

**Logistics Services and Organisational Performance of the Nigerian Block Industry, Delta
State**

**Sonia Oghosa EDEGBE
MGS2104803**

**DEPARTMENT OF BUSINESS ADMINISTRATION,
FACULTY OF MANAGEMENT SCIENCES,
UNIVERSITY OF BENIN,
BENIN CITY,**

OCTOBER, 2025

**Logistics Services and Organisational Performance of the Nigerian Block Industry, Delta
State**

**Sonia Oghosa EDEGBE
MGS2104803**

**Being a Research Project Written and Submitted to the Department of Business
Administration, Faculty of Management Sciences, University of Benin, Benin City, in
Partial Fulfillment of the Requirements for the Award of Bachelor of Science (B.Sc.)
Degree in Business Administration**

OCTOBER, 2025

DECLARATION

I, **Sonia Oghosa EDEGBE**, hereby declare that the work presented in this thesis is a genuine work done originally by me and has not been submitted elsewhere for the award of any degree. All sources of information referred to in this work are acknowledged with reference to the respective authors.

Sonia Oghosa EDEGBE

(BSc. Student/Researcher)

Date

CERTIFICATION

This is to certify that this thesis titled “**Logistics Services and Organisational Performance of the Nigerian Block Industry, Delta State**” was carried out by **Sonia Oghosa EDEGBE** in the Department of Business Administration, Faculty of Management Sciences, University of Benin, Benin City.

Dr. Omorodion Omoregbe
(Supervisor)

Date

Dr. D.O. Ogbeide
(Ag. Head of Department)

Date

DEDICATION

This project work is dedicated to Almighty God for His mercies through my stay in the University of Benin. This work is also dedicated to my lovely parents, Mr. and Mrs. Edegbe for their unrelenting support to me financially, morally, spiritually among other things.

ACKNOWLEDGEMENTS

I express my deepest gratitude to God Almighty, whose grace and unwavering guidance has sustained me throughout the journey of this academic program and the successful completion of this research work. His presence gave me the strength to persevere through every challenge and I return all the glory to Him.

I want to thank my project supervisor, Dr. Omorodion Omoregbe, your support, guidance, and feedback have been invaluable throughout this whole year. Thank you for genuinely recognising my passion for this subject and for answering every question, whether big or small, with such consideration and care. Your encouragement and clarity are the reason why this work exists.

I would like to acknowledge the invaluable contributions of Prof. Shaibu Ibrahim, Dr. Bamidele Lawal, my course advisers and all my lecturers. Your encouragement and support are deeply appreciated

My beloved Dad and my sweet mom – Mr. and Mrs. Edegbe, your unwavering prayers and love have been a constant source of strength. I am grateful for the support of my siblings- Precious, Praise, Tracy and Samuel, and to my friends Cali, Destiny, Koko, Precious, my course rep, Ehigiamusoe Eugene and Mummy Shelia.

Special appreciation goes to those who provided financial, spiritual, and moral support for this project, your generosity and encouragement have been invaluable. God bless you all abundantly.

TABLE OF CONTENTS

Title page	ii
Declaration	iii
Certification	iv
Dedication	v
Acknowledgments	vi
Abstract	xiv
CHAPTER ONE: INTRODUCTION	
1.1 Background to the Study	1
1.2 Statement of the Research Problem	3
1.3 Research Questions	4
1.4 Objectives of the Study	4
1.5 Research Hypotheses	5
1.6 Scope of the Study	6
1.7 Significance of the Study	6
CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	8
2.2 Concept of Organisational Performance	8
2.3 Concepts of Logistics Services	34
2.4 Components of Logistics Services	57
2.4.1 Warehousing Management	57
2.4.2 Information Flow Management	57
2.4.3 Material Handling	57
2.4.4 Inventory Management	57
2.4.5 Transport Management	57
2.4.6 Reverse Logistics Management	57
2.5 Conceptual Framework	57

2.6	Theoretical Review	58
2.7	Theoretical Framework	66
2.8	Empirical Review	66
2.9	Research Gap	25

CHAPTER THREE: METHODOLOGY

3.1	Introduction	72
3.2	Research Design	72
3.3	The Population and Sample of the Study	72
3.4	Sample Size and Sampling Technique	72
3.5	Sources of Data	73
3.6	Research Instrument	75
3.7	Validity and Reliability of the Research Instrument	76
3.8	Model Specification	73
3.9	Operationalisation of Variables	77
3.10	Method of Data Analysis	79

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1	Introduction	80
4.2	Description of Respondents' Demographics	80
4.3	Description of Research Variables	83
4.3.1	Description of Logistics Services	83
4.3.2	Description of Organisational Performance	88
4.4	Relationship between Logistics Services and Organisational Performance of the Nigerian Block Industry, Delta State	90
4.5	Test of Hypotheses	91
4.6	Discussion of Findings	93

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1	Introduction	46
-----	--------------	----

5.2	Summary of Findings	46
5.3	Conclusion	46
5.4	Recommendations	47
5.5	Contributions to Knowledge	48
5.6	Limitations and Suggestions for Further Research	48
	References	50
	Appendix	56

ABSTRACT

This study investigated the influence of logistics services on the organisational performance of the Nigerian Block Industry in Delta State. Specifically, it examined the relationship between warehousing management, information flow management, material handling, inventory management, transport management, reverse logistics management, and the organisational performance of the Nigerian Block Industry in Delta State.

The research adopted the survey research design, management staff of the block industries in Delta State, Nigeria. A total of 193 questionnaires were distributed, with 189 usable responses retrieved. Stratified random sampling was employed to administer the questionnaires to the selected management staff. Data analysis involved descriptive statistics such as frequency distribution, mean, and standard deviation, as well as multiple regression analysis using the Ordinary Least Squares (OLS) technique in SPSS Version 24.

The results gotten indicated a significant positive correlation between warehouse management, material handling management, inventory management, transport management, and organisational performance, while a negative correlation exists between information flow management, reverse logistics management, and organisational performance in the Nigerian Block Industry, Delta State.

The study recommends that the Nigerian Block Industry prioritise the provision of adequate warehousing facilities and management systems, ensure timely communication and information dissemination across all stakeholders in the logistics flow system, implement proper materials handling procedures and processes, establish effective inventory management systems, and institute reverse logistics practices to recycle and re-utilize unused parts and components.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The block industry in developing nations, particularly in Nigeria, holds significant importance in the economy due to its contribution to national development. Blocks are widely utilised in construction, making the block industry a vital sector (Anosike & Oyebade, 2012). This sector has been recognised as pivotal in the local building materials industry (Rasheed & Akinleye, 2016). Block making has been a prevalent practice in Nigeria for decades, involving both small-scale industries and large construction firms (Ibim & Chijioke, 2018). The sector is extensive, with block manufacturing factories present in nearly every local government area (Sholanke et al., 2015). Effective management is crucial for the profitability of block production enterprises, underscoring the importance of logistics services in this industry.

Logistics services entail the management of the flow of goods from origin to consumption to meet customer or organisational objectives (Bello, Rotimi & Omoniyi, 2019). It involves planning and organizing the movement of products or services to enhance the supply chain efficiently (Ndung'u & Were, 2016). Effective logistics service delivery involves conveying goods from supply sources to demand destinations, ensuring timely delivery and efficient service to enhance organisational performance (Bagshaw, 2019). The success of manufacturing companies in Nigeria is closely tied to the smooth delivery of goods and services to customers (Adedeji, 2005).

Improving logistics performance is a key strategy for enhancing the overall performance of manufacturing organisations (Awino, 2011). Logistics services play a vital role in corporate operations by managing operational costs and improving business efficiency (Abdul, Oladipo & Olot, 2019). Organisational performance encompasses the overall operations and outcomes of a company, including its ability to achieve market-oriented and financial objectives (Chan, Ngai & Moon, 2016). Enhancing organisational performance involves measuring various indicators, including accounting and marketing metrics (Adetunji & Owolabi, 2016).

Effective logistics management involves securing necessary resources in terms of quantity, location, price, and timing for both inbound and outbound activities (Albernaz et al., 2014). It encompasses activities such as inbound logistics, involving the receipt of supplies, and outbound logistics, including post-production actions such as after-sales services (Albernaz et al., 2014). Modern business innovations, including logistics services, are crucial for improving overall performance in the manufacturing sector (Bello & Adeoye, 2018).

In the context of the block industry, logistics services such as warehousing management, material handling, transportation, inventory management, and reverse logistics play significant roles in enhancing performance (Umar, 2019). Previous studies have shown that variables such as transport management, information flow management, on-time delivery, and inventory management significantly influence organisational performance (Odhiambo et al., 2017; Musau et al., 2017; Ristovska et al., 2017; Yap & Tan, 2012; Kolawole, Akomoafe & Olusipe, 2019; Onikoyi et al., 2017).

This study thus aims to fill the gap in empirical research by investigating the influence of logistics services on organisational performance in the Nigerian block industry, focusing specifically on warehousing management, information flow management, material handling, transport management, inventory management, and reverse logistics. By examining these variables, this research seeks to provide valuable insights into the dynamics of logistics services and their impact on organisational performance in the block industry.

1.2 Statement of the Research Problem

Numerous studies have explored logistics services and organisational performance, but a significant portion of this research has been conducted outside Nigeria (Bagshaw 2019; Musau, Namusonge, Makokha & Ngeno 2017; Ndung'u & Were, 2016; Odhiambo, Onyango, Kibet & Kimutahi, 2017; Ristovska, Kozuharov & Petkovski, 2017). Conversely, studies conducted within Nigeria have predominantly focused on manufacturing companies, with limited attention given to the block industry (Umar, 2019; Abdul, Oladipo & Olota, 2019; Bello, Rotimi & Omoniyi, 2019). For example, Abdul, Oladipo, and Olota (2019) explored the impact of logistics

management on organisational performance, while Umar (2019) investigated logistics management and performance in manufacturing firms in selected northern states.

However, these studies may not fully encompass the complexities of the block industry due to its unique operational processes and materials involved in production. Despite the wealth of research on logistics services and organisational performance, there is a notable gap in studies conducted within the Nigerian context, particularly focusing on the block industry (Bagshaw, 2019; Musau et al., 2017; Ndung'u & Were, 2016; Odhiambo et al., 2017; Ristovska et al., 2017).

Moreover, the geographical focus of existing studies presents a significant gap, with limited attention given to specific regions such as Delta State. The lack of research addressing the intricacies of the block industry within places like Delta State hinders a comprehensive understanding of the factors influencing logistics services and organisational performance in this particular context.

Furthermore, the absence of dedicated research on the block industry in Delta State contributes to a dearth of knowledge and understanding regarding the industry's logistics challenges and performance drivers. The complexities inherent in block production, including material handling, transportation, and inventory management, necessitate tailored research to address the industry's unique needs and constraints.

To address these gaps, there is a need for comprehensive investigation into logistics services and organisational performance within the block industry in Delta State. Such research can provide valuable insights into optimizing logistics processes and enhancing organisational performance in this critical sector. Thus, the proposed study aims to fill this gap by exploring the relationship between logistics services and organisational performance within the Nigerian Block Industry, with a particular focus on Delta State.

1.3 Research Questions

Against the above backdrop, the following research questions are raised:

- i. what is the relationship between warehousing management and organisational performance in the Nigerian block industry, Delta State?
- ii. what is the relationship between information flow management and organisational performance in the Nigerian block industry, Delta State?
- iii. what is the relationship between material handling and organisational performance in the Nigerian block industry, Delta State?
- iv. what is the relationship between inventory management and organisational performance in the Nigerian block industry, Delta State?
- v. what is the relationship between transport management and the organisational performance in the Nigerian block industry, Delta State?
- vi. what is the relationship between reverse logistics management and the organisational performance in the Nigerian block industry, Delta State?

1.4 Objectives of the Study

The broad objective of this study is to examine the relationship between logistics services and organisational performance in the Nigerian block industry, Delta State. The specific objectives are to:

- i. determine the effect of warehousing management on organisational performance in the Nigerian block industry, Delta State;
- ii. examine the relationship between information flow management and organisational performance in the Nigerian block industry, Delta State;
- iii. examine the relationship between material handling and organisational performance in the Nigerian block industry, Delta State;
- iv. examine the relationship between inventory management and organisational performance in the block industry, Delta State;
- v. analyse the extent to which transport management affects organisational performance in the Nigerian block industry, Delta State; and

- vi. determine the effect of reverse logistics management on organisational performance in the Nigerian block industry, Delta State.

1.5 Research Hypotheses

The following hypotheses stated in their null forms have been formulated to serve as a base for this research, and as such the hypotheses was be tested:

1. Warehousing management does not significantly enhance organisational performance in the Nigerian block industry, Delta State.
2. Information flow management has no significant influence on organisational performance in the Nigerian block industry, Delta State.
3. Material handling does not significantly boost organisational performance in the Nigerian block industry, Delta State.
4. Inventory management does not significantly promote organisational performance in the Nigerian block industry, Delta State.
5. Transport management has no significant influence on organisational performance in the Nigerian block industry, Delta State.
6. Reverse logistics management does not significantly boost organisational performance in the Nigerian block industry, Delta State.

1.6 Scope of the Study

This research work focused on logistics services and organisational performance in the Nigerian block industry. The population for this study consists management staff from each of the one hundred and twenty-four (124) block industries registered under the Association of block industry Owner in Delta State. The logistics services variables were restricted in term of warehousing management, information flow management, material handling, inventory management, transport management and reverse logistics management. And the dependent variable was organisational performance. Geographically, the study was be conducted in Delta State in the south-south region of Nigeria. Delta state has 25 local governments and every of the

local government has block industries. The justification for the use of Delta State is due to proximity of the researcher and the fact that a study of this nature has not been conducted in the Delta state; hence this study is conducted in Delta State with the aim to boost the dearth of empirical literature on logistics management in the Delta State. This study was carried out between November 2024 and October 2025.

1.7 Significance of the Study

This study primarily contributes to the body of knowledge regarding the subject matter: logistics services and organisational performance and it is beneficial to the following:

Block Business Owners/Managers: The results of this study would contribute to improved understanding of how the selected variables affect performance of the block industry in Delta state and Nigeria at large, thereby assisting the block business owners/managers to make better decision for good business performance. It will help strategy planners in the block business, as the findings serve as a target of strategy formulation, which is capable of bringing about improvement and easier directives/guidelines toward promoting the performance of the block industry in Nigeria.

Government agencies: The government of Nigeria through its agencies such as Corporate Affairs Commission, Standards Organisation of Nigeria, Ministry of Trade, Commerce and Industry will also benefit from the findings of this study, as the findings will serve as an eye opener to the agencies of government in the area of policies formulation capable of influencing performance and stability in the block industry in Nigeria.

Block Industry Stakeholders: The findings of the study are expected to practically effective to the block industry stakeholders as it will broaden their knowledge and understanding on the activities of block industry as regards logistics activities and it will also enhance their investment decisions in the block industry.

Academics, Researchers and Scholars: The academicians, researchers as well as scholars will also be a beneficiary of the findings of this study, because the findings of this study will not only serve as a reference point, but create knowledge gap to be filled, hence encourage

them to dig deeper in this area of study by conducting further research with the aim of expanding the scope of the subject area thereby increasing the readers knowledge and understanding in this area of study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review literature of the work done by various authors/scholars. The chapter is organised as follows: concept of organisational performance, concepts of logistics services, theoretical framework, as well as empirical review.

2.2 Concept of Organisational Performance

Organisational performance refers to how well a firm is doing in terms of making profit, return on investment, and retention of employees as well as having a good reputation from their host community (Akinwumi, Tunde & Adebunsi, 2021). Akinwumi et al., (2021:1) buttress that “it can also be perceived as the achievement of objectives that was set from the inception of a business year or quarterly depending on the type of activities embarked which explain that organisational performance consists of three basic fields of firms results: (a) financial performance (profits, return on assets, return on investment, amongst others.); (b) performance of the product market (sales, market share, amongst others); and (c) return on shareholders (total shareholder return, economic value added, amongst others)”.

Organisational performance, according to Almatrooshi, Singh, and Farouk (2016), is the actual output or results of an organisation as compared to its expected outputs. Rehman, Mohamed and Ayoub (2019:2) explained organisational performance means the effectiveness of an organisation in the achievement of their desired goals. Rehman et al., (2019) buttressed that organisational performance is a factor that measures how well an organisation attains its desired goals. Similarly, Khajeh (2018) is of the view that organisational performance comprises of the results of an organisation or the actual outputs of an organisation, which can be measured against intended outputs, goals and objectives. The organisational performance involves three areas associated with the organisation – financial performance (return on investments, profits amongst others.), shareholder return (economic value added, total shareholder amongst others.) and the product/service market performance (market share, sales amongst others.).

2.3. Concept of Logistics Services

Logistics is the physical distribution that attempts to systematically manage a set of related activities that include transportation, distribution, storage, finished products, inventory levels, packaging and material handling to guarantee the efficiency of the delivery of finished products to the clients (Ogundare&Alalade, 2018).

Saiyawut (2018) defines logistics as part of supply chain management in the planning, support and control of both the forward and reverse flow of goods and services, including the information from the beginning to the consumer to the highest efficiency, considering the customer satisfaction.

2.4. Components of Logistics Services

Warehousing management, information flow management, material handling, inventory management, transport management, and reverse logistics management are key components that have been identified in the literature (Ristovska, Kozuharov, & Petkovski, 2017). These components play a crucial role in all logistics operations of all industries and can significantly impact its performance. In this section, the concept of each of the variables selected for the purpose of this study is discussed as follows:

2.4.1 Warehousing Management

Warehousing is a significant component of an organisation's logistics technique that stores goods at and between points of origin and points of consumption (Abdul, Oladipo, Taiwo & Olota, 2019). According to Mutai and Moronge (2017) warehouse management essentially describes as the organisation of the transfer and storage of items (materials) inside a stockroom and procedure related and dealings, including dispatching, accepting, set aside and picking. Warehousing is considered as one of the important supporters to trade. It makes time utility by crossing over the hole among manufacturing and utilisation of products.

Vatumalae, Rajagopal & Sundram (2020) opined that, a warehouse is very important for every business particularly for the production and retail sector, but also for the entire supply chain. The term 'warehouse' is often mentioned in a negative context, as the operations of the

warehouse causes high costs, waste of time and without adding value to the product. Such understanding of the process of warehouse management and warehousing are limited and does not take into account of the main activities of warehouse management such as: reducing the warehouse costs and inventory holding cost, increasing warehouse efficiency, increasing inventory accuracy, increasing productivity while achieving greater value for customers and higher levels of service quality”.

2.4.2 Information Flow Management

The issue of information exchange among supply chain partners in the business environment has been a major concern (Sindhuja, 2014). Hanafy & Hashem (2017:42) disclose that, in recent years, the environment has become more competitive than in the past. Integrated supply chain relationships are important and necessary and integral to the organisation's successful structure. Supply chain management could be best described as procedures and exercises designed for efficient and effective flow of both information and material between the organisation, distributors and consumers (Lancaster, Yen & Ku, 2006). “The exchange of information and communication between partners, and the potential for feedback from clients and the search for solutions to their problems, will undoubtedly have a positive impact on the organisation's performance and outputs”(Hanafy & Hashem, 2017).

The success of an organisation is in doubt with the absence of information flow, because information flow is considered as the live wire of any organisation (Mahto & Davis, 2012). Information flows perform numerous vital functions in an organisation (Jivan & Zarandi, 2012). For instance, promoting scientists have recommended that the flow of information on manufactured goods (for example regularity of awareness creation (advertisements) boost the brand attention to the distributors or client (Mahto & Davis, 2012). The assumption underlying this argument is that the repetition of information enhances the likelihood and extent to which a person attends to, comprehends, and retains the information (Mahto & Davis, 2012). The subject's expanding experience with the data raises the probability and measure of disposition

change (Mahto & Davis, 2012). Inside associations, data stream likewise affects its recipients (Markos & Sridevi, 2010). As the data stream (about authoritative objectives and means) expansions in the association, the commonality of representatives about hierarchical objectives and means increments fundamentally (Kellermanns & Floyd, 2005). The knowledge of hierarchical objective and means manages the conduct of the representatives in a reliable way bringing about expanded consistency with different layers of the association

2.4.3 Material Handling

Materials are simply industrial goods that become part of another physical product. They represent the major component of business cost and profitability (Asaolu, Agorzie & Unam, 2012). Karande & Chakraborty (2012) posit that material handling is an activity that uses the right method to provide the right amount of the right material at the right place, at the right time, in the right sequence, in the right position, and at the right cost. Karande et al, (2012) buttress that a material handling system is responsible for transporting materials between workstations with minimum obstruction and joins all the workstations and workshops in a manufacturing system by acting as a basic integrator.

According to Oba, Ayoola, Ademola & Obadeji (2017:4) “materials are the lifeblood and heart of any manufacturing system and no organisation can operate without them. They must be made available at the right price, at the right quantity, in the right quality in the right place and at the right time in order to co-ordinate and schedule the production activity in an integrative way for an industrial undertaking.” A manufacturing firm will remain shaky if materials are under stocked, overstocked, or in any way poorly managed (Banjoko, 2000).

Bahale & Deshmukh (2014) said that material handling system provides transportation and storage of materials, components and assemblies. Material handling activities start with unloading of goods from delivery transportation, the goods then passed into storage, onto machining, assembly, testing, storage, packaging, storage and finally loading onto transport.

Each of these stages of the process requires a slightly different design of handling equipment and some processes integration of multiple items of handling equipment.

In the current exceedingly aggressive worldwide commercial environment, the weight on firms to discover better approaches to convey value to their clients is becoming ever challenging (Kisioya& Moronge, 2019). The expanding requirement for industry to offer items in a worldwide market based on cost and quality has generated the need to implement more productive warehousing methodologies (Kisioya& Moronge, 2019). Material handling is now seen as an essential component of large-scale manufacturing companies' operations. Material handling comes before processing of completed products held for distribution to customers (Coyle, Langley, Gibson, Novak& Bardi, 2014). Material handling with is essential hubs in a supply chain network as it performs important functions that help the development of materials, handling items, discharge vehicle loads, making stock keeping unit combinations and gathering materials for shipments purposes (Andre Langevin& Riopel Diana, 2015). With a primary focus on cost reduction and improving company performance, the stores' efficient material handling practices guarantee optimal manufacture and distribution of entire items.

2.4.4 Inventory Management

Inventory management is seen as an important segment of productivity, effectiveness and organisational performance. It tends to be considered to be successful when it is introduced upon a framework to monitor stock, a solid gauge of interest, satisfactory information on lead times, sensible assessments of holding costs, requesting expenses and deficiency costs (Kolawole, Akomoafe &Olusipe, 2019). A decent order framework ought to be set up as any omissions saw in stock administration could cause misfortunes because of shrinkage or pilferage. An organisation's administration has the obligation to guarantee control of its stock through use of methods, for example, great faculty choice, preparing, and discipline, tight control on approaching shipments and powerful control on all merchandise leaving office (Kolawole et al., 2019).

Sohail (2018) considers inventory to be the stock of crude materials, work-in-progress and completed products as an organisation keeps up to meet its operational requirements. It addresses a substantial venture and a prospective wellspring of waste that should be scrupulously controlled. While NdiranguKung'u (2016) said that inventory management alludes to all exercises associated with creating and dealing with the stock levels, regardless of whether the stock is crude materials, semi-completed materials or completed products, so sufficient supplies should consistently be accessible and the structure should ensure that the expense of over or under stocks are in every case low.

Prempeh (2015) opined that it is significant that supervisors' associations handling stock, to have as a primary concern, the goal of fulfilling client needs and keeping stock expenses at its lowest level. According to Drury (2004) Holding costs, ordering costs, and shortage costs are all part of inventory costs. The costs of keeping physical objects in stock are referred to as holding costs. These costs include insurance, obsolescence, and the opportunity costs of possessing funds. They could be somewhere else, but inventory prevents them from doing so. Ordering cost is the costs of placing an order and receiving inventory. Among them is deciding how much is required, the cost of producing invoices, the cost of transportation, and the cost of checking items are all factors to consider. When demand outstrips available inventory, shortage costs arise. Among the expenses are loss of client goodwill, late fees, and other related costs are all examples of opportunity costs (Drury, 2004).

As indicated by Ogbo, Onekanma & Ukpere (2014), inventories are essentially a collection of assets held for the purpose of future creation or potential transactions. Inventories can be thought of as a dormant asset with monetary value. Better inventory management would free up capital that could be put to better use elsewhere (Ghosh & Kumar, 2003). As a result, inventory control denotes the synchronization of material availability, control, consumption, and acquisition. Stock control is the course of action determined to get the right stock in the right place at the right time and in the right amount, and it is inextricably linked to a company's ability

to create. This implies that any association's production is directly proportional to its size. (Miller, 2010). Associations have numerous reasons for maintaining a product inventory.

2.4.5 Transport Management

The foundation of trade is the ability to move or transport a product from the source to the consumers and still make a profit (Obasan, Ogunkoya & Hassan, 2016). Obasan et al. (2016) buttressed that “the foundation of businesses can be described with the two fundamental major problems: finding or creating demand and how to supply it while the performance thereafter reflects the outcome of the implementation of any strategic task and whether such outcome is deemed to be successful or disastrous”.

Transportation, in general, refers to the actual physical movement of people and products from one location to another (Ahukannah, Ndinaechi & Arukwu, 2003). It is basically the movement of products from one location to another as it makes its way from the beginning of a supply chain to the customer’s hands (Bagshaw, 2019).

According to Abdul, Oladipo, Taiwo & Olota (2019) transport management is the planning, controlling and decision making on operational area of logistics that geographically moved and positioned inventory. Because of its fundamental importance and visible cost, transportation had traditionally received considerable managerial attention and almost all enterprises, big and small, had managers responsible for transportation. Bowersox, Closs, and Cooper (2010) assert that Transportation accounts for one-third to two-thirds of logistics expenditures, hence transportation management has a significant impact on logistics system performance. From manufacturing to distribution to ultimate consumers and returns, transportation is essential throughout the production process. The benefits of logistics can only be maximized with efficient management and coordination amongst all components. In logistics activities, excellent transportation management may improve logistics efficiency, save operating costs, and improve service quality for businesses (Bowersox et al., 2010).

2.4.6 Reverse Logistics Management

Reverse logistics has garnered increased attention in recent years, particularly due to the growing concern for environmental sustainability and the economic benefits associated with effective management of reverse logistics processes (Bor, 2020). Bor (2020) emphasises that this heightened interest stems from various factors, including the emphasis on sustainable development and the potential economic advantages that organisations can derive from proficient reverse logistics management. In the realm of manufacturing, reverse logistics is intricately linked to product recovery management, which aims to maximize both economic and ecological values by minimizing waste (Bor, 2020).

Anne, Nicholas, Gicuru, and Bula (2015) define reverse logistics as the process whereby customers return products to the original company for the purpose of recovering value from unused products or components. Alnoor, Eneizan, Makhamreh, and Rahoma (2019) assert that companies adopt reverse logistics strategies to address environmental concerns and manage products throughout their life cycle. This involves the planning, implementation, and control of the efficient flow of products, materials, and information from the point of consumption back to the point of origin, facilitating income generation and recycling.

Echoing similar sentiments, Ramírez and Morales (2014) describe reverse logistics activities as encompassing all measures through which a corporation can derive economic gain, either directly or indirectly. Somuyiwa and Adebayo (2014) elaborate on the operational aspects of reverse logistics, highlighting its role in efficiently managing the flow of raw materials, in-process inventory, finished goods, and associated information from the point of consumption back to the point of origin. This process aims to recapture value through proper disposal or recycling efforts.

2.5 Conceptual Framework

The conceptual framework for this study is constructed based on the relationship between the identified components/variables of the independent variable, logistics services and the dependent variable, organisational performance in the Nigerian block industry, Delta State. The

conceptual framework below provides a visual representation of the theoretical foundation guiding the research.

LOGISTICS SERVICES AND ORGANISATIONAL PERFORMANCE OF THE NIGERIAN BLOCK INDUSTRY, DELTA STATE

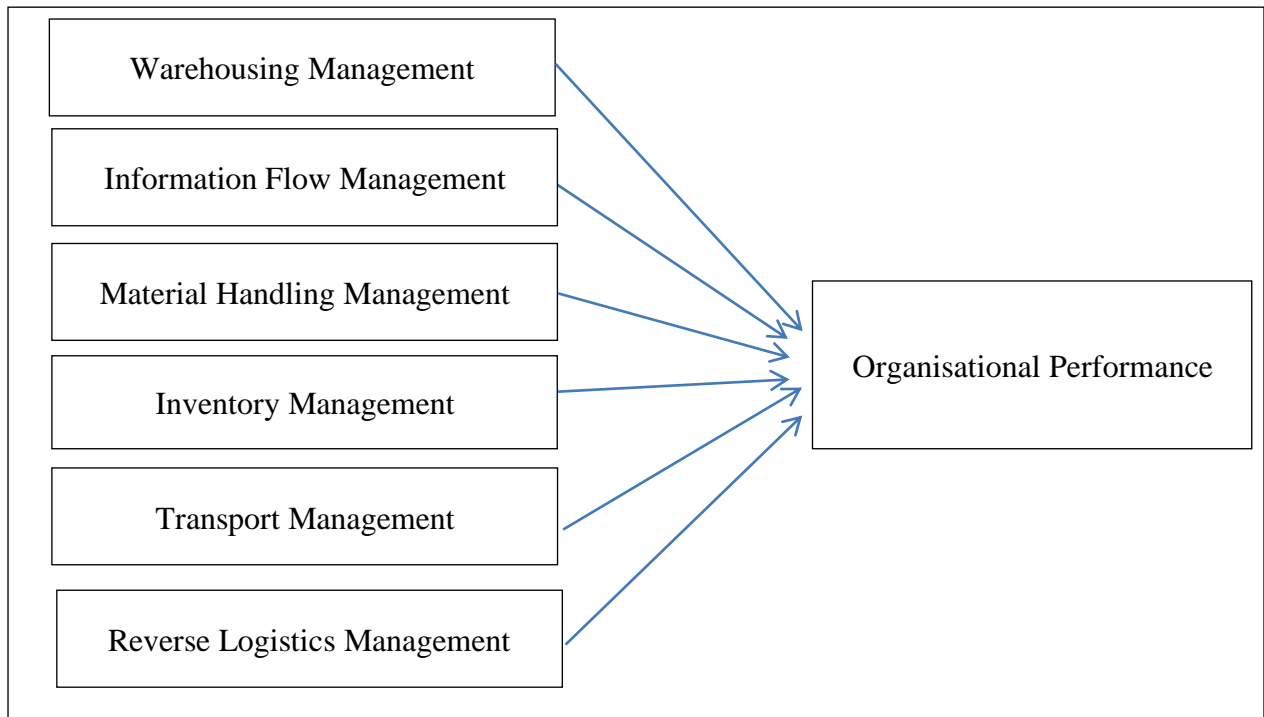


Fig 2.1: Conceptual Framework

Source: Researcher's Conceptualisation, 2025.

2.6 Theoretical Review

In this section, four theories relevant to the study were discussed. They are the theory of supply chain management, the resource based view (RBV), the theory of constraints (TOC) as well as control theory.

2.6.1 Supply Chain Management Theory

This theory was introduced by Keith Oliver, a consultant at Booz Allen Hamilton in 1982. The term Supply Chain Management (SCM) has been utilised to clarify the arranging and management of resources and data streams just as the coordinations exercises inside an organisation as well as remotely between organisations (Kirui & Nondi, 2017). Various fields like buying and supply, coordinations and transportation, activities management, promotion, organisational theory, the board data frameworks and vital administration have added to the blast

of the SCM hypothesis (theory). Numerous writers have underlined the urgent need for obviously identified concept and reasonable structures to boost the theory of Supply Chain Management (SCM) (Kirui & Nondi, 2017). The theory of Supply Chain Management (SCM) stresses on mutual benefit. The business world is made out of an organisation of reliant connections created and encouraged through essential coordinated effort with an objective of conveying common advantages to the entire supply chain partners (Miles & Snow, 1986). SCM looks for enhanced accomplishment by way of healthier utilisation of inward and outer abilities to make a flawlessly organised supply chain, subsequently inspiring intercompany rivalry to inter-supply chain rivalry (Christopher, 2011). In this manner with regards to SCM, accomplishment is not, at this point influenced by a solitary firm. Maybe, accomplishment of all individuals included plays a part to the general accomplishment of the whole supply chain. The development of supply chain administration has gotten a lot of disarray understanding the idea of logistics administration. Nonetheless, numerous authors contend that if stringently characterized, there is a reasonable differentiation between supply chain administration and logistics administration as each manage an alternate degree of issues. Clearly supply chain administration is utilised from a more extensive perspective than logistics administration. Stock & Lambert (2001) uphold that logistics administration is essential for the more supply chain and there is a lot of covering. Lambert and Cooper (2000) show that: logistics is that piece of the inventory network measure that arrangement, executes and controls the proficient, compelling stream and capacity of merchandise, benefits and related data from the starting place to the mark of utilisation to meet client necessities.

2.6.2 The Resource Based View (RBV)

The RBV was widely depicted and advocated by Barney (1991), in spite of the fact that it is established in the previous work of Wernerfelt (1984) and Penrose (1959). RBV recognises the (significant, uncommon, imitable and non-substitutable) assets possessed by the firm as the wellspring of the association's manageable upper hand. Augmentations of the theory have

created a few hypothetical refinements including the information-based perspective on the firm Grant, (1996), center skill Prahalad & Hamel, (1990), capacities hypothesis Helfat & Peteraf, (2003) and the powerful abilities Teece, Pisano and Sheun, (1997).

According to Hamel and Prahalad, (1996) The Resource Based View (RBV) examines and interprets an organisation's internal resources, focusing on resources and capabilities when developing a plan to attain long-term competitive advantages. Resources can be thought of as inputs that allow businesses to carry out their operations. Resources may be considered as inputs that enable firms to carry out their activities. Internal resources and capabilities determine strategic choices made by firms while competing in their external business environment (Pankaj, 2010).

“The essential commitment of the resource based view on the firm to date has been as a hypothesis of upper hand. Its fundamental rationale is a moderately straightforward one. It begins with the presumption that the ideal result of administrative exertion inside the firm is a manageable upper hand. Accomplishing a manageable upper hand permits the firm to acquire monetary rents or better than expected returns. Thusly, this spotlights consideration on how firms accomplish and support benefits. The resource-based view fights that the response to this inquiry lies in the ownership of certain distinct advantages, that is, assets having the qualities of significant worth, obstructions to duplication and appropriability. A manageable upper hand can be acquired if the firm viably sends these assets in its item showcases. Hence, the RBV underlines vital decision, accusing the company's administration of the significant assignments of distinguishing, creating and conveying distinct advantages to boost returns. In outline, the fundamental components of the asset-based view are: reasonable upper hand and unrivaled execution; the attributes and sorts of benefit creating assets; and vital decisions by the executives (Barney, 1991). The logistics chiefs ought to accordingly be sufficiently sharp to recognise those assets and abilities that can assist their associations with accomplishing an economical upper hand and accomplish a prevalent exhibition”.

2.6.3 The Theory of Constraints (TOC)

The theory of constraints could be best described as an administration theory that tries to expand producing throughout effectiveness or framework execution estimated by deals through the distinguishing proof of those cycles that are compelling the production framework (Goldratt, 2004). Kazim (2008) contends that theory of constraints depends on the rule that a chain is just pretty much as solid as the most fragile connection or imperative and to hoist and deal with the limitation as fundamental. The troubles in the theory of constraints are: “very long lead times, large number of unfulfilled orders or they are executed with much extra effort (overtimes), high level of unnecessary inventories or lack of relevant inventories, wrong materials order, large number of emergency orders and expedition levels, high levels of devolution, lack of key customers engagement, frequent changes or absence of control related to priority orders, which implies on schedule conflicts of the resources” (Goldratt, 2004).

2.6.4 Control Theory

Kirui and Nondi (2017) describe control theory as “an interdisciplinary branch of engineering and mathematics that deals with the behavior of dynamical systems with inputs, and how their behavior is modified by feedback. The usual objective of control theory is to control a system, often called the plant, so its output follows a desired control signal, called the reference, which may be a fixed or changing value. To do this a controller is designed, which monitors the output and compares it with the reference. The difference between actual and desired output, called the error signal, is applied as feedback to the input of the system, to bring the actual output closer to the reference”.

2.7 Theoretical Framework

This work is anchored on the Resource Based View (RBV). Penrose (1959) provided initial insights of the resource perspective of the firm. However, the resource-based view of the firm (RBV) was put forward by Wenerfelt (1984) and subsequently popularized by Barney’s

(1991) work.

“The theory emphasized the importance of organisation resources and their influence on performance and competitive advantage in the market” (Ndung’u & Moronge, 2017). “According to RBV, every organisation has its own unique resources that enable it to remain competitive in the market by addressing the rapidly changing environment” (Helfat, 2007). “These resources may be financial, human, physical, technological and information. These may be valuable, rare and non-substitutable” (Crook, Ketchen, Combs & Todd, 2008). “The Resource Based View of the firm (RBV) explains that each firm has resources and capabilities, and that there are resources that can be exploited and become sources of competitive advantage under certain conditions. Initiated in the mid-1980s, the resource-based view (RBV) has since become one of the dominant contemporary approaches to the analysis of sustained competitive advantage” (Ndung’u and Moronge, 2017).

2.8 Empirical Review

Empirical review was carried out based on the hypotheses of the study:

2.8.1 Warehousing Management and Organisational Performance

Mutai and Moronge (2017) investigate the association between warehouse management and organisational performance in public sector in Kenya. The study utilised a descriptive research design and the study target population was the employees of Kenya Electricity Generating Company Limited (Kengen). The study employed a census survey on one hundred and seventeen (117) respondents using questionnaires. The study found that there is a strong positive connection between warehouse management and organisational performance.

Raziki, Radi & Okar (2016) conducted a study to identify the factors affecting warehouse management performance development. The study first explained via a review of literature the warehousing management performance and then discussed the purpose to establish the concept of important achievement factors in the study. “Next, on the basis of an action research and a survey, the importance of the warehousing function and obstacles of its performance are

described. Then, research findings concerning factors affecting warehousing performance improvement in supply chain are shown”.

Wambua, Okibo, Andrew and Sixtus (2015) examined “the influence of warehouse management and organisational performance in Kenya. They employed descriptive research design and the study population was two hundred and sixteen (216) employees of Housing and Household Economic Statistics (HHES) while a sample size of sixty-four (64) was used. The study relied on stratified random sampling due to the fact that the population is heterogeneous. The Statistical Package for Social Science (SPSS) was employed in analyzing the data with the aid of regression and correlation. The study found that there is a positive and significant connection between warehouse management and organisational performance”.

2.8.2 Material Handling and Organisational Performance

Kisioya and Moronge (2019) looked at the relationship between material handling and organisational performance using manufacturing companies in Nairobi Kenya as a case study. The researcher utilised descriptive survey design, their target population was three hundred and fifty-five manufacturing companies in Nairobi, Kenya. The stratified random sampling technique was employed in choosing a sample size of one hundred and eighty-eight manufacturing companies in Nairobi, Kenya. The researcher used primary data was utilised through a Likert scale structured questionnaires. The generated data was analysed using SPSS. In analyzing the data, the researcher employed both descriptive and inferential statistics. The data was presented in tabular form with explanations and a regression analysis was adopted in testing the formulated hypotheses. The study discovered that material handling practices influences organisational performance positive and significantly.

Geoffrey and Muturi (2018) evaluate “the effects of materials handling systems on the performance of tea processing plants in Kenya. It particularly intended to; ascertain the impact of automated material handling systems on performance; assess the impact of information directed systems on performance; investigate the impact of semi-automated systems on performance; and determine the impact of mechanized materials handling systems on performance of Tea

Processing Plants in Kisii County. This study was based on three theories namely: the control theory, Queuing theory and the theory of constraints. It was a survey research targeting 78 management staff at Tea Processing Plants in Kisii County who were selected using census method. Questionnaires were administered on both employees and interview schedule were given to CEO as data collection instruments. Data was analysed using descriptive analysis; Pearson's correlations and regression analysis to test hypotheses was also used. The data was then presented in tables, graphs and charts with the aid of SPSS and the findings were useful to the staff and management. The findings revealed that there is significant correlation of 0.96 this implies that an increase in material handling systems increases the performance of tea firms by approximately 0.9. It was clear that respondents agreed that adequate training on matters of material handling systems facilitates efficient and effective performance of tea firms”.

Kathurima, Ombul and Iravo (2016) examined the association among materials handling and organisational performance using cement manufacturing companies in Machakos County as a case study. The study employed the descriptive correlational research design. The study population was sixty (60) staff of the selected companies, and then a census was conducted on the target population. The used in the study was gathered through primarily with the aid of questionnaires. The version 21 of the SPSS was used in the data analysis via regression analysis. The results of the study revealed that there is a positive and significant association between materials handling and organisational performance.

Asaolu, Agorzie and Unam (2012) investigated “the impact of materials handling on organisational performance using Nigerian Bottling Company Plc as a case study. A structured questionnaire was utilised in generating the data for the study. The study found that there is a positive and significant connection among materials handling and organisational performance”.

2.8.3 Inventory Management and Organisational Performance

Kolawole, Akomoafe and Olusipe (2019) examined the connection among inventory management and organisational performance of International Breweries Plc. The study relied on secondary data; hence the data used in the study was gathered from the company's annual report

for a period of ten (10) years. The study specified a simple linear regression model to determine the association among the selected variables. The study uncovered that inventory management positively and significantly influences organisational performance of International Breweries Plc

Yvonne and Ngugi (2019) established “the influence of inventory management practices on performance of fast-moving consumer goods manufacturers in Nairobi County, Kenya. This study adopted a descriptive research design for the purpose of accessing the study’s general intent. The target population was 51 fast moving consumer goods manufacturers in Nairobi County. The study focused on the logistics managers and IT managers of the 51 FMCG manufacturers located in Nairobi as the unit of observation where a census will be conducted on them. Hence a total of 102 respondents was sampled. The study used self-administered questionnaires. Primary data was collected through the administration of questionnaires to respondents. A pilot study was conducted in order to establish the validity and reliability of data collection instruments. The analysis of the data was guided by the research objectives. The study brought up both qualitative and quantitative data. To analyze this data descriptive statistics used by use of questions that are close ended. Pearson R correlation was used to measure strength and the direction of linear relationship between variables. Multiple regression models was fitted to the data in order to test how far the independent variables affect the dependent variable. From the study findings it was found that lead time, top management support, supplier evaluation and e-procurement and performance of fast-moving consumer goods manufacturers have an association”.

Inegbedion, Eze, Asaleye and Lawal (2019) examined “the relationship between inventory management and organisational performance. The study utilised the classical inventory management techniques. A door sales business organisation in Ilorin city of Nigeria that volunteered information on the basis of anonymity was used and relevant data were collected on six types of doors; panel, flush, sliding, folding and as well as manual and electronic garage doors. The study uncovered that there a positive and significant relationship between inventory management and organisational performance”.

Takeeto, Michael, Pastor and Osunsan (2017) appraised the correlation between inventory management and organisational performance of Gumutindo Coffee Cooperative Enterprise Limited. A descriptive research design was adopted for the purpose of this study. The sample size of the study was one hundred and eighty-one (181) out of the population of three hundred and forty-five employee. The study uncovered that inventory management positively and significant influence organisational performance.

Onikoyi, Babafemi and Aje (2017) assessed the connection among inventory management and organisational performance of Larfage Wapco Plc, Nigeria. The study adopted a survey design method; hence the study utilised audited annual report/financial statement of the selected company. The study also employed field design and descriptive statistics. The result revealed that inventory management significantly influence organisational performance in Larfage Wapco Plc.

2.8.4 Reverse Logistics Management and Organisational Performance

Bor (2020) find out “the effect of reverse logistics on performance of food industries in Kenya. An explanatory research design was used in this study. The study used a census survey on the entire one hundred and eighty-seven (187) food manufacturing companies. The instrument used in the collection of data was a structured questionnaire. Descriptive and inferential statistical tool was utilised in the data analysis. The study found that reverse logistics is significantly and positively influence organisational performance of food industries in Kenya”

Zhang, Tianshan and Muhammad (2018) “investigated the association among reverse logistics management and organisational performance of pharmaceutical companies in India. The regression method was adopted in testing the formulated hypothesis. The study discovered that reverse logistics management positively and significantly promote organisational performance of pharmaceutical companies in India.

Anne, Nicholas, Gicuru and Bula (2015) investigated the connection among reverse logistics and organisational performance of food processing companies in Kenya. The study

carried out a cross-sectional survey on one hundred and thirty (130) food processing companies in Kenya. The study gathered its data through primary data via questionnaires. The factor analysis was employed to determine the construct validity, while multivariate linear regression was utilised to test criterion validity. The study found that the practice of reverse logistics promotes organisational performance of food processing companies in Kenya.

Somuyiwa and Adebayo (2014) investigated the relationship between reverse logistics management and organisational performance of food and beverages firms in Lagos State, Nigeria. The data used in the study was gathered through primary and secondary sources and the analysis was done using inferential statistical analysis. The study uncovered that reverse logistics management enhances organisational performance of food and beverages firms in Lagos State, Nigeria.

2.9 Research Gap

The research gap identified in the literature review underscores a significant dearth of empirical studies on the relationship between logistics services and organisational performance within the Nigerian context. Most of the existing research in this area has been conducted outside Nigeria, as evidenced by studies such as those by Bagshaw (2019), Musau et al. (2017), Ndung'u and Were (2016), Odhiambo et al. (2017), and Ristovska et al. (2017). Conversely, studies conducted within Nigeria have primarily focused on manufacturing companies, with limited attention given to the block industry. For instance, research conducted by Umar (2019), Abdul Oladipo, & Olota (2019), and Bello, Rotimi, & Omoniyi (2019) predominantly explored logistics management and organisational performance in manufacturing firms, neglecting the specific dynamics of the block industry.

This paucity of empirical literature on logistics services and organisational performance in the Nigerian block industry creates a significant knowledge gap. Therefore, there is an urgent need for research that delves into this area, particularly focusing on registered block industries in Delta State, Nigeria. By investigating the relationship between logistics services and organisational performance within the block industry, this study aims to address this gap and

contribute to a deeper understanding of how various factors influence the performance of block businesses in Delta State and Nigeria as a whole.

The findings of this study are expected to enhance understanding of the selected variables' impact on the performance of the block industry in Delta State and Nigeria at large. By shedding light on these dynamics, the study will provide valuable insights that can assist block business owners and managers in making informed decisions to improve organisational performance. Ultimately, this research aims to fill the existing knowledge gap and contribute to the advancement of scholarship in the field of logistics services and organisational performance within the Nigerian block industry.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter dealt with the methods and procedures that were used in this study. It is discussed under the following sub-headings: research design, population of the study, sample and sampling technique, research instrument, validity of the instrument, reliability of the instrument, method of data collection as well as method of data analysis.

3.2 Research Design

This study adopted survey research design. The goal of survey study design is to describe a population, situation, or phenomena properly and systematically. A survey research design can study one or more variables using a number of quantitative and qualitative methodologies. Descriptive survey describes, analyzes and interprets conditions that are in existence. The interest of the researcher is in the identification and selection of variable, elements, subject which is considered relevant to the investigation. This was because opinion of subjects on logistics services and organisational performance in the block industry were be explored through the use of questionnaire. Nworgu (1998) is of the view that survey research involves the assessment of the public opinion beliefs, attitudes and motivations and behaviour, using questionnaire. He buttressed further that if a study required the opinion of respondents, the survey design is appropriate.

3.3 Population and Sample of the Study

The population of this study comprises of all management staff from each of the one hundred and twenty-four (124) block industries registered under the Block Industry Owners Association in Delta State. Based on the figures obtained from the office of the Chairman of the Association of Block Industry in Delta State, Nigeria, a total of three hundred and seventy-two (372) management staff are currently in the employ of these organisations.

3.4 Sample Size and Sampling Technique

Given that the population is known and finite and could easily be estimated, the

Yamane (1967) sample size determination formula was employed in determine the sample size of this study. The computation of Yamani is based on the formula:

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

Where:

- n = Sample Size
 N = Population
 e = Margin of Error (0.05)

Where:

- N = 372 (number of employees of selected block industries)
 (e)² = 0.05 level of significance

$$n = \frac{372}{1 + 372(0.05)^2}$$

$$n = \frac{372}{1 + 372(0.0025)}$$

$$n = \frac{372}{1 + 0.93}$$

$$n = \frac{372}{1.93}$$

$$n = 192.746$$

Based on the computation, the sample size of this study is one hundred and ninety-three (193) management staff from the one hundred and twenty-four (124) registered block companies, that are registered with the Association of Block Industries Owners in Delta State.

3.5 Sources of Data

The needed data for the purpose of this study was be obtained through primary data. The data will be obtained via questionnaire. The questionnaire is aimed at soliciting responses from the selected research participants in order to achieve the objectives of this study.

3.6 Research Instrument

The research instrument employed in this study is the questionnaire titled: Logistics Services and Organisational Performance Questionnaire (LSOPQ). The questionnaire was divided into Sections A and B. Section A entails questions designed to elicit information about the bio-data of the respondents.

Section B covered thirty-five (35) items statements arranged in cluster to the research questions. Each item in Section B contains statements which require the respondents to provide Strongly Agree (SA), Agree (A), Undecided (UN), Disagree (D) and Strongly Disagree (SD) and weighted 5, 4, 3, 2, and 1 respectively.

3.7 Validity and Reliability of Research Instrument

3.7.1 Validity

To ensure the validity of the research instrument constructed by the researcher, it was given to the research supervisor who went through it and made some modification and corrections. These modifications and corrections were done and the final copy of the instrument was administered to the respondents.

3.7.2 Reliability

To ensure the reliability of the instrument, a pilot test was conducted and this was determined by conducting a reliability test. To ascertain that the instrument is reliable, the researcher administered the research instrument to twenty (20) respondents who were not part of the sample size. The researcher adopted the Cronbach's Alpha reliability coefficient test. The Cronbach's Alpha measures the internal consistencies of the questions used to express the proxies/constructs in the questionnaire in a single test administration. The Cronbach's Alpha values range from 0.1 – 1.0. Alpha values from 0.7 and above are satisfactory and acceptable.

The data generated from the administration research instrument was coded with the aid of spreadsheet software (Excel) and was analysed using Statistical Package for Social Sciences (SPSS 20). The data generated from the test were correlated statistically with the Cronbach's Alpha, thereby guaranteeing the internal consistency of the questionnaire.

The result of the pilot study shows an overall of 0.98. It was above the minimum required coefficient value of 0.70, and this was considered reliable. This is as stipulated by Nunnally (1978) that reliability coefficient of 0.70 and above are beyond the expected threshold, are adequate and are considered reliable. Below is a summary of the results for each variable presented in a tabular form:

Table 3.1 Reliability Test

S/N	Variable	Cronbach Alpha Value
1.	Organisational Performance (OPER)	0.871
2.	Warehousing Management (WAMA)	0.980
3.	Information Flow Management (IFMA)	0.964
4.	Material Handling (MAHA)	0.976
5.	Inventory Management (INMA)	0.963
6.	Transport Management (TRMA)	0.964
7.	Reverse Logistics Management (RLMA)	0.875

Source: Researcher's Computation (2025)

3.8 Model Specification

In order to capture logistics services and organisational performance in the Nigerian block industry, a model was adapted by the researcher. The variables used in the model were obtained from the questionnaires distributed.

Expressing equation in functional form, it becomes

$$\text{OPER} = f(\text{WAMA}, \text{IFMA}, \text{MAHA}, \text{INMA}, \text{TRMA}, \text{RLMA})$$

The model in its econometric form is specified as follows:

$$\text{OPER} = \beta_0 + \beta_1\text{WAMA} + \beta_2\text{IFMA} + \beta_3\text{MAHA} + \beta_4\text{INMA} + \beta_5\text{TRMA} + \beta_6\text{RLMA} + U_t$$

Where:

OPER = Organisational Performance

WAMA = Warehousing Management

IFMA = Information Flow Management

MAHA = Material Handling

INMA = Inventory Management

- TRMA = Transport Management
- RLMA = Reverse Logistics Management
- Ut = Stochastic error term
- β_0 = Intercept
- $\beta_1 - \beta_6$ = Parameters to be estimated

The apriori expectation of the model are: $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6, > 0$

The statement below shows the expected relationship between the dependent variables and other endogenous variables.

$\beta_1 > 0$ (positive relationship is expected)

$\beta_2 > 0$ (positive relationship is expected)

$\beta_3 > 0$ (positive relationship is expected)

$\beta_4 > 0$ (positive relationship is expected)

$\beta_5 > 0$ (positive relationship is expected)

$\beta_6 > 0$ (positive relationship is expected)

This connotes that all the endogenous variables are expected to positively influence organisational performance in the period under investigation.

3.9 Operationalisation of Variables

Table 3.2 Operationalisation of Variables

S/N	Variable	Operationalised As	Measured Scale	Appears in the data gathering instrument as
1	Sex	Male Female	2 1	Q1
2.	Age	0 – 25 26 – 30 31 – 40 41 – 50 51 and above	5 4 3 2 1	Q2
3	Educational Qualification	SSCE/WASC OND/Diploma HND/BSc Masters Ph.D.	5 4 3 2 1	Q3
4	Working Experience	0 – 5 years 6 – 10 years	5 4	Q4

		11 – 15 years	3	
		16 – 20 years	2	
		21 years and above	1	
Section B				
5	Dependent Variable: Organisational Performance	OPER	5 point likert scale	Q6 – 10
6	Independent Variable: Warehousing Management	WAMA	5 point likert scale	Q11 – 15
7	Independent Variable: Information Flow Management	IFMA	5 point likert scale	Q16 – 20
8	Independent Variable: Material Handling	MAHA	5 point likert scale	Q21 – 25
9	Independent Variable: Inventory Management	INMA	5 point likert scale	Q26– 30
10	Independent Variable: Transport Management	TRMA	5 point likert scale	Q31– 35
11	Independent Variable: Reverse Logistics Management	RLMA	5 point likert scale	Q36– 40

Source: Researcher’s Compilation (2025)

3.10 Method of Data Analysis

In analysing the data gathered for the purpose of this study, the researcher utilised descriptive statistics, correlation matrix as well as Ordinary Least Square statistical tool. A descriptive study of the data was conducted to obtain the sample characteristics; the study conducted a correlation matrix to ascertain the relationship between the selected variables, while the Ordinary Least Square statistical tool. The Ordinary Least Square (OLS) technique was performed to test the relationship between the independent variables and dependent variable.

“CHAPTER FOUR

DATA PRESENTATION, ANALYSES AND INTERPRETATION

4.1 Introduction

This chapter contained the presentation, analysis and interpretation of the data collected from the respondents. It specifically covers the descriptive analysis, interpretation and presentation of demographic information of the respondents and data collected from the respondents on questions related to logistics services and organisational performance in the Nigerian block industry. Furthermore, in this chapter, regression analysis and its interpretation with respect to hypothesized relationship between logistics services and organisational performance among the sampled respondents are also presented.

4.2 Description of Respondents’ Demographics

This section contains a descriptive analysis of the demographic data elicited from the sampled respondents. The demographic variables include: gender, educational qualification, work experience and age of the respondents.

Table 4.1: Demographic characteristics of the respondents

S/N	Categories	% Response	
		No.	%
1.	Gender		
	Male	104	55.0
	Female	85	45.0
2.	Educational Qualification		
	SSCE/WAEC	98	51.9
	OND/Diploma	35	18.5
	HND/BSc	34	18.0
	MSC/MBA	19	10.1
	PhD	3	1.6
3.	Work Experience		
	0-5yrs	99	52.4
	6-10yrs	23	12.2
	11-15yrs	29	15.3
	16-20yrs	33	17.5
	21yrs and above	5	2.6
4.	Age		
	18 – 25	53	28.0
	26 – 35	32	16.9
	36 – 50	92	48.7
	50 and above	12	6.3

Source: Field Survey, 2025.

Gender

Table 4.1 showed that the majority of the respondents were males. This category of respondents accounted for 55% of the total number of respondents, while 45% of the respondents were females.

Educational Qualification

Table 4.1 also revealed that a majority of the respondents obtained SSCE/WAEC as their highest educational qualification. This category of the respondents accounted for 51.9% of the total number of respondents. 18.5% of the respondents obtained OND/Diploma certificate and 10.1% obtained MSc/MBA as their highest educational qualification, while 1.6% of the respondents had obtained Ph.D. as their highest educational qualification.

Work Experience

Table 4.1 above also showed that a majority of the respondents had worked in the industry for 0-5 years. This category of respondents accounted for 52.4% of the total number of respondents. 12.2% of the respondents had worked in the industry for 6-10 years, 15.3% of the respondents had worked in the industry for 11-15 years, 17.5% of the respondents had worked in the industry for 16-20 years while 2.6% of the respondents had worked in the industry for 21 years and above.

Age

From Table 4.1, it was observed that a majority of the respondents were between the ages of thirty-six (36) and fifty (50). This category of respondents accounted for 48.7% of the total number of respondents. Also, respondents between the ages of eighteen (18) and twenty-five (25) accounted for 28% of the total number of respondents, respondents between the ages of twenty-six (26) and thirty-five (35) accounted for 48.7% while 6.3% of the respondents were above the ages fifty (50).

4.3 Description of Research Variables

The various variables were described using simple percentage, mean and standard deviation. The independent variable is logistics services while the dependent variable is organisational performance.

4.3.1 Description of Logistics Services

In achieving this objective, firstly, all computed the mean scores and standard deviation of responses to each sub-independent variable of logistics services was assessed on five point Likert scale in which 1 represents strongly disagreed and 5 represents strongly agreed.

Table 4.2 showed the description of logistics services in the Nigerian Block Industry.

Table 4.2: Description of Logistics Services

Q/N	Item	% Response					Mean	SD
		1	2	3	4	5		
	<i>Warehousing Management</i>							
10.	Frequent evaluation of warehouse management influences organisational performance	18	10	66	35	60	3.58	1.251
11.	Inspection of delivered materials at the right time enhances organisational performance	6	15	52	54	62	3.8	1.083
12.	Prompt confirmation of supplied goods at delivery point does not boost organisational performance	4	15	47	64	59	3.84	1.024
13.	Training and re-training of warehouse managers boost organisational performance	8	23	52	53	53	3.63	1.139
14.	Organisation with effective stock control system stands to gain improved organisational performance	6	12	41	62	68	3.92	1.056
	Total						3.754	1.1106

<i>Information Flow Management</i>								
15.	Availability of data sources facilitates production/delivering of higher; quality products	25	32	51	42	39	3.2	1.309
16.	Effective use of informal communication channels hardly enhances organisational performance	11	13	35	63	67	3.86	1.151
17.	Receiving feedbacks from directors influence the quality of products	7	23	43	66	50	3.68	1.104
18.	Keeping accurate records have no positive influence on the smooth running of the organisation	4	20	38	49	78	3.94	1.109
19.	Ability to create alternative means of data storage enhances organisational performance	27	21	49	44	48	3.34	1.35
Total							3.604	1.2046
<i>Material Handling Management</i>								
20.	Proper Material handling enhances production level and increase sale volume	12	30	52	50	45	3.46	1.196
21.	The practice of effective material stock control to decrease possible waste promotes organisational performance	19	30	34	57	49	3.46	1.303
22.	Eradication of potential damages to equipment and products does not improve organisational performance	3	28	41	53	64	3.78	1.117
23.	Utilisation of latest technological equipment in	1	8	40	64	76	4.09	0.909

	receiving and storage of raw material boost organisational performance							
24.	Inspection of materials before admitting them into the warehouse promotes organisational performance	4	26	34	49	76	3.88	1.147
Total							3.734	1.1344
<i>Inventory Management</i>								
25.	Using inventory management effectively reduces operational cost	1	14	31	66	77	4.08	0.956
26.	Curbing store fraudulent practice promotes organisational performance	1	27	49	58	54	3.72	1.046
27.	Availability of products for customers purchase does not lead to organisational performance	11	20	48	47	63	3.69	1.203
28.	Striking a balance between having too much of an item in stock and running out of stock enhances smooth running of the Organisation.	2	34	32	58	63	3.77	1.128
29	Making timely response to customer suggestions does not enhance organisational performance	4	3	25	41	116	4.39	0.925
Total							3.93	1.0516
<i>Transport Management</i>								
30.	Acquisition of sufficient vehicle for product delivery increases organisational performance	6	19	35	42	87	3.98	1.158
31.	Frequent maintenance of	7	16	37	51	78	3.94	1.133

	broken-down delivery vehicle promotes organisational performance							
32.	Having effective vehicle inspection unit enhances organisational performance	19	26	47	33	64	3.51	1.347
33.	Reduced delivering time does not enhances financial performance of the Organisation	12	11	41	59	66	3.83	1.161
34.	The practice of preventive maintenance measures is a sure way to organisational performance	8	12	47	56	66	3.85	1.103
	Total						3.822	1.1804
<i>Reverse Logistics Management</i>								
35.	Recruitment of competent procurement personnel to manage reverse logistics promote organisational performance	5	12	35	54	83	4.05	1.058
36.	Effective product recovery management influence organisational performance negatively	4	14	34	56	81	4.04	1.049
37.	Remanufacturing of waste product enhances organisational performance	14	23	54	51	47	3.5	1.201
38.	Carrying extra products to make up for any defective product upon delivery boost organisational performance	16	13	65	36	59	3.58	1.234
39.	Improper disposal of recovered defective products promotes organisational reputation	4	18	49	55	63	3.82	1.067

	Total	3.798	1.1218
	Overall Logistics Services Score	3.773666667	1.1339

Source: Field Survey, 2025.

N.B: 1, 2, 3, 4 and 5 denote strongly disagreed, disagreed, unsure, agreed, strongly agreed response rate respectively.

Warehouse Management

It was observed from Table 4.2 above that majority of the respondents (above 60%) agreed and strongly agreed that the frequent evaluation of warehouse management, inspection of delivered materials at the right time, prompt confirmation of supplied goods at delivery point, Training and re-training of warehouse managers and effective stock control system influences, enhances, boosts and improves organisational performance. However, less than 20% of the respondents disagree and strongly disagree to these stated questions and the remaining respondents were undecided in their opinions.

Information Flow Management

As regards information flow management, a majority of the respondents (over 50%) agreed and strongly agreed that availability of data sources, effective use of informal communication channels, receiving feedbacks from directors, keeping accurate records and ability to create alternative means of data storage facilitates production/delivering of higher; quality products, influence the quality of products and the smooth running of the organisation while enhancing organisational performance. Less than 30% of the respondents disagreed and strongly disagreed to these stated questions while the remaining respondents were undecided in their opinions.

Material Handling Management

For material handling management, over 55% of the respondents agreed and strongly agreed that proper material handling, the practice of effective material stock control, eradication of potential damages to equipment and products, utilisation of latest technological equipment in receiving and storage of raw material and inspection of materials before admitting them into the warehouse enhances production level and increase sale volume, promotes, boosts and improves

organisational performance. It can be seen that 25% of the respondents disagreed and strongly disagreed to these stated questions while the remaining respondents were undecided in their opinions.

Inventory Management

From the Table 4.2, the majority of the respondents (above 65%) agreed and strongly agreed that using inventory management, curbing store fraudulent practice, availability of products for customers' purchase, striking a balance between having too much of an item in stock and running out of stock and making timely response to customer suggestions effectively reduces operational cost, promotes, leads and enhances organisational performance and the smooth running of the organisation. It can be seen that 15% of the respondents disagreed and strongly disagreed to these stated questions while the remaining respondents were undecided in their opinions.

Transport Management

The majority of the respondents (above 60%) agreed and strongly agreed that the acquisition of sufficient vehicle for product delivery, frequent maintenance of broken-down delivery vehicle, having effective vehicle inspection unit, reduced delivering time and the practice of preventive maintenance measures increases, promotes, enhances financial and organisational performance. It can be seen that 10% of the respondents disagreed and strongly disagreed to these stated questions while the remaining respondents were undecided in their opinions.

Reverse Logistics

From the Table 4.2, the majority of the respondents (above 50%) agreed and strongly agreed that recruitment of competent procurement personnel to manage reverse logistics, effective product recovery management, remanufacturing of waste product, carrying extra products to make up for any defective product upon delivery and improper disposal of recovered defective products promote, influence, enhances, boosts and promotes organisational performance and reputation. It can be seen that 15% of the respondents disagreed and strongly

disagreed to these stated questions while the remaining respondents were undecided in their opinions.

As shown in table 4.2 above, using a possible 5-point rating, inventory management appeared to be the most conspicuous sub-variable of logistics services in the Nigerian Block Industry (Mean = 3.93, SD = 1.0516). However, warehouse management, information flow management, material handling management, transport management and reverse logistics had a mean value above average of 3 of 5-point scale (Mean = 3.754, SD = 1.1106; Mean = 3.604, SD = 1.2046; Mean = 3.734, SD = 1.1344; Mean = 3.822, SD = 1.1804; and Mean = 3.798, SD = 1.1218 respectively). The overall mean for logistics services was 3.773666667 out of 5.00 (SD = 1.1339). This goes to show that logistics services are of great importance to many organisations.

4.3.2 Description of Organisational Performance

Table 4.3 showed the description of organisational performance in the Nigerian Block Industry.

Table 4.3 Description of Organisational Performance

Q/N	Item	% Response					Mean	SD
		1	2	3	4	5		
<i>Organisational Performance</i>								
5.	logistics services provide the organisation enabling environment to achieve a higher level of profitability	13	12	43	54	67	3.79	1.192
6.	Logistics services negatively affect organisation's competitiveness	12	12	45	57	63	3.78	1.164
7.	Logistics will lead to production of higher; quality products	6	11	37	50	85	4.04	1.081
8.	The ability of an organisation to engage in effective logistics services creates higher value for customers	4	14	37	52	82	4.03	1.059
9.	Logistics will lead to effective and efficient utilisation of company's resources	13	24	53	50	49	3.52	1.201

	Total	3.832	1.1394
--	--------------	--------------	---------------

Source: Field Survey, 2025.

N.B: 1, 2, 3, 4 and 5 denote strongly disagreed, disagreed, unsure, agreed, strongly agreed response rate respectively

Organisational Performance

From Table 4.3 above, majority of the respondents (over 65%) agreed and strongly agreed that logistics services provide organisations enabling environment to achieve a higher level of profitability, affects organisation’s competitiveness, lead to production of higher quality products, creates higher value for customers and leads to the effective and efficient utilisation of company’s resources. However, it can be seen that 20% of the respondents disagreed and strongly disagreed to these stated questions while the remaining respondents were undecided in their opinions.

4.4 The Relationship between Logistics Services and organisational performance in the Nigerian Block Industry

The regression analysis was performed to establish relationship between logistics services and organisational performance. Below are tables representing the output of the regression analysis.

Table 4.4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.826 ^a	0.682	.672	2.548427	2.419

a. Predictors: (Constant), Warehouse Management, Information Flow Management, Material Handling Management, Inventory Management, Transport Management, Reverse Logistics

b. Dependent Variable: Organisational Performance

Table 4.4 above reviewed a coefficient of determination (R^2) value of 0.682, which indicated that 68.2% of the variation in the dependent variables (organisational performance) is explained by the independent variable (logistics services: warehouse management, information flow management, material handling management, inventory management, transport management and reverse logistics sub-independent variables). This means that only 68.2% of the responses concerning organisational performance is influenced by logistics services. The figure further reduced to 67.2% when the R^2 was adjusted. This means that other factors apart from

logistics services dimensions are responsible for organisational performance. Also, the Durbin-Watson statistic of 2.419 (value above 2) indicated a negative correlation.

Table 4.5: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2539.204	6	423.201	65.161	.000 ^b
Residual	1182.034	182	6.495		
Total	3721.238	188			

a. Dependent Variable: Organisational Performance

b. Predictors: (Constant), Warehouse Management, Information Flow Management, Material Handling Management, Inventory Management, Transport Management, Reverse Logistics

From Table 4.5 above, the regression result yielded an F-statistic of 65.161 and P-value of 0.000 which indicated that there is a statistically significant relationship between the independent variable and the dependent variable.

The hypotheses were tested with p-value in regression result. Where the p-values are greater than or equal to 0.05, the null hypotheses (H_0) are not rejected. And where the p-values are less than 0.05, the null hypotheses (H_0) are rejected. The results of the hypotheses are presented below.

Table 4.6: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.762	1.139		2.425	0.016
Warehouse Management	0.607	0.072	0.588	8.424	0.000
Information Flow Management	-0.044	0.075	-0.044	-0.586	0.558
Material Handling Management	0.381	0.096	0.397	3.983	0.000
Inventory Management	-0.272	0.097	-0.253	-2.818	0.005
Transport Management	0.233	0.069	0.207	3.353	0.001
Reverse Logistics	-0.022	0.050	-0.021	-0.434	0.665

a. Dependent Variable: Organisational Performance

Test of Hypotheses

Hypothesis 1

***H₀*:** There is no significant relationship between warehouse management and organisational performance in the Nigerian Block Industry.

The regression coefficients, *t* and *P-value* corresponding to the effect of warehouse management on organisational performance are given in Table 4.6 above. The *P-value* in the regression result is 0.000 which is lesser than 0.05. Hence, the null hypothesis (*H₀*) that states that there is no significant relationship between warehouse management and organisational performance in the Nigerian Block Industry was rejected. This indicated that the study suggests that there is a positive relationship between warehouse management and organisational performance in the Nigerian Block Industry.

Hypothesis 2

***H₀*:** There is no significant relationship between information flow management and organisational performance in the Nigerian Block Industry.

The regression coefficients, *t* and *P-value* corresponding to the effect of information flow management on organisational performance are given in Table 4.6 above. The *P-value* corresponding to the coefficient associated with the effect of information flow management on organisational performance in the regression result is 0.558, which is greater than 0.05. Thus, the null hypothesis (*H₀*) that state that there is no significant relationship between information flow management and organisational performance in the Nigerian Block Industry was accepted. This is an indication that there is negative relationship between information flow management and organisational performance in the Nigerian Block Industry.

Hypothesis 3

***H₀*:** There is no significant relationship between material handling management and organisational performance in the Nigerian Block Industry.

The *P-value* corresponding to the effect of material handling management on organisational performance in the regression result is 0.000, which is less than 0.05 as shown in Table 4.6 above. Therefore, the null hypothesis (*H₀*) that state that there is no significant relationship between material handling management and organisational performance was

rejected. This implies that there is positive significant relationship between material handling management and organisational performance in the Nigerian Block Industry.

Hypothesis 4

H₀: There is no significant relationship between inventory management and organisational performance in the Nigerian Block Industry.

The P-value corresponding to the effect of inventory management on organisational performance in the regression result is 0.005, which is lesser than 0.05 as shown in Table 4.6 above. Therefore, the null hypothesis (*H₀*) that state that there is no significant relationship between inventory management and organisational performance was rejected. This implies that there is a positive relationship between inventory management and organisational performance in the Nigerian Block Industry.

Hypothesis 5

H₀: There is no significant relationship between transport management and organisational performance in the Nigerian Block Industry.

The P-value corresponding to the effect of transport management on organisational performance in the regression result is 0.001, which is less than 0.05 as shown in Table 4.6 above. Therefore, the null hypothesis (*H₀*) that state that there is no significant relationship between transport management and organisational performance was rejected. This implies that there is a positive relationship between transport management and organisational performance in the Nigerian Block Industry.

Hypothesis 6

H₀: There is no significant relationship between reverse logistics and organisational performance in the Nigerian Block Industry.

The P-value corresponding to the effect of reverse logistics on organisational performance in the regression result is 0.665, which is greater than 0.05 as shown in Table 4.6 above. Therefore, the null hypothesis (*H₀*) that state that there is no significant relationship between reverse logistics and organisational performance was accepted. This implies that there is

a negative relationship between reverse logistics and organisational performance in the Nigerian Block Industry.

4.5 Discussion of Findings

This study examined the effect of the logistics services and organisational performance in the Nigerian Block Industry. It explicitly examined the relationship between logistics services and organisational performance.

The study revealed a positive relationship between warehouse management and organisational performance in the Nigerian Block Industry. This is in agreement with the findings of Wambua, Okibo, Andrew and Sixtus (2015) and Mutai and Moronge (2017) who examined the association/influence between warehouse management and organisational performance in Kenya where it revealed a positive relationship between warehouse management and organisational performance.

It also showed a negative relationship between information flow management and organisational performance in the Nigerian Block Industry.

This study found a positive significant relationship between material handling management and organisational performance in the Nigerian Block Industry. This supported the findings of Asaolu, Agorzie and Unam (2012), Kathurima, Ombul and Iravo (2016), Geoffrey and Muturi (2018) and Kisioya and Moronge (2019) which revealed a positive relationship between material handling management and organisational performance.

This study found a positive significant relationship between inventory management and organisational performance in the Nigerian Block Industry. This supported the findings of Onikoyi, Babafemi and Aje (2017), Kakeeto, Michael, Pastor and Osunsan (2017), Inegbedion, Eze, Asaleye and Lawal (2019) and Kolawole, Akomoafe and Olusipe (2019) which revealed a positive relationship between inventory management and organisational performance.

This study found a positive significant relationship between transport management and organisational performance in the Nigerian Block Industry.

Lastly, this study found a negative relationship between reverse logistics and organisational performance in the Nigerian Block Industry. This is in disagreement with the findings of Somuyiwa and Adebayo (2014), Anne, Nicholas, Gicuru and Bula (2015), Zhang, Tianshan and Muhammad (2018) and Bor (2020) who carried out studies on the relationship between reverse logistics and organisational performance.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter focused on the summary of findings from the empirical analysis as well as the conclusion. The policy recommendations necessitated by these findings are subsequently presented.

5.2 Summary of Findings

Based on the hypotheses tested, the following findings were made:

1. there is a positive relationship between warehouse management and organisational performance in the Nigerian Block Industry;
2. the information flow management sub-variable also had a negative relationship with organisational performance in the Nigerian Block Industry;
3. there is a positive significant relationship between material handling management and organisational performance in the Nigerian Block Industry;
4. there is a positive significant relationship between inventory management and organisational performance in the Nigerian Block Industry;
5. there is also a positive relationship between transport management and organisational performance in the Nigerian Block Industry; and
6. lastly, the study revealed a negative relationship between reverse logistics and organisational performance in the Nigerian Block Industry.

5.3 Conclusion

This study examined logistics services and organisational performance in the Nigerian Block Industry. When organisations have a well-structured, effective and efficient logistics services in place, it enables them to perform better as management and proper storage of goods, inventory and materials via an efficient transport system coupled with reverse logistics in mind will ensure that the organisation's resources are put to the best use while also satisfying the

customers. Failure to adopt this management system will lead to wastage and customers' dissatisfaction.

Based on the results obtained, it was concluded that warehouse management, material handling management, inventory management, transport management sub-variables of logistics services have positive significant influence on organisational performance; while information flow management and reverse logistics have no significant influence on organisational performance.

5.4 Recommendations

Based on the findings of this study, the following recommendations were made:

1. The companies in the Nigerian Block Industry should ensure that they have adequate warehousing facilities and management systems for the convenience of both suppliers and customers alike. This will go a long way in ensuring that goods are readily available while easing the staff of undue pressure that arises from the non-availability of goods;
2. the management of companies in the Nigerian Block Industry should always ensure that they communicate and disseminate timely information to all stakeholders involved in the logistics flow system. This will aid in planning and also help in the tolerance of shortages, delays and other incapability that may be experienced by the stakeholders;
3. companies should establish proper materials handling procedures and processes to avoid the damage of goods before they get to the final point of usage as this will go a long way in minimizing losses experienced by the company and the final consumers of the products;
4. proper inventory management systems should be put in place so as to reduce conflicts and disputes amongst the various parties involved in the logistics flow process;
5. transport management could be improved upon by introducing effective and efficient loading and offloading arrangements while also introducing green vehicles that can deliver goods timely at a reduced cost and contribute more to the environmental friendliness of the locations;

6. finally, reverse logistics should be put in place to mop up and re-use the parts and components that were not used up in the construction sites. This will go a long way in ensuring that eco-friendliness is achieved by the companies while also reusing materials that will have otherwise been wasted or contribute to the pollution and depletion of the environment.

5.5 Contributions to Knowledge

This study has made the contributions to the body of knowledge:

1. inventory management as the most conspicuous sub-variable of logistics services dimension, which shows that it is the basis for improving and increasing effective approaches, systems and procedures that lead to a smooth inbound and outbound flow of logistics and boosts the workers, suppliers and customers' relationship respectively thus, improving organisational performance.
2. this study has also contributed to the operations and general management literature by considering the relationship between logistics services and organisational performance in the Nigerian Block Industry, though, many studies have been carried out within Nigeria on the impact of logistics services on organisational performance but, to the best of our knowledge, none has been undertaken in the Nigerian Block Industry in Delta State. This study therefore, serves as means of providing empirical evidence on logistics services and its effects on organisational performance which may be important to theory building in the Nigerian context.
3. Another contribution of this study is the revelation of significant dimensions of logistics services that influence organisational performance in the Nigerian Block Industry in Delta State.

REFERENCES

- Abdul, F. A., Oladipo, A. I. I., Taiwo, G. & Olota, O. O. (2019). Impact of logistics management on organisational performance (a case study of Dangote Flour Mills Plc, Nigeria). *Journal of Sustainable Development in Africa*, 21(1), 36 – 49.
- Abor, J. (2007). Debt policy and performance of SMEs: Evidence from Ghanaian and South African firms. *The Journal of Risk Finance*, 8(4), 364-379.
- Adebayo, S. I. & Onyeiwu, C. (2018). The determinants of profitability of manufacturing firms in Nigeria. *International Journal of Economics, Commerce and Management*, 6(4), 479 – 493.
- Adedeji, Y. M. D. (2005). Outdoor space planning and landscape qualities of religious centre in Akure, Nigeria. *Inter-World Journal of Science and Technology*, 2(1), 40 – 51.
- Ahukannah, L. L., Ndinaechi, G. I. & Arukwu, O. N. (2003). *Commerce for Senior Secondary Schools*. Onitsha: Africana-First Publishers Limited.
- Akinwumi, O. A., Tunde, S. M. & Adebuseyi, J. R. (2021). Influence of salary administration and conflicts management on organisational performance. *International Journal of Psychological and Brain Sciences*, 6(1), 1 – 6.
- Albernaz, H., Maruyama, U. G., Maciel, M. S., & Correa, F. R. (2014). Implementation of distribution centers as logistics competitive advantage: Study on oil company distributor in southeast Brazil. *Independent Journal of Management & Production*, 5(4), 1089 - 1106.
- Almatrooshi, B., Singh, S. K. & Farouk, S. (2016). Determinants of organisational performance: a proposed framework. *International Journal of Productivity and Performance Management*, 65(6), 844 – 859.
- Alnoor, A., Eneizan, B., Makhamreh, H. Z. & Rahoma, I. A. (2019). The effect of reverse logistics on sustainable manufacturing. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 9(1), 71 – 79.
- Anne, M., Nicholas, L., Gicuru, I. & Bula, O. (2015). Reverse logistics practices and their effect on competitiveness of food manufacturing firms in Kenya. *International Journal of Economics, Finance and Management Sciences*, 3(6): 678-684
- Anosike, M. N. & Oyebade, A. A. (2012). Sandcrete blocks and quality management in Nigeria building industry. *Journal of Engineering, Project, and Production Management*, 2(1), 37 – 46.
- Asaolu, T. O., Agorzie, C. J. & Unam, J. M. (2012). Materials management: an effective tool for optimizing profitability in the Nigerian food and beverage manufacturing industry. *Journal of Emerging Trends in Economics and Management Sciences*, 3 (1): 25 – 31
- Awino, Z. B. (2011). Strategic management: an empirical investigation of selected strategy variables on firms performance: a study of supply chain management in large private manufacturing firms in Kenya. *Business Administration and Management*, 1(1),0
- Bagshaw, K. B. (2019). Logistics management from firms' performance perspective. *European Journal of Logistics, Purchasing and Supply Chain Management*, 7(1), 12 – 28.

- Bahale, A. P. & Deshmukh, S. S. (2014). Improving material handling efficiency in a ginning machine manufacturing company. *International Journal of Innovative Research in Science, Engineering and Technology*, 3(3), 10180 – 10186.
- Banjoko, S. A. (2000). *Production and Operations Management*, Lagos: Saban Publishers.
- Barney, J. B. (1986). Strategic factor markets: Expectations, luck, and business strategy. *Management Science*, 32(10), 1231 – 1242.
- Bello, B. A., Rotimi, I. A. & Omoniyi, B. O. (2019). The logistics strategy and the growth of e-commerce in Nigeria. *The Pacific Journal of Science and Technology*, 20(1), 214 – 224.
- Bello, O. B., & Adeoye, A. O. (2018). Organisational learning, organisational innovation and organisational performance: Empirical evidence among selected manufacturing companies in Lagos, Nigeria. *Journal of Economics and Management*, 33(3), 25 – 38.
- Bor, J. (2020). Reverse logistics and performance of food industries in Kenya. *Journal of Logistics Management*, 9(2), 23 – 30.
- Bowersox, D. J., Closs, D. J., & Cooper, B. M. (2010). *Supply chain logistics management* (3rd ed.). Boston: McGraw-Hill/Irwin.
- Christopher, M. (2011). *Logistics & Supply Chain Management* (4th ed.). Dorset: Pearson Education Limited
- Coyle, J., Langley, C., Gibson, B., Novak, R. & Bardi, E. (2014). *Managing supply chain – a logistics approach*, 8th Edition. Mason, OH: South-Western
- Drury, C. (2004). *Management and Cost accounting*. London: Prentice Hall.
- Geoffrey, O. O. & Muturi, W. (2018). The effect of material handling systems on the performance of tea processing plants in Kisii County. *International Journal of Core Engineering & Management*, 5(7), 117 – 129.
- Ghosh A.K. & Kumar P. (2003). *Production management*. New Delhi: Anmol Publication Pvt. Ltd.
- Goldratt, E. M. 2004. Keynote: “What is different about TOC?” In: Video Conference Proceedings of 2nd Annual Worldwide Gathering of TOC Professionals. Miami, FL: TOCICO, October 23-26.
- Grant, R. (1996). Towards a knowledge-based view of the firm. *Strategic Management Journal*, 17, 109-122.
- Hanafy, H. A. & Hashem, A. E. (2017). Impact of information security initiatives on supply chain performance. *Global Journal of Management and Business Research: A Administration and Management*, 17(6), 40 – 54.
- Helfat, C., & Peteraf, M. (2003). The dynamic resource-based view: capability lifecycles, *Strategic Management Journal*, 24(10), 997-1011.

- Ibim, A. A. & Chijioke, A. K. (2018). Lean production of sandcrete blocks: Environmental implications of seasonal climatic sequence for waste generation. *The Environmental Studies: A Multidisciplinary Journal*, 1(1), 21 – 34.
- Inegbedion, H., Eze, S., Asaley, A. & Lawal, A. (2019). Inventory management and organisational efficiency. *The Journal of Social Sciences Research*, 5(3), 756 – 763.
- Makeeto, F., Michael, T., Pastor, K. & Osunsan, O. K. (2017). Inventory management and organisational profitability at Gumutindo Coffee Cooperative Enterprise Limited, Uganda. *International Journal of Business and Management Invention*, 6(11), 1 – 8.
- Karande, P. & Chakraborty, S. (2012). Material handling equipment selection using weighted utility additive theory. *Journal of Industrial Engineering*, 9(1), 1 – 10.
- Kathurima, R. I., Ombul, K. & Iravo, M. A. (2016). Effects of materials handling systems on performance of cement manufacturing firms in Machakos County. *International Academic Journal of Procurement and Supply Chain Management*, 2(1), 21 – 26.
- Kazim, S. (2008). Inventory inaccuracy and performance of collaborative supply chain practices. *Industrial Management and Data Systems*, 108, 495–509
- Kellermanns, F.W., Walter, J., Lechner, C., & Floyd, S.W. (2005). The lack of consensus about strategic consensus: advancing theory and research. *Journal of Management*, 31(5), 719–737.
- Khajeh, E. H. A. (2018). Impact of leadership styles on organisational performance. *Journal of Human Resources Management Research*, 1(1), 1 – 10.
- Kirui, M. T. & Nondi, R. (2017). Effects of logistics management on the organisational performance of shipping firms in Mombasa County. *The Strategic Journal of Business & Change Management*, 4(3) 821 – 839.
- Kisioya, D. K. & Moronge, M. (2019). Influence of material handling practices on performance of large scale manufacturing firms in Nairobi County, Kenya. *The Strategic Journal of Business & Change Management*, 6 (4), 745 – 760.
- Kolawole, A. D., Akomoafe, A. B. & Olusipe, B. J. (2019). Inventory management: an impetus for increased profitability in manufacturing firms. *International Journal of Accounting, Finance and Risk Management*, 4(4), 110 – 115.
- Lambert, D. & Cooper, M. C. (2000) Issues in Supply Chain Management, *Industrial Marketing Management* 29, 65–83
- Lancaster, S., Yen, D.C. & Ku, C. Y. (2006). E-supply chain management: an evaluation of current web initiatives, *Information Management & Computer Security*, 14(2), 167 – 184.
- Mahto, R. V. & Davis, P. S. (2012). Information flow and strategic consensus in organisations. *International Journal of Business and Management*, 7(17), 1 – 12.
- Markos, S. & Sridevi, M.S. (2010). Employee engagement: the key to improving performance. *International Journal of Business and Management*, 5(12), 89-96.
- Miles, R.E., Snow, C.C., 1986. Network organisations: new concepts for new forms. *California Management Review* 28 (3), 62–73.

- Miller, R. (2010). *Inventors control: theory and practice*. New Jersey: Prentice Hall.
- Musau, E. G., Namusonge, G., Makokha, E. N. & Ngeno, J. (2017). The effect of transport management on organisational performance among textile manufacturing firms in Kenya. *International Journal of Academic Research in Business and Social Sciences*, 7(11), 1015 – 1031.
- Mutai, C. & Moronge, M. (2017). Influence of warehouse management on organisational productivity in state corporations in Kenya: A case of Kenya Electricity Generating Company Limited. *The Strategic Journal of Business & Change Management*, 4(2), 588 – 605.
- Ndirangu Kung'u, J. (2016). Effects of inventory control on profitability of industrial and allied firms in Kenya. *IOSR Journal of Economics and Finance*, 7(6), 09 – 15.
- Ndung'u, A. K. & Moronge, M. (2017). Determinants of adoption of reverse logistics in manufacturing firms in Nairobi City County, Kenya
- Ndung'u, N. & Were, S. (2016). Factors affecting effective logistics management in the manufacturing industry in Kenya: A case of Sameer Africa Limited. *The Strategic Journal of Business & Change Management*. 3(4), 810 – 832.
- Nunnally, J. C. (1978). *Psychometric Theory*. McGraw-Hill Book Company, pp. 86-113, 190-255
- Nworgu, B. G. (1998). *Educational research: Basic issues and methodology*. University Press, pp. 62-94.
- Oba, A. A., Ayoola, Q. A., Ademola, A. & Obadeji, J. (2017). The effectiveness procurement on material management in manufacturing industries. *International Journal of Advanced Scientific Research*, 2(2), 1 – 12.
- Obasan, K. A., Ogunkoya, O. A. & Hassan, B. A. (2016). The effect of transportation in logistics operation on an entrepreneurial performance. *Ethiopian Journal of Environmental Studies & Management* 9(2), 228 – 234.
- Odhiambo, H., Onyango, R., Kibet, Y. & Kimutahi, G. (2017). Effect of logistics activities on performance of agro processing firms in Uasin Gishu County, Kenya. *IOSR Journal of Business and Management*, 19(12), 21 – 28.
- Ogbo, A. I., Onekanma, I. V. & Ukpere, W. I. (2014). The impact of effective inventory control management on organisational performance: A study of 7up Bottling Company Nile Mile Enugu, Nigeria. *Mediterranean Journal of Social Sciences*, 5(10), 109 – 118.
- Ogundare J. A. T. & Alalade O. O. (2018) Effect of Logistics, Supply Input, Production and Finance on small and medium Enterprises (SMEs) Performance in Kaduna State. *Conveant Journal of Entrepreneurship (CJoE)* 1(2), 72 - 84
- Onikoyi, I. A., Babafemi, E. A. & Aje, C. O. (2017). Effect of inventory management practices on financial performance of Larfage Wapco Plc. Nigeria. *European Journal of Business and Management*, 9(8), 113 – 122.

- Penrose, E. (1959). *The Theory of the Growth of the Firm*, Oxford University Press, New York, NY.
- Prahalad, C. & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 79 – 91.
- Prempeh, K. B. (2015). The impact of efficient inventory management on profitability: evidence from selected manufacturing firms in Ghana. *International Journal of Finance and Accounting*, 5 (1), 22-26.
- Ramírez, A. M. & Morales, V. (2014). Improving organisational performance through reverse logistics. *Journal of the Operational Research Society*, 65(6), 954 – 962.
- Rasheed, A. & Akinleye, T. M. (2016). The effects of production methods on the compressive strength of hollow sandcrete blocks. *Journal of Materials and Engineering Structures*, 3(1), 197 – 204.
- Raziki, M., Radi, B. & Okar, C. (2016). An empirical investigation of the factors affecting warehousing performance improvement in a supply chain. *2nd International Conference of Project and Logistic*, 1 – 17.
- Rehman, S., Mohamed, R. & Ayoup, H. (2019). The mediating role of organisational capabilities between organisational performance and its determinants. *Journal of Global Entrepreneurship Research*, 9(30), 1 – 23.
- Ristovska, N., Kozuharov, S., & Petkovski, V. (2017). The impact of logistics management practices on company's performance. *International Journal of Academic Research in Accounting, Finance and Management Sciences, Human Resource Management Academic Research Society, International Journal of Academic Research in Accounting, Finance and Management Sciences*, 7(1), 245-252.
- Saiyawut, S. (2018). Factors influencing company's logistics performance in industrial areas, Phra Nakhon Si Ayutthaya Province, Thailand. *Proceedings of the International Conference for Multiple Academic Disciplines*, 1 – 12.
- Sholanke, A. B., Fagbenle, O. I., Aderonmu, A. P. & Ajagbe, M. A. (2015). Sandcrete block and brick production in Nigeria: Prospects and challenges. *IIARD International Journal of Environmental Research*, 1(4), 1 – 17.
- Sindhuja P.N, (2014). Impact of information security initiatives on supply chain performance. *Information Management & Computer Security*, 22(5), 450 – 473.
- Sohail, N. (2018). A study of inventory management system case study. *Journal of Advance Research in Dynamical & Control Systems*, 10(10), 1176 – 1190.
- Somuyiwa, A. O. & Adebayo, I. T. (2014). Empirical study of the effect of reverse logistics objectives on economic performance of food and beverages companies in Nigeria. *International Review of Management and Business Research*, 3(3), 1484 – 1493.
- Stock, J, R., Lambert, D.M. 2001. *Strategic logistics management*. 4th edn , Boston, Irwin/McGraw-Hill.
- Taiwo, O. J. A. & Olufunke, A. O. (2018). Effect of logistics, supply input, production and finance on Small and Medium Enterprises (SMEs) performance in Kaduna State. *Covenant Journal of Entrepreneurship*, 1(2), 72 – 84.

- Teece, J. D., Pisano, G., & Sheun, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509-533.
- Umar, A. M. (2019). Logistics management and the performance of manufacturing firms in selected states of northern Nigeria. *International Journal of Engineering and Management Research*, 9(1), 49 – 57.
- Uzuagulu AE (2011). Practical guide to writing research project report in tertiary institutions. Enugu: John Jacob classic publishers Ltd.,1-8.
- Vatumalae, V., Rajagopal, P. & Sundram, V. P. K. (2020). Warehouse management system of a third party logistics provider in warehouse management system of a third party logistics provider in Malaysia. *International Journal of Economics and Finance*, 12(9), 73 – 82.
- Vocabulary Dictionary. (2021). *About Modeling*. Retrieved from <https://www.vocabulary.com/dictionary/modeling>
- Wambua, B. J., Okibo, W. B., Andrew, N. A. & Sixtus, M. O. (2015). effects of inventory warehousing systems on the financial performance of seventh day adventist institutions: a case of Adventist Book Centers (ABC), Kenya. *International Journal of Business and Management*, 10(4), 259 – 264.
- Yap, L. L. & Tan, L. T. (2012). The effect of service supply chain management practices on the public healthcare organisational performance. *International Journal of Business and Social Science*, 3(16), 216 – 224.
- Yvonne, C. & Ngugi, P. K. (2019). Influence of inventory management practices on performance of fast-moving consumer goods manufacturers in Nairobi County, Kenya. *International Journal of Social Sciences Management and Entrepreneurship*, 3(2), 17 – 35.
- Zhang, Y., Tianshan, M. & Muhammad, F. U. D. (2018). The impact of reverse logistics on operational performance. *American Journal of Mechanical and Industrial Engineering*, 3(5), 99 – 104.

**APPENDIX:
QUESTIONNAIRE**

Department of Business Administration,
Faculty of Management Sciences,
University of Benin,
Edo State.

25th August, 2025.

Dear Sir/Madam,

**REQUEST FOR YOUR COOPERATION IN COMPLETING
THIS QUESTIONNAIRE**

I am an undergraduate student of the above-mentioned Institution and as part of the requirement for the award of Bachelor of Science (BSc.) degree in Business Administration, I am conducting a research titled “**Logistics Services and Organisational Performance of the Nigerian Block Industry, Delta State, Nigeria**” and your personality/corporation has been selected as the samples to use in this study.

I humbly request that you assist me (the researcher) by kindly sparing a few minutes to complete this questionnaire to the best of your knowledge. You are not required to disclose your identity. I also wish to assure you that your answers will be treated in strict confidence and only for academic purpose.

Thanks for your anticipated co-operation.

Yours faithfully,

Sonia Oghosa EDEGBE
Researcher

SECTION A

INSTRUCTION: Please tick appropriately in the box/column as []

SECTION A: Personal Data

1. Sex: Male [] Female []
2. Educational Qualification: SSCE/WASC [], OND/Diploma [], HND/first Degree [],
Master's Degree [], Ph.D. []
3. Work Experience: 0-5yrs [], 6-10yrs [], 11-15yrs [], 16-20yrs [], 21yrs and
above []
4. Age: 18 – 25 [], 26 – 35 [], 36 – 50 [], 50 and above []

SECTION B

Key:

SA = Strongly Agree; A = Agree; U = Undecided;

D = Disagree; SD = Strongly Disagree

S/N	STATEMENTS	SD	D	U	A	SA
	ORGANISATIONAL PERFORMANCE					
5.	The overall performance of our organization meets or exceeds industry standards.					
6.	Our organization consistently achieves its financial goals.					
7.	Employees in our organization are satisfied with their work environment and job roles.					
8.	Customer satisfaction is a priority for our organization, and we actively measure and improve it.					
9.	Our organization effectively adapts to changes in the business environment.					
	WAREHOUSING MANAGEMENT	SD	D	U	A	SA
10.	The layout and design of our warehouses optimize space and efficiency.					
11.	Our warehousing processes are well-organised, reducing errors and delays.					
12.	We regularly assess and update our warehousing technology to enhance management.					
13.	Employees receive adequate training to handle warehousing tasks efficiently.					
14.	Our warehousing practices prioritize safety and compliance with industry standards.					
	INFORMATION FLOW MANAGEMENT	SD	D	U	A	SA
15.	Information is easily accessible to relevant stakeholders within the organization.					
16.	Our information systems effectively support decision-					

	making processes.					
17.	We have established protocols for timely and accurate information dissemination.					
18.	Information flow is well-coordinated between different departments.					
19.	The organization utilizes advanced technologies to enhance information flow.					
	MATERIAL HANDLING MANAGEMENT	SD	D	U	A	SA
20.	Material handling processes in our organization are streamlined and efficient.					
21.	Employees are adequately trained in proper material handling techniques.					
22.	Our organization regularly evaluates and updates material handling equipment.					
23.	Safety measures are strictly followed in material handling activities.					
24.	Material handling costs are optimized without compromising quality.					
	INVENTORY MANAGEMENT	SD	D	U	A	SA
25.	Our organization maintains accurate and up-to-date inventory records.					
26.	Inventory turnover rates align with industry benchmarks.					
27.	We employ effective forecasting methods to optimize inventory levels.					
28.	The organization minimizes excess or obsolete inventory through efficient management.					
29.	Inventory-related data is used to make informed decisions about procurement and storage.					
	TRANSPORT MANAGEMENT	SD	D	U	A	SA
30.	Our transportation network is well-organised and reliable.					
31.	The organization regularly evaluates and optimizes transportation routes.					
32.	We have effective communication systems to track and manage transportation activities.					
33.	Transportation costs are effectively controlled without compromising service quality.					
34.	Our organization invests in sustainable and environmentally friendly transportation practices.					
	REVERSE LOGISTICS MANAGEMENT	SD	D	U	A	SA
35.	Reverse logistics processes are well-defined and documented in our organization.					
36.	Customer returns are efficiently managed and processed.					
37.	We actively seek opportunities to recover value from returned products.					
38.	Our organization assesses the environmental impact of reverse logistics activities.					
39.	Employees are trained to handle reverse logistics challenges effectively.					