize operational costs and improve efficiency.

Hypothesis 2:

H_{02} : Logistics does not play a significant role in enhancing operational efficiency.

Table 9: Linear Regression Analysis of Logistics and Operational Efficiency

Variable	R	R ²	Adjusted R ²	F(df)	β (SCM)	t-value	p-value	Remark
Logistics	0.701	0.491	0.484	F(1,73) = 70.423, p < .001	0.643	8.391	0.000	Significant

The linear regression analysis reveals that logistics has a significant positive influence on operational efficiency ($\beta = 0.643$, $t = 8.391$, $p < 0.001$). The R-value of 0.701 indicates a strong relationship, while the R² value of 0.491 implies that 49.1% of the variation in operational efficiency is explained by logistics. The adjusted R² of 0.484 confirms the model's reliability, and the F-statistic of 70.423 with a p-value less than 0.05 indicates that the regression model is statistically significant. Since the p-value is below the threshold of 0.05, the null hypothesis (H₀₂) is not accepted. This finding underscores that effective logistics—covering transportation, warehousing, and distribution—plays a vital role in enhancing the operational efficiency of business operations.

Hypothesis 3:

H₀₃: Supplier relationships do not have a significant impact on business performance.

Table 10: Linear Regression Analysis of Supplier Relationships and Business Performance

Variable	R	R ²	Adjusted R ²	F(df)	β (SCM)	t-value	p-value	Remark
Supplier Relationship	0.784	0.615	0.610	F(1,73) = 116.325, p < .001	0.764	10.785	0.000	Significant

The linear regression analysis demonstrates that supplier relationships have a significant positive impact on business performance ($\beta = 0.764$, $t = 10.785$, $p < 0.001$). The R-value of 0.784 indicates a strong correlation, while the R² value of 0.615 shows that 61.5% of the variance in business performance can be explained by the quality of supplier relationships. The adjusted R² of 0.610 confirms the model's robustness, and the F-statistic of 116.325, with a p-value less than 0.05, indicates that the model is statistically significant. Since the p-value is far below the accepted threshold, the null hypothesis (HO₃) is not accepted. This finding affirms that strong, collaborative supplier relationships are essential for achieving improved business outcomes and maintaining competitive advantage.

4.4 DISCUSSION OF FINDINGS

Findings from the study revealed that various components of supply chain management—ranging from procurement to timely delivery are widely recognized as

instrumental in achieving cost reduction. The findings of the study can be attributed to the strategic role that supply chain management plays in streamlining operations and minimizing unnecessary expenses. Efficient procurement practices, such as bulk purchasing and supplier negotiations, help reduce the cost of acquiring raw materials. Additionally, timely delivery reduces storage costs and prevents delays that may result in lost sales or rushed production. Effective coordination among supply chain components enhances inventory management, reduces waste, and improves resource allocation. Furthermore, advancements in technology and logistics allow businesses to monitor and control every stage of the supply chain, ensuring optimal performance. These combined efforts contribute significantly to reducing overall operational costs, thereby explaining why respondents identified supply chain management as a key driver of cost reduction. This findings is in line with Chukwudi (2023) who asserted that effective supply chain management strategies streamline procurement, logistics, and production processes, allowing businesses to minimise waste and redundancies.

Findings from the study also revealed that various elements of logistics—including transportation, warehousing, technology, and timely distribution plays a vital role in improving operational efficiency. The findings of the study can be explained by the fact that logistics serves as the backbone of efficient business operations. Transportation ensures that goods are moved swiftly and reliably from suppliers to production centers and finally to consumers, reducing downtime and bottlenecks. Warehousing facilitates proper storage and inventory control, which minimizes losses

and supports demand forecasting. The integration of technology—such as tracking systems, automated inventory, and route optimization—enhances real-time decision-making and reduces operational delays. Timely distribution, on the other hand, ensures that products reach their destination as scheduled, thereby improving customer satisfaction and reducing costs associated with delays. Collectively, these elements of logistics contribute to streamlined operations, enabling organizations to function more effectively and efficiently. In support of the findings, Salako (2022) emphasized that logistics digital tools such as fleet tracking systems, inventory management software, and enterprise resource planning (ERP) platforms enable businesses to improve visibility and control across supply chains. Similarly, Fadegbe (2023) asserted that logistics is the backbone of supply chain operations, allowing firms to coordinate procurement, production, and distribution with minimal disruption.

Findings from the study further revealed that supplier relationships—through collaboration, evaluation, and trust—play a vital role in sustaining raw material supply, enhancing competitiveness, and improving overall business performance. The findings can be attributed to the critical role strong supplier relationships play in ensuring business continuity and performance. Collaborative partnerships with suppliers foster open communication, which enables better planning, forecasting, and responsiveness to market demands. Regular evaluation helps in maintaining quality standards, ensuring reliability, and identifying areas for improvement. Trust between buyers and suppliers encourages long-term cooperation, reduces conflicts, and facilitates favorable terms such as flexible

payment options or priority service. These relationships ensure a steady supply of raw materials, minimize production disruptions, and reduce procurement risks. Moreover, when suppliers are treated as strategic partners, businesses gain a competitive advantage through cost efficiency, innovation, and timely delivery—all of which contribute significantly to improved overall business performance. This findings is in corroboration with Kalu (2023) who asserted that a dependable supplier network helps maintain uninterrupted production by ensuring the timely delivery of raw materials. In same vein, Nwosu (2022) explained that businesses with established supplier connections often enjoy better pricing, bulk discounts, and favourable payment terms.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study investigated the supply chain management and organizational efficiency. The population for this study was made up of all 75 staff members of the University of Benin (UNIBEN) Table Water Factory, Benin City. The sample size for this study is 75, representing the entire population of staff at the University of Benin (UNIBEN) Table Water Factory. The primary source of data for this study is the questionnaire which was designed to collect relevant information from the participants. The data collected for this study was analyzed through linear regression analysis. Additionally, descriptive statistics, including frequency distributions and percentages, was applied to offer an initial overview of the respondents' demographic profiles and response patterns.

5.2 Summary of Findings

The following constitutes the major findings of the study;

1. The findings of the study in research question one revealed that various components of supply chain management ranging from procurement to timely delivery are widely recognized as instrumental in achieving cost reduction. The findings of the study can be attributed to the strategic role that supply chain management plays in streamlining operations and minimizing unnecessary expenses. Efficient procurement practices, such as bulk purchasing and supplier

negotiations, help reduce the cost of acquiring raw materials. Additionally, timely delivery reduces storage costs and prevents delays that may result in lost sales or rushed production. Effective coordination among supply chain components enhances inventory management, reduces waste, and improves resource allocation. Furthermore, advancements in technology and logistics allow businesses to monitor and control every stage of the supply chain, ensuring optimal performance. These combined efforts contribute significantly to reducing overall operational costs, thereby explaining why respondents identified supply chain management as a key driver of cost reduction. This findings is in line with Chukwudi (2023) who asserted that effective supply chain management strategies streamline procurement, logistics, and production processes, allowing businesses to minimise waste and redundancies.

2. The findings of the study in research question two revealed that various elements of logistics including transportation, warehousing, technology, and timely distribution plays a vital role in improving operational efficiency. The findings of the study can be explained by the fact that logistics serves as the backbone of efficient business operations. Transportation ensures that goods are moved swiftly and reliably from suppliers to production centers and finally to consumers, reducing downtime and bottlenecks. Warehousing facilitates proper storage and inventory control, which minimizes losses and supports demand forecasting. The integration of technology—such as tracking systems, automated inventory, and

route optimization—enhances real-time decision-making and reduces operational delays. Timely distribution, on the other hand, ensures that products reach their destination as scheduled, thereby improving customer satisfaction and reducing costs associated with delays. Collectively, these elements of logistics contribute to streamlined operations, enabling organizations to function more effectively and efficiently. In support of the findings, Salako (2022) emphasized that logistics digital tools such as fleet tracking systems, inventory management software, and enterprise resource planning (ERP) platforms enable businesses to improve visibility and control across supply chains.

3. The findings of the study in research question three revealed that supplier relationships through collaboration, evaluation, and trust play a vital role in sustaining raw material supply, enhancing competitiveness, and improving overall business performance. The findings can be attributed to the critical role strong supplier relationships play in ensuring business continuity and performance. Collaborative partnerships with suppliers foster open communication, which enables better planning, forecasting, and responsiveness to market demands. Regular evaluation helps in maintaining quality standards, ensuring reliability, and identifying areas for improvement. Trust between buyers and suppliers encourages long-term cooperation, reduces conflicts, and facilitates favorable terms such as flexible payment options or priority service. These relationships ensure a steady supply of raw materials, minimize production disruptions, and

reduce procurement risks. Moreover, when suppliers are treated as strategic partners, businesses gain a competitive advantage through cost efficiency, innovation, and timely delivery—all of which contribute significantly to improved overall business performance. This findings is in corroboration with Kalu (2023) who asserted that a dependable supplier network helps maintain uninterrupted production by ensuring the timely delivery of raw materials.

5.3 Conclusion

The study investigated supply chain management and organizational efficiency. Based on the results that emanated from the study, it was therefore concluded that supply chain management serves as a critical strategic component in improving organizational performance rather than functioning merely as a support system. Effective supply chain practices contribute significantly to cost reduction through improved procurement processes, optimized inventory control, and the elimination of redundancies, which collectively enhance profitability and competitiveness. Logistics was identified as a vital element in strengthening operational efficiency, as it enables the integration of production planning, distribution systems, and customer service delivery. The study affirms that when organizations invest in data-driven logistics solutions and adopt a systems-based approach to managing their supply chain networks, they are better equipped to respond to market changes, reduce lead times, and achieve operational excellence on a sustainable scale.

Furthermore, the research emphasizes the pivotal role of supplier relationships in fostering long-term organizational growth and resilience. Strong collaborative partnerships with suppliers enhance trust, encourage innovation, and guarantee consistent quality, thereby reinforcing customer satisfaction and market competitiveness. Supplier engagement also acts as a mechanism for mitigating risks associated with supply chain disruptions, fluctuating market demands, and other external uncertainties. When integrated with well-structured logistics systems and comprehensive supply chain strategies, supplier relationships contribute to the creation of value-driven and adaptive business models. Ultimately, this study concludes that effective supply chain management is a transformative tool for achieving cost efficiency, operational improvement, and strategic advancement. These findings underscore the necessity for organizations to view supply chain management not merely as an operational function but as a central framework for decision-making and sustainable business development in increasingly dynamic and globalized markets.

5.4 Policy Implications and Recommendations

In the light of the findings above, the following policy recommendations were proffered:

1. Organizations should invest in modern supply chain technologies such as Enterprise Resource Planning (ERP), predictive analytics, and automation tools to streamline procurement, inventory, and logistics operations. This will enhance decision-making, reduce human errors, and improve cost efficiency.

2. Companies should establish clear communication channels, engage in joint problem-solving, and adopt supplier performance evaluation systems to ensure consistent quality and timely deliveries. Building long-term, collaborative relationships with suppliers is critical for improving reliability and reducing disruptions.
3. Businesses should adopt lean supply chain principles to eliminate waste and enhance productivity while maintaining flexibility to respond to market changes. This dual approach will increase operational responsiveness, lower costs, and improve customer satisfaction.
4. Managers should integrate supply chain management into overall strategic planning to ensure that logistics, procurement, and supplier relationships directly support organizational goals, thereby promoting sustainable growth and competitiveness.

5.5 Contribution to Knowledge

The study made significant contributions to knowledge in the following areas:

1. This study provides empirical evidence demonstrating how effective supply chain management directly contributes to reducing operational and procurement costs, thereby offering a clearer understanding of cost optimization strategies in organizational settings.

2. The research highlights the role of logistics as a critical driver of operational efficiency, providing theoretical and practical insights into how integrated logistics systems enhance productivity, minimize delays, and improve service delivery.
3. The study contributes to knowledge by establishing the significance of strong supplier relationships in improving overall business performance, including quality assurance, innovation, and long-term competitiveness.
4. By linking supply chain practices to organizational efficiency, the study offers a conceptual framework that can guide managers and researchers in aligning supply chain strategies with corporate goals for sustainable performance and growth.

5.6 Suggestions for Further Studies

To build upon the findings of this study, the following areas are recommended for further research:

1. Future studies could investigate the impact of emerging technologies, such as artificial intelligence, blockchain, and IoT, on supply chain efficiency and organizational performance across different industries.
2. Researchers may explore how sustainable supply chain practices, including green logistics and ethical sourcing, influence operational efficiency, cost reduction, and corporate social responsibility outcomes.

3. Further research could compare the effectiveness of supply chain management practices in various sectors, such as manufacturing, services, and retail, to identify sector-specific strategies that enhance performance and competitiveness.

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DEPARTMENT OF BUSINESS ADMINISTRATION
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QUESTIONNAIRE

Dear Respondent,

I am an undergraduate student of the above-named department and institution, currently conducting a research study titled “*Supply Chain Management and Organizational Efficiency.*” This study is solely for academic purposes, and you have been selected as one of the respondents.

Your participation is valuable, as the information you provide will contribute significantly to the knowledge base on the research topic. I kindly request your honest and thoughtful responses.

Please be assured that all information provided will be treated with the utmost confidentiality and will be used strictly for academic purposes. To maintain anonymity, personal details such as your name, address, and phone number are not required.

Your willingness to take a few minutes to complete this questionnaire will be greatly appreciated.

Thank you for your time and cooperation.

DEMOGRAPHIC DATA

Gender: Male () Female ()

Age: 18-25yrs () 26-30yrs () 31-35yrs () 35 years and above ()

Qualification: SSCE () Diploma/OND () BSC/HND () Master’s Degree and above ()

Years of Work Experience: 0-5 years () 5–10 years () 11–15 years () More than 15 years ()

Please indicate the extent to which you agree or disagree with the following statements.

Key: Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD)

SECTION A: EFFECT OF SUPPLY CHAIN MANAGEMENT ON COST REDUCTION

S/N	Cost Reduction through Supply Chain Management	SA	A	N	D	SD
1.	Effective supply chain management has helped reduce production costs in UNIBEN Table Water Factory.					

2.	Procurement practices at the factory contribute significantly to overall cost savings				
3.	Proper inventory management has minimized waste and reduced operating expenses				
4.	Timely delivery of materials from suppliers reduces emergency procurement costs				
5.	The factory has adopted cost-effective sourcing strategies through supply chain optimization				

SECTION B: ROLE OF LOGISTICS IN ENHANCING OPERATIONAL EFFICIENCY

S/N	Logistics and Operational Efficiency	SA	A	D	SD
6.	The logistics system in the factory ensures timely distribution of table water				
7.	Transportation arrangements for delivery of finished products are well-coordinated and efficient				
8.	Warehousing and storage facilities support smooth operational flow				
9.	The use of technology in logistics (e.g., tracking systems) enhances efficiency				
10.	Inefficiencies in the logistics process lead to delays and affect customer satisfaction				

SECTION C: IMPACT OF SUPPLIER RELATIONSHIPS ON BUSINESS PERFORMANCE

S/N	Supplier Relationships and Business Performance	SA	A	D	SD
11.	Maintaining good relationships with suppliers contributes to				

	consistent supply of raw materials				
12.	The factory regularly evaluates supplier performance to ensure quality and reliability				
13.	Suppliers are involved in collaborative planning and forecasting activities				
14.	Strong supplier partnerships enhance the overall competitiveness of the factory				
15.	Delays or issues with suppliers directly affect the factory's performance and reputation				