

**LOGISTICS MANAGEMENT AND OPERATIONAL
PERFORMANCE OF NAIROBI BOTTLERS LIMITED IN
NAIROBI COUNTY, KENYA**

**BY
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D61/27611/2019**

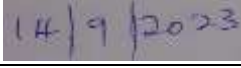
**A RESEARCH PROJECT PRESENTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE AWARDS OF DEGREE OF MASTER OF
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2023

DECLARATION

I declare that this is my original work, and it has not been submitted for an award in any other university.

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ABBREVIATIONS AND ACRONYMS

3PL	Third-Party Logistics
4PL	Forth-Party Logistics
DRP	Distribution Resource Planning
EOQ	Economic Order Quantity
ERP	Enterprise Resource Planning
JIT	Just in Time
LMP	Logistics Management Practices
MRP	Material Resource Planning
NCPD	National Council of Physical Distribution Management
SCM	Supply Chain Management
TLI	Transport Level Interface
TQM	Total Quality Management

ABSTRACT

The study objective was to establish logistics Management Practices (LMP) and their impact on operational performance of Nairobi Bottlers Limited (NBL) in Nairobi County. The specific objectives were to establish LMP in NBL, Kenya, determine logistical practices adopted in NBL, Kenya and establish the relationship between logistical management practices and operational performance in NBL, Kenya. This study adopted the descriptive research design. The study targeted management employee's in purchasing and supplies department, transport department and stores department and the senior manager in NBL. The study sample was 71 respondents. The study used a questionnaire to gather primary data, and both closed-ended and open-ended questions were used to obtain the data. Descriptive statistics like mean, and standard deviation was utilized in sorting, tabulating, and summarizing the data. The findings were presented using tables and graphs. Inferential statistics will be the regression analysis. To ascertain the link between the independent and dependent variables, regression analysis was utilized. It was noted that order processing has a significant impact on operational performance of NBL. The study revealed that transport management has a significant impact on operational performance of NBL. It was revealed inventory management has a significant impact on operational performance of NBL. Information systems had a significant impact on operational performance of NBL. The study recommends that the company should automate its order processing activities. The study recommends that NBL should monitor the transport throughout the supply chain. The organization should be able to track all transport activities. This allows the company to easily track shipments and analyze business success. The study recommends that the company should outsource inventory management activities. This would ensure that efficiency in inventory management. Information systems had a significant impact on operational performance of NBL. The study recommends that NBL should invest in information systems. The organization can also outsource for information. This would enhance the flow of information throughout the supply chain.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Organizations realize the need of proactively reviewing their business operations in context of current changing business conditions. According to Nyaberi and Mwangangi (2014), logistics originated from military's requirement to supply itself when they shifted from their base to a forward location. The integration of operations in a business aimed at ensuring smooth functioning from beginning of manufacturing to final the distribution is known as as logistics and transportation management (Luu, 2019). This is owing to the rising complexity of delivering resources to a firm and transporting goods out through an increasingly globalized supply chain, necessitating the involvement of specialists in the sector (Zakaria, Nawawi & Salin, 2016).

Transport improves supply chain operations like customer services, procuring, and management of inventory, whereas logistics management helps in information and products flow (Azeem, 2018). Logistics makes sure that products get efficiently to the end customer and that the final consumer demands are accomplished, so that the organization get maximum profits (Lysons & Farrington, 2012). Management techniques are an integrated concept for managing a channel's complete flow, from early raw material supplier through the end client and even beyond, such as the removal of waste (Mellat-Parast & Spillan, 2014).

The existing theories, like theory of the firm, which says that organizations exist to earn profits, support the beneficial influence that logistics has on companies. Whereas the

transactions theory posits that logistics and transportation would boost manufacturing industry performance by ensuring effectiveness and also minimizing the operational costs (Nuahn 2017). The logistical tasks include but are not restricted to coordinating of client orders, the development of a warehousing network, choosing of couriers to deliver products to clients, and having an accounting system to use for payments (Nyaberi & Mwangangi, 2014).

1.1.1 Logistics Management Practices

Logistics, according to Kiraga (2014), is the development, execution, and supervision of operations for successful management of supply chain. Logistics management allows for supply chain operations integration through better connections, resulting in a long-term competitive edge (Mamad & Chahdi, 2013). Logistics improves performance operations by lowering costs, lowering capital, and improving service delivery (Mutangili, 2019). Data as well as information move up and down the supply chain with the help of transport management. A strong and effective logistics system allows a company to acquire a competitive edge by providing excellent services to its customers (Bawa, Asamoah & Kissi, 2013).

Management of transports, information systems for logistics, stock management and the management of distribution are some of the logistics methods adopted in companies. While developing ways that monitor supply chain and ensure that its inexpensive, efficient and offers consumer value, integrated logistics techniques are required (Nyaberi & Mwangangi, 2014). This includes inbound and outbound system for transportation,

management of fleet, storage, warehouse management, order processing, logistical network planning, control of inventory, forecasting of supply and demand, and control of third-party logistics providers (Springinkle & Wallenburg, 2012).

Transportation management is the administration, control, and optimization of all transportation processes along the supply chain. Transport management has gained in importance in recent years as supply chains have become more complicated and new transportation challenges have come about (Zhang & Okoroafo, 2015). The advantage of efficient transportation management is that it allows a company to easily track shipments and analyze business success. Furthermore, proper transportation management guarantees that the logistics of the organization work smoothly and effectively. Furthermore, transportation management adds value by guaranteeing that a product is available when and where the consumer requests it (Omoush, 2022).

Information system management entails gathering, processing, and distributing information at the correct time and location to allow information sharing within supply chains (Kiragi, 2014). Information system management is critical in optimizing supply chain management in order to maintain good coordination and optimize the supply chain (production, storage, and transport) (Omoush, 2022). By delivering real-time information on open orders, production, and activities, information technologies help monitor inventory levels in the supply chain. It can inform supply chain planners by making an early choice and reporting extraordinary and changing events in real time (Sirina & Zubkov, 2021).

Inventory management is a way of managing and directing the movement of supplies and products within a business. When done correctly, the procedure efficiently and economically ensures that necessary resources and goods are constantly available. Effective inventory management is the foundation of good SCM, which considers the sources of materials and goods, as well as the transportation required to transfer them to the desired location (Wellenbrock, 2013). Inventory management has two components: management of the materials or elements required to manufacture finished items and control and storing of finished products ready for sale to customers. Poor inventory management can disrupt cash flow, result in unsatisfied consumers, and obscure difficulties in business operations, all of which can be harmful for an organization (Rushton, Croucher, & Baker, 2014).

Order processing is the workflow that occurs the period of time between when a consumer puts an order and when it is delivered. Product and batch choosing, sorting, packing, tracking, and shipping and handling are all included. Order management is the process of accepting, overseeing, and completing customer orders. When a customer puts an order, the process begins and does not finish until the order is delivered. Almost every system and process in supply chain management is influenced by order management (Bagshaw, 2017). By automating manual procedures and decreasing errors, order processing management can assist businesses reduce expenses and produce income. Order management has a direct impact on how a consumer recognizes a company or brand (Wellenbrock, 2013).

Inventory control involves having track of the available assets so that to determine if they are enough for the needed operations. Whereas, distribution management ensures that specified commodities arrive on time (Nuahn, 2017). The supplier collaboration effect on firms, success features in strategic supplier collaborations, orientation of supplier management, performance of suppliers, the importance of supplier relationships in enhancing supply and the precedence and outcomes of the relationships are all discussed (Bagshaw, 2017). Nonetheless, transportation is a relatively new concept in Kenya, particularly among industrial firms. Hence, organizations have a challenge of adopting it. Backward and forward links are more important than ever before, and logistics management techniques in industrial institutions are at the heart of it (Mamad & Chahdi, 2013).

1.1.2 Operational Performance

This is referred as the aspects that can be measured in an organization's procedures, like manufacturing, dependability, inventory turns and cycle time. Operational performance impact on the measures of firm performance like customer satisfaction and market share (Treadwell, 2015). Performance in the organization is not only measured by its success in terms of sales turnover and profits, but also through efficiency when carrying out its operations. It involves utilizing its resources maximally while ensuring efficiency, which involves all the measures carried out to ensure the operational cost is minimized while attaining the organization objectives. Organizations measure performance based on the level to which a firm meet its objectives. Many organizations evaluate their performance using measures like efficiency and cost (Nuahn, 2017). This includes undertaking all the

best practices at minimal cost. There are also non-financial metrics used to determine the effectiveness of firms (Onyango, 2011).

The non-financial metrics of performance comprise effectiveness, quality, reliability and flexibility. These ones can be utilized to gauge how efficient and affective a firm is in doing its business. Financial metrics include profitability, return on assets (ROA), return on equity (ROE) and return on investments. It is imperative to note that both financial and non-financial measures enable the management to establish how the firm is doing in terms of its success and whether it will benefit from the going concern principle. Through, this the firm can easily attain competitiveness over the others in the sector (Nuahn, 2017). The emphasis on operational performance metrics like operating cycle, fixed asset turnover, ROA, and ROE. The ratios assess how well certain areas of a company's finances are performing. The ratios provide a distinct perspective on how a firm generates revenue, whether it spends its funds wisely, and how efficiently it uses its resources and assets.

1.1.3 Nairobi Bottlers Limited

Nairobi Bottlers Limited (NBL) is situated at Nairobi County, Industrial Area. It is the sole supplier of soft drinks in the region under coca cola as brand name. It produces soft drinks and consumes high volume of input both from within and outside the country. It also supplies final products to customers found in different regions of Kenya and east Africa. As a consequence, it is doing well in the market. Indeed, the industry's success has enticed entrepreneurs to enter it. Marketing the firm's products, for example, and selling raw resources to the business are two examples.

The company has vast development which has resulted to high working capital, posing a challenge on the management of its assets. Further, entry of other companies into the industry possesses competitive challenge making it to have a major problem if proper measures are not adopted. Introduction of close substitutes by other companies venturing into the industry also remains a challenge to the giant producer of soft drinks in Kenya. For example, Pepsi Company has substituted the coca cola products. Also, the juice manufacturers producing an assortment of fruit flavors have substituted products of Coca-Cola.

1.2 Problem Statement

Logistics management is essential for NBL since it helps in the management of shipping operations and the delivery of products. Most of the world's most attractive enterprises have well-established logistical operations. Failure to regulate and manage the movement of items along the supply chain is harmful to a firm success. Hence, the role of logistics in assisting companies in their quest for more effective management systems is very important (Cozzolino, 2012).

There are costs in logistics management. According to Armstrong (2012), worldwide logistics management techniques generate a net income of \$133.8 billion, with annual increase for the Third-Party Logistics (3PL) industry anticipated to exceed 6 percent in 2013. The overall cost of logistics for NBL is projected to be 7 percent to 12 percent of sales, and it is increasing as the supply chain becomes more complicated (Coca-Cola,

2012). As a result, company management is placing a greater emphasis on cost coordination and monitoring. The NBL appears to be paying a significant price for maintaining the balance of rising materials and transport costs versus consumer expectations of better service standards.

Omoush (2022) investigated logistic management strategies impact on operational performance in the Jordanian road transport sector. Abdul and Iortimbir (2019) evaluated the impact of logistics management on firm performance at Nigeria's Dangote Flour Mills, and discovered that transportation management has an impact on organizational effectiveness. Chala (2021) investigated the effect of logistic management on firm performance at the Wonji/Shoa Sugar Factory and discovered that inventory, transportation and management of warehouse all had a positive impact on performance. Muema (2020) evaluated the influence of logistic management strategies on Kenyan enterprises' supply chain performance and discovered that warehousing management has a substantial effect on supply chain performance. Kiraga (2014) researched on logistics management approaches in Kenyan humanitarian firms and noted enhanced logistics chain results to improved business performance.

The studies show that, there is a gap in terms of analyzing the influence of logistics on operational performance. Numerous studies have been done in the same fields of logistics management but not much has been done in the continent and more especially little research done in Kenya. This study, therefore, sought to fill this gap by answering the

question, what is the impact of Logistics Management Practices (LMP) on operational performance of NBL.

1.3 Objectives

General objective was to establish LMP and their impact on operational performance of NBL in Nairobi County, whereas the specific objectives were to:

- (i) Establish LMP in NBL, Kenya
- (ii) Determine logistical practices adopted in NBL, Kenya
- (iii) Establish the relationship between logistical management practices and operational performance in NBL, Kenya

1.4 Value of the Study

The study sought to provide suggestions to the business-related issues affecting many manufacturing firms in Kenya, and more specifically to NBL. It provided information on the use of logistical management to enhance operational performance. The information was useful to both small and large manufacturing firms in Kenya and across the globe. They would understand how they can properly employ the logistical practices to enhance performance, while ensuring quality, through effective use of available resources. They would also get information on the best practices to ensure the drinks they produce attracts the largest market share and are not harmful to human consumption.

Top level management would need to have full information on the best logistics practices as they come up with the policy manual in the firm to ensure good operational performance.

Through this, organizations would come up with strategies to enhance performance in the sector. This would lead increased sales, large market share and hence growth of the industry. Other upcoming researchers intending to research in the same field will have some essential information regarding the same. It can also be used as a stepping stone for further research on logistical practices and operational performance.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The chapter provides an outline of the existing literature on logistics and its impact on the operational performance. It includes the theoretical framework, the conceptual framework, and their impact on operational performance. It also looks into empirical literature review.

2.2 Theoretical Review

Theories help in explaining the existing research problem by introducing theories that explains and describes the problem. The theoretical foundation for this study includes the resource-based view, theory of constraints and institutional theory.

2.2.1 Resource Based View Theory

This theory was advanced by Barney (1991) and Wernerfelt (1984) suggest that instead of relying on competitive business environment, firms should focus on their internal sources that can help them to gain competitiveness. The RBV shows that possession of strategic resources gives organizations good abilities to perform better than fellow competitors.

As per the resource-based perspective, resources that are of value, rare, a challenge to copy, and unique give a corporation a good position for long-term achievement. The strategic assets can serve as the cornerstone for the growth of business abilities that, after some time, can lead to improved performance. The RBV strategy also places a strong emphasis on the generation of economic rent through unique skills. Economic value added, also known as economic rent, is what businesses make after deducting the cost of the capital used in their

operations. The only way for businesses operating in competitive markets to generate economic rent is by measuring their competitive edge (Barney (1991). To ensure successful logistic management, organization need to adopt strategies that are valuable and rare to achieve superior performance. Hence, the theory supports effect of LMP.

2.2.2 Theory of Constraints

Goldratt (1984) came up with theory of constraints, which has been used by organizations for effective management. It proposes that there must be a hindrance in any organization that bars it from achieving its goals. According to Goldratt (1984), organizations can succeed by recognizing and utilizing a system's constraints. According to this theory, there is always at least one restriction, which is anything that limits performance. An organization can identify the most significant restriction (or limiting factor) that prevents it from accomplishing a goal, and then work to remove that limitation one step at a time.

It is assumed that the use of the limitation is more viable than utilizing individual components and processes. By focusing on the exact issue that is hindering the company and addressing it, one may increase profitability and ultimately help an organization achieve its objectives. Because an organization is a system, the theory of constraints dictates that it to find a single leverage point and correct it in order to enhance the system as a whole rather than dealing with occasional or short-term disagreements between different teams. Therefore, in logistic management practices, the organization can identify any constraints limiting factor in logistic management and improve on it to ensure efficiency in logistic management this will also enhance operational performance.

2.2.3 Institutional Theory

The foundations of organizational institutionalism were laid by Oliver (1990). The theory states that institutional settings give firms pressure to be legitimate and observe set society regulations. Using institutional theory, businesses response to pressures helps them to focus on objectives that will enhance legitimacy and ensure they are viewed to observe regulations, norms and standards of sector they operate (Oliver, 1990; Touboulic & Walker, 2015).

The institutional idea contributes to the explanation of why businesses act in particular ways in the situation of the development of supply chain relationships. Firms are also motivated to conform as a method of appeal and survival, and also seeking legitimacy as a way of enhancing a company recognition or establishing social worth (Oliver, 1991). One approach for appealing to and surviving in the business world is to essentially blend in. Mimicking or imitating norms is one of the strategies. Companies institutionalize logistical methods since they are concerned about losing market share to rivals and understand the consequences of not complying with environmental requirements.

2.3 Empirical Literature Review

Several studies have supported that logistics has impact on organizations. The studies have brought out mixed reactions on how logistical practices impact on operational performance. Logistics management coordinates the effective, efficient, forward and reverse movement and goods storage, and associated data from the area of origin and the

final consumption so that to achieve consumer expectations (Ketchen Jr. &Hult, 2006).

2.3.1 Logistics Management Practices

Omoush (2022) conducted a field research of road transportation businesses to evaluate the effects of logistics management strategies on operational performance. The study examined the sector of road transport businesses in Jordan and determined logistic management methods impact on the effectiveness of their operations. The correlation, descriptive and regressions statistics were all determined by various statistical methods. The main data-collection technique was a questionnaire with thirty items. The research's conclusions indicate that logistic management approaches significantly enhance the operational effectiveness of Jordanian transport firms in all of its dimensions, including inventory control, order process management, warehousing, packaging and transportation.

At Dangote Flour Mills Plc in Nigeria, Abduland (2019) studied logistic management effects on performance. The study set out to address the following goals: to examine information flow impact on staff productivity; management of inventory on firm productivity; and to assess the influence of transportation management on firm effectiveness. One hundred and fifteen employees were selected and descriptive survey research approach was employed. The study's conclusions indicate that inventory management and organizational productivity are strongly correlated with each other, information flow management and staff productivity are strongly correlated with each other, and transportation management has an impact on organizational effectiveness.

At Wonji/Shoa Sugar Factory, Chala (2021) conducted study on the logistic management impact on firm performance. Analyzing logistics activities impact on firm performance was the goal. In addition to using a quantitative research approach, a descriptive and explanatory design was employed. Employees of the Sugar Factory who were involved in inventory management, material planning, and facility management made up the population under study. A combination of primary and secondary sources was employed to get data. The results demonstrated that management of the transportation network, inventories, and warehouses had a favorable and statistically significant impact on performance.

An investigation on the logistics management impact on company performance was conducted by Adelwini, Toku, and Adu in 2023. This study's objective is to ascertain how logistic management impacts the operational efficiency of roofing processing firms in Ghana. The researchers used multiple linear regression to show the impact of logistic management on performance. The outcomes demonstrated that management of inventory, physical dispersion, and management of warehouse LMP that positively affect company performance. In order to support organizations as they work to implement more effective management systems, logistics is crucial.

Muema (2020) conducted a study on performance of supply chain for industrial firms in Kenya. This study's objective was to evaluate how successfully managed supply chains affect Kenyan manufacturing enterprises. The chosen research design was descriptive. The 708 industrial firms in Kenya were the study's target population. To find out the association

between objectives, a relapse model was used. The study discovered that the performance of manufacturing enterprises in Kenya's supply chains is favorably and significantly impacted by storage management. The outcomes also demonstrated that inventory management techniques have a positive effect on processing companies' supply chain. It was also discovered that order processing management had a favorable impact on the performance of supply chain. The study's conclusion was that the performance of industrial enterprises in Kenya's supply chains is positively impacted by transportation management.

In Nairobi, Kenya, Ouma (2021) conducted study on the operational effectiveness and logistical management techniques of online retail companies. The aim was to ascertain how LM logistics management strategies affecting the operational effectiveness of Nairobi-based online retailers. This study used a descriptive methodology and targeted 30 internet retail businesses in Nairobi, Kenya. On each of the 30 online retail businesses, a census was used. Questionnaires were employes to obtain primary data, and regression analysis, was employed. The results showed that the key LMP adopted by online retail firms include order processing, transportation management, warehousing, and packaging. These procedures have a strong positive correlation with operational performance. Numerous issues, such as operational instability within the company and a lack of adequate training, have hampered the implementation of logistics management methods.

2.3.2 Operational Performance

Soewarno (2017) conducted research on operational performance role in mediating the link between entrepreneurship and financial performance. An example of the Hand Drawn

Batik Industry in Indonesia's East Java. This study concentrated on the purpose of operational performance in mediating the association of entrepreneurship and financial performance in East Java Province. This study adopted a quantitative methodology and 111 small batik businesses made up study's sample. The results indicated that the link of entrepreneurship and financial results was mediated by operational performance. The results provided guidance to East Java Province policymakers about creating a profitable and sustainable batik business to increase the province's creative economic activity.

Rompho (2018) conducted study on the metrics for operational performance for startups. The goal was to look into the performance measurements used in startup businesses, as well as their perceived value and effectiveness. In this study, the survey method was employed. Information was gathered from the founders, CEOs, and managers of 110 businesses in Thailand. This study's analysis tool included the correlation analysis. The outcomes demonstrated a strong correlation between each metric's performance and perceived relevance. However, there were no discernible differences in each metric's performance or importance across different startup stages.

Chesaro (2016) conducted study on the operational effectiveness of multinational manufacturing enterprises in Kenya and their SCM techniques. The census survey was utilized as the research design. 45 multinational manufacturing enterprises in Nairobi was the sample. A questionnaire was used to collect data. According to the report, the majority of multinational manufacturing firms have greatly embraced supply chain management

strategies, which have improved service delivery, making of decisions, increased total cost reduction, and real-time goods and services delivery.

Kamau (2016) conducted study on operational effectiveness and performance assessment strategies of Kenyan manufacturing enterprises. The study evaluated the connection amid performance measuring procedures and operational performance measures. It also sought to evaluate the manufacturing companies in Kenya's operational performance index and level. The sample was employees from the firms. A systematic questionnaire was utilized in obtaining data. It was discovered that the Kenyan manufacturing companies show operational performance measures and performance have a moderate association.

2.4 Summary of Empirical Literature Review

This section covers a summary of the reviewed literature on logistics management and operational performance. There are numerous studies done on logistic management and operational performance. However, the studies were done in different contexts and covered different concepts - this is as demonstrated in Table 1 below.

Table 1 Summary of Empirical Literature Review

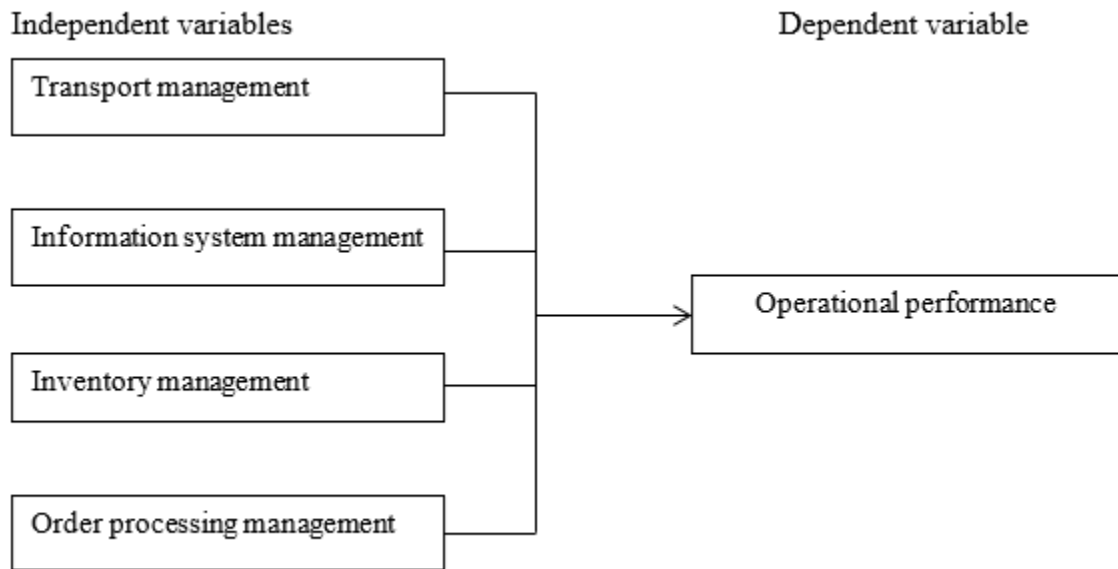
Author(s)	Study	Objectives	Findings	Focus of Current Study
Omoush (2022)	Effects of logistic management procedures on operational efficiency	Utilizing sector of Jordanian road transport businesses, to determine the effect of logistic management strategies on effectiveness of their operations	Operational performance of Jordanian road transport companies is significantly improved by logistic management principles.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Abdul and Iortimbir (2019)	Logistics management's impact on organizational performance at Dangote Flour Mills Plc in Nigeria	Examine how transport management affects an organization's effectiveness. Analyze the effect of inventory management on business productivity. Analyze the impact of DATA flow on employees' productivity	Efficiency of personnel is strongly correlated with information flow management, which in turn influences organizational effectiveness.	Establish transport impact on operational performance of NBL in Nairobi County
Chala (2021)	Effect of logistics management on organizational performance at Wonji/Shoa Sugar factory	Analyze the effect of logistics activities on organizational performance	Management of transportation, inventories, and warehouses has a favorable impact on FIRM performance.	Establish transport impact on operational performance of NBL in Nairobi County
Adelwini, Toku and Adu, (2023)	Logistics management's effects on a company's performance	Analyze how Ghanaian roofing sheet manufacturing companies' organizational performance is impacted by logistics management.	Logistics management positively affect firm performance.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Muema (2020)	Effect of logistics management techniques on Kenyan industrial companies' supply chains	Examine how logistics management affects supply chain success for Kenyan manufacturing enterprises.	The performance of Kenyan industrial companies' supply chains is favorably and considerably impacted by warehousing management.	Establish LMP and their impact on operational performance of NBL in Nairobi County

Ouma (2021)	Practices of logistics management and operational effectiveness of online retail businesses in Nairobi, Kenya	Analyze how logistics management strategies affect the operational effectiveness in Nairobi-based online retail enterprises.	Online retailers have included order processing, information flow management, transportation management, and warehousing procedures are a crucial component of logistics management, and it significantly improves operational performance.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Soewarno (2017)	The association between entrepreneurship and financial performance is moderated by operational performance.	Analyze the mediating role of operational performance in the East Java Province of Indonesia's batik hand-drawn industry's relationship between entrepreneurship and financial performance.	The association between entrepreneurship and financial performance was mediated by operational performance.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Rompho (2018)	operational performance evaluations for new businesses	Examine how performance measures are used in new businesses, paying particular attention to how important they are and how well they work.	The performance of each statistic and its perceived importance are positively correlated.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Chesaro (2016)	Practices in supply chain management and operational effectiveness of multinational manufacturing companies in Kenya.	Determine the connection between the operational success of multinational manufacturing companies in Kenya	Supply chain management techniques are widely used by multinational industrial companies.	Establish LMP and their impact on operational performance of NBL in Nairobi County
Kamau (2016)	Performance measurement practices and operational performance of manufacturing firms in Kenya	Measure relationship between operational performance measures and performance measurement practices.	There is a fair positive relationship between operational performance measures and performance measurement practices	

2.5 Conceptual Framework

This section provides the predictor variables which are the numerous logistics practices namely, transport management, information system, inventory management and order processing and the response variable will be operational performance, as shown in Figure 1 below. Transport management is defined as the whole process from supply chain from the choice of the supplier through processing invoices. An information system controls the flow of goods, information, money, and product along the entire supply chain. Inventory management is the practice of keeping inventory organized and up to date across the supply chain. The administration of order processing involves receiving, monitoring, and completing orders from customers (Nuahn, 2017).

Figure 1 Conceptual Framework



CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the methodology utilized to carry out the study on the influence of LMP on operational performance at NBL in Nairobi County, Kenya. It covers the study design, study population, sample and sampling techniques, research tools, data collecting, data analysis, and ethical reflections are all included.

3.2 Research Design

A study design is a framework to ensure that the study is conducted in a logical way and this study used the descriptive research design. This design was valuable in determining NBL's operating performance as a result of logistics. The descriptive design determines the nature of the topic being investigated and it helped to answer the research questions. This approach was used since it enabled for data collection without altering the setting's atmosphere. It also allowed the mix qualitative and quantitative methods in both data gathering and analysis.

3.3 Target Population

A population comprises of a set of persons or items that the researcher aims to study. This study was conducted at NBL and targeted management employee's in purchasing and supplies department, transport department and stores department and the senior manager in NBL. The population distribution is as shown in the Table 2 below.

Table 2 Target Population

Strata	Target Population
Managing director	1
Purchasing department	14
Transport department	35
Stores department	21
Total	71

Source: (NBL Human Resource Management, 2023)

3.4 Sample Size

A proportion of a larger population chosen in a systematic manner is known as a sample. The census method was utilized to get the respondents and involved enumeration of all respondents. Since the study population was small, studying all population was suitable and 71 respondents were used.

3.5 Operationalization of the Study Variables

This section covers the operationalization of variables, where the predictor variables were transport, information systems, inventory, and order processing management, whereas operational performance is the dependent variable. Table 3 below provided the operational definition of these variables as well as the type of measurement.

Table 3 Operationalization of Variables

Variables	Operational Definition	Type of Scale
Transport management	Management, control and optimization of all transportation processes along supply chain	Likert
Information system management	System that manages flow of products, data, money and information throughout entire supply chain	Likert
Inventory management	Process of ordering, storing, using and selling a company's inventory	Likert
Order processing management	Complete workflow from order placement to delivery	Likert
Operational performance	Measurable aspects of outcomes of an organization's processes, such as reliability, production cycle time, and inventory turnaround	Ratio

3.6 Data Collection

The study obtained primary data utilizing a questionnaire and the data was obtained utilizing both open ended and closed questionnaires because they are efficient in collection of wide data range over a short time period. Closed-ended questions were used based on a Likert scale method with five options. The use of the scale was done regularly in an effort to combine information about respondents, their perspectives, and logistics management and performance of the company. There were several sections to the questionnaire where each component of the questionnaire addressed different research variable. Section A was be used to collect demographic information such as gender, age, academic levels, as well as experience and questions used in this part were all closed ended. This part allowed the researcher to learn about the respondent's history, and experiences. The Section B, evaluated measures of performance used, section C evaluated effects of ordering process performance, section D evaluated transport management on performance of the company, and section E evaluated inventory management. In addition, section F evaluated effects of information systems management on performance, section G evaluated LMP, and section

H evaluated challenges of LMP. Administration of the questionnaire was done days before and given to the respondents to respond and after then collected.

3.7 Data Analysis

Utilizing descriptive and inferential statistics, data was evaluated, where descriptive statistics like mean, and standard deviation were utilized in sorting, tabulating, and summarizing the data. The findings were presented using tables and graphs. Inferential statistics was done using linear regression analysis. Linear regression analysis was utilized to determine the association of the predictor and response variable and significance of the results. The association of logistical practices and operational performance in Kenya was established utilizing a linear regression analysis model. The multiple linear regression model was of the form

$$FP = \beta_0 + \beta_1 TM + \beta_2 LIS + \beta_3 IM + \beta_4 OPM + \varepsilon$$

where FP was firm performance; TM transport management; LIS logistics information system; IM inventory management; and OPM order processing management. The β_1 's are parameters and ε is the error term. Analysis of variance was used to determine explanatory power and significance of the model.

3.8 Ethical Considerations

To ensure ethical considerations, the researcher asked the respondent for permission by explaining the goal of the study in local dialect. In addition, the university offered a letter of introduction as confirmation of identity. The researcher ensured and assured the

participants of the confidentiality of the information they provided. Additionally, the researcher made sure that the respondents are at ease with the schedule of data collection.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The general goal was to establish LMP and their impact on operational performance of NBL in Nairobi County. Specifically, the study sought to establish LMP in NBL, Kenya, determine logistical practices adopted in NBL, Kenya, and determine the relationship between logistical management practices and operational performance in NBL, Kenya.

Data obtained using questionnaires was analyzed and presented. The questionnaire was used to obtain data from management employee's in purchasing and supplies department, transport department and stores department and the senior manager in NBL. The questionnaires were self-administered by the researcher and informed consent of the respondents was sought and they were informed on the objectives and significance of the study. The analysis covered the response rate, analysis of general information, descriptive statistics, linear regression analysis and discussion of results.

4.2 Response Rate

The study targeted 71 respondents and after a two weeks period of data collection, 60 questionnaires had been obtained from the respondents. The questionnaires were sorted and two were found to incomplete and, therefore, the response was 58 questionnaires which were fully filled and suitable for analysis. The questionnaire's response rate was 82 percent and according to Mugenda (2009) a response rate of more than 30 percent is adequate for social studies. Since this study response rate met the threshold, it was adequate for analysis, derivation of conclusions and recommendations.

4.3 Demographics of the Respondents

The study sought the general information of the study population with different features. The 58 questionnaires were obtained from respondents with varied characteristics, namely gender, age, marital status, education qualification and years of work experience. Table 4 below provides a summary of the findings.

Table 4 Summary of Demographics of Respondents

Variable	Social Demographic	Frequency	Percent
Gender	Male	35	60.3
	Female	23	39.7
Age (Years)	Under 25	2	3.4
	26 – 35	9	15.5
	36 – 45	15	25.9
	46 – 55	22	37.9
	Above 55	10	17.2
Marital status	Married	32	55.2
	Single	12	20.7
	Single parent	14	24.1
Education qualification	Diploma	15	25.9
	First degree	25	43.1
	Post graduate degree	18	31.0
Period of service	Less than a year	1	1.7
	1- 2 years	9	15.5
	3-4 years	20	34.5
	5 years and above	28	48.3

Table 4 above shows that majority (60.3 percent) of respondents was male while female was represented by 39.7 percent. It is evident that majority of the respondents were male indicating that at NBL there were more males. However, females were also represented at NBL. The results on age in Table 4 above indicated that 38 percent of the PARTICIPANTS were aged between 46 and 55 years, 26 percent were aged between 36 and 45 years, 16

percent were aged between 26 and 35 years and above 55 years 17 percent and 3 percent were under 25 years. This was an indication that majority of the employees at NBL were over 35 years of age.

Results on marital status as shown in Table 4 above show that 55 percent of the participants were married, 24 percent were single parents while 21 percent were single. Hence, majority of the employees at NBL were married. In addition, results on education qualification showed that 43 percent of the respondent's highest professional qualification was first degree, 31 percent professional qualification was postgraduate degree and 26 percent professional qualification was diploma. This implied that the respondents had varied education qualification with majority having undergraduate degree and post graduate degree. Hence, the respondents were able to give their contribution in this study.

Further, the results in Table 4 above indicated that 48 percent of the respondents had worked in the organization for more than 5 years, 35 percent had worked in NBL for 3 to 4 years, 16 percent had worked in NBL for 1 to 2 years and 2 percent had worked in NBL for less than one year. This indicated that most of the participants had worked at NBL for more than 3 years. So, they had an understanding of their organization and provided information needed in this study.

4.4 Descriptive Analysis of the Study Variables

This section covered the descriptive analysis regarding performance of NBL. The study sought to establish LMP in NBL, Kenya, determine logistical practices adopted in NBL,

Kenya, and establish the relationship between logistical management practices and operational performance in NBL as discussed below.

4.4.1 Performance of Nairobi Bottlers Limited

The study determined the performance of NBL, Kenya and performance of the company was measured using profitability, sales growth, return on assets and return on equity. The information on performance was obtained from the published information in NBL websites and the results, from 2018 to 2022 are as shown in Table 5 below.

Table 5 Performance of Nairobi Bottlers Limited (Percent): 2018 - 2022

Performance	2018	2019	2020	2021	2022
Profitability	33	40	45	55	60
Sales growth	39	46	51	57	62
Return on assets	30	36	43	51	58
Return on equity	37	43	45	52	55

From table 5 above, the results on performance show that the profitability of the company had been increasing over the years from 33 percent in 2018 to 60 percent in 2022. Further, the sales of the company have been growing from 39 percent in 2018 to 62 percent in 2022. Also, return on assets has been improving over the years from 30 percent in 2018 to 58 percent. Return on equity had been increasing over the years from 37 percent in 2018 to 55 percent in 2022. This shows impressive performance of NBL and all the aspects of performance in the company increased from 2018 to 2022. This shows that LMP play an important role in ensuring improved performance.

4.4.2 Effects of Ordering Process Performance

The study aim was to determine the effects of ordering logistics management on performance on performance of NBL. The participants were, therefore, asked to give their opinion on their level of agreement regarding the statements on the effects of ordering logistics management on performance in the company. The results are summarized in Table 6 below.

Table 6 Effects of Ordering Process

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Company's order processing is automated	3	4	7	26	18	3.897	0.828
Our company achieves timely delivery	1	2	9	30	16	4.000	0.895
Company's customer satisfaction is high	3	4	10	21	20	3.879	0.766
Company orders are processed on time	2	5	8	28	15	3.845	0.813
Minimum order process is followed	4	5	7	25	17	3.793	0.776

Table 6 above shows that the participants agreed that the company achieves timely delivery as shown by (mean = 4.000, standard deviation = 0.895). The respondents also agreed that the company's order processing is automated as shown by (mean = 3.897, standard deviation = 0.828). Also, the company's customer satisfaction is high (mean = 3.879, standard deviation = 0.766). Further, the company orders are processed on time (mean = 3.845, standard deviation = 0.813) and the minimum order process is followed (mean = 3.793, standard deviation = 0.776). This implied that NBL had, on average, adopted a

systematic ordering process which ensures timely delivery, timely order processing and customer satisfaction, with low variability as indicated by standard deviation values.

4.4.3 Transport Management

The study aimed to find out the effect of transport management on performance of NBL. The participants were asked to indicate their agreement level on the statements about the effects of transport management on performance. The results are summarized in Table 7 below.

Table 7 Transport Management

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
There is proper fleet management system	2	6	7	29	14	3.810	0.826
Vehicle maintenance policy in place	1	4	5	33	15	3.983	0.970
Vehicle disposal policy in force	4	4	9	27	14	3.741	0.769
Proper maintenance planning	2	5	7	25	19	3.931	0.826

The findings from Table 7 above show that majority of the respondent agreed that there was vehicle maintenance policy in place as shown by a mean of (mean = 3.983, standard deviation = 0.970). The respondents also agreed that there was proper fleet management system as indicated by (mean = 3.810, standard deviation = 0.826). Further, vehicle disposal policy was in force (mean = 3.741, standard deviation = 0.769), and there was also a proper maintenance planning (M=mean = 3.931, standard deviation = 0.826). This implied that at NBL transport management has, on average, been given priority – there was also strong agreement on these statements. This has helped in ensuring proper fleet

management, vehicle disposal policy and proper maintenance of vehicle. This is important in ensuring efficiency in logistic management in the company.

4.4.4 Inventory Management

The purpose of the study was to ascertain how NBL performance was impacted by inventory control and logistics management. As a result, the participants were asked if they agreed with the assertions of how inventory control and logistics management affect performance. The following results as shown in Table 8 below were got.

Table 8 Inventory Management

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Cost of maintenance of stock reduces	3	3	7	23	22	4.000	0.874
Production flow improves	4	5	9	25	15	3.724	0.728
Cost of breakages reduce	5	6	7	29	11	3.603	0.788
Quality of products remains intact	3	3	8	30	14	3.845	0.861
Less risks of fraud and obsolescence	2	4	6	26	20	4.000	0.881

From Table 8 above, the respondents agreed that cost of maintenance of stock reduced (mean = 4.000, standard deviation = 0.874). The respondents also agreed that there was less risks of fraud and obsolescence (mean = 4.000, standard deviation = 0.881). Also, quality of products remained intact as shown (mean = 3.845, standard deviation = 0.861). Further, cost of breakages reduced (mean = 3.603, standard deviation = 0.788), and production flow improve (mean = 3.724, standard deviation = 0.728). This demonstrated that, on average, the participants recognized the importance of inventory management in

ensuring reduced stock maintenance, reduced fraud risks, ensuring quality and reduced costs. This also implied that inventory management was a predictor of performance at NBL.

4.4.5 Information Systems

The study aim was to determine the effect of information systems logistics management on performance of NBL. So, the participants were asked to indicate their agreement on the statements about the effect of information systems logistics management on performance.

The results are indicated in Table 9 below.

Table 9 Information Systems

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Inquiries of inputs are made quickly	1	4	8	30	15	3.931	0.874
Orders are emailed quickly	4	5	7	27	15	3.759	0.787
Evaluation of suppliers are carried out quickly	2	6	6	32	12	3.793	0.895
E-payment is made fast	2	4	8	24	20	3.966	0.830
Supplies are addressed fast	1	7	9	21	20	3.897	0.760

From Table 9 above, the respondents were in agreement that e-payment was made fast as indicted by (mean = 3.966, standard deviation = 0.830). They also agreed that inquiries of inputs were made quickly (mean = 3.931, standard deviation = 0.874). Further, supplies were addressed fast (mean = 3.897, standard deviation = 0.760). Also, evaluation of suppliers was carried out quickly (mean = 3.793, standard deviation = 0.895), and orders are emailed quickly (mean = 3.759, standard deviation = 0.787). This implied that information systems at NBL, on average, helps in ensuring fast payments, fast inquiries,

improved supplies since supplier evaluation was fast and also orders were made fast. In addition, there was less variation on the agreement of the statements, as shown by standard deviation values, this also meant that information systems in logistic management enhanced performance.

4.4.6 Logistics Management Practices

The study's final goal was to ascertain how LMP affected NBL performance. Participants were asked to mark whether or not they agreed with the assertions of how LMP affected performance in their organization. The outcomes are shown in Table 10 below.

Table 10 Logistics Management Practices

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Standard Deviation
Company uses order logistics management policy	2	4	7	28	17	3.931	0.857
Company provides logistics above average	4	3	9	31	11	3.724	0.856
Company provides quality logistics services	1	5	6	26	20	4.017	0.878
Company provides efficient logistics	2	4	8	30	14	3.862	0.858
Company logistics policy is implemented effectively	3	3	9	25	18	3.897	0.802

The findings from Table 10 above show that the respondents agreed that the company provided quality logistics services as shown (mean = 4.017, standard deviation = 0.878). The respondents also agreed that the company used order logistics management policy (mean = 3.931, standard deviation = 0.857). Further, the company logistics policy was implemented effectively (mean = 3.897, standard deviation = 0.802). The company

provided efficient logistics (mean = 3.862, standard deviation = 0.858), and that the company provided logistics above average (mean = 3.724, standard deviation = 0.856). This implied that, on average and low variability, LMP enhance performance. This was because quality was ensured, there was effective logistics policy implementation and the company logistics were excellent.

4.5 Challenges of Logistics Management Practices

The participants were asked to identify some of the challenges they faced in using LMP in enhancing performance. They indicated that there was high cost of transportation, lack of transparency in the supply chain, loss of products on transit due to theft and failure to meet customer expectations. Other challenges included inability to handle risks timely, lack of visibility in logistics, lack of proper communication along the supply chain, high costs in technology maintenance and the risk of rising fuel costs which affects transportation.

The respondents were required to indicate the practices they suggest if adopted can improve company performance. They indicated that the organization should fully adopt technology in its supply chain as it would ensure efficiency in the supply chain. The respondents also indicated that there should be regular communication with suppliers to ensure that the company is up to date on the status of resources that support operations. Through integrated electronic networks and cutting-edge technologies, the organization should increase supply chain visibility for all participants. The business should also use cloud services to maximize productivity while cutting costs on technology. The most affordable options for business operations on a restricted budget are cloud services.

4.6 Logistical Management Practices and Operational Performance

The association of logistical practices and operational performance in Kenya was established utilizing a linear regression analysis model. Independent variables were order processing, transport management, inventory management and information systems while the dependent was variable operational performance.

The model summary was used to determine the variation of performance due the changes in LMP (order processing, transport management, inventory management, information systems). The results were as shown in Table 11 below.

Table 11 Regression Results

Model		R	R Square	Adjusted R Square			
1		0.697	0.485	0.446			
Model		Sum of Squares	Degrees of Freedom	Mean Square	F	Sig.	
1	Regression	9.615	4	2.40375	12.489	.001 ^b	
	Residual	10.201	53	0.192			
	Total	19.816	57				
Model		Unstandardized Coefficients		Standardized Coefficients		t	Sig.
		B		Beta			
1	(Constant)	1.256			5.233	.001	
	Order processing	.381		.314	4.187	.001	
	Transport management	.365		.302	4.148	.001	
	Inventory management	.344		.299	3.699	.001	
	Information systems	.367		.309	3.634	.001	

From Table 11 above, the results show that R square was 0.485, which indicated that 48.5 percent (moderate explanatory power) variation in operational performance of NBL are explained by order processing, transport management, inventory management, information

systems. The remaining 51.5 percent of the variation in operational performance of NBL was explained by other variables that were not considered in this study.

The Analysis of Variance (ANOVA) was used to check whether the model was significant. The results in Table 11 above show that the model was significant since the p-value (0.001) was less than the selected significance level 0.05. In addition, all predictor variables were significant since the p-value (0.001) was less than the selected significance level 0.05. This implied that order processing, transport management, inventory management, information systems had a significant influence on operational performance of NBL.

The regression model fitted was $FP = 1.256 + 0.381OPM + 0.365TM + 0.344IM + 0.367LIS$.

The equation indicates that if order processing, transport management, inventory management, information systems are increased, on average, by one-unit, operational performance will increase by 0.381, 0.365, 0.344, and 0.367 units, respectively. In addition, the most important variable was logistics information system since it had the largest absolute value (0.309) as shown under standardized coefficients column in Table 11 above.

4.6 Discussion of Results

The study found that the company achieved timely delivery, company's order processing has been automated, customer satisfaction was high, the company orders are processed on time and the minimum order process was followed. The study also showed that order processing had a significant influence on operational performance of NBL. Omoush (2022)

concluded that logistic management approaches significantly enhance the operational effectiveness firms in all of its dimensions, including inventory control, order process management, warehousing, packaging and transportation. The findings also showed that the company had a vehicle maintenance policy, there was proper fleet management system, vehicle disposal policy was in force, and there was also a proper maintenance planning. Further, transport management had a significant influence on operational performance of NBL. Abduland (2019) indicated that inventory management and organizational productivity are strongly correlated with each other, information flow management and staff productivity are strongly correlated with each other, and transportation management has an impact on organizational effectiveness.

The study also showed that cost of maintenance of stock had reduced, there were less risks of fraud and obsolescence, quality of products remained intact, cost of breakages reduced, and production flow improved. Also, inventory management had a significant influence on operational performance. Chala (2021) demonstrated that management of transportation network, inventories, and warehouses had a statistically significant impact on performance. It was indicated that using information systems, the e-payment is made fast, inquiries of inputs are made quickly, supplies are addressed fast, evaluation of suppliers is carried out quickly, and orders are emailed quickly. Ouma (2021) found that LMP adopted by online retail firms include order processing procedures, transportation management procedures, information flow management, warehousing procedures, and packaging.

The findings indicated that the company provided quality logistics services, it used order logistics management policy, logistics policy is implemented effectively, the company provided efficient logistics. Also, logistic management systems had a significant influence on operational performance of NBL. Adelwini, Toku, and Adu (2023) demonstrated that management of inventory, physical dispersion, and management of warehouse LMP had a positively affect company performance. In order to support organizations as they work to implement more effective management systems, logistics is crucial.

The challenges faced in using logistics management included high cost of transportation, lack of transparency in the supply chain, loss of products on transit due to theft and failure to meet customer expectations. Other challenges included inability to handle risks timely, lack of visibility in logistics, lack of proper communication along the supply chain, high costs in technology maintenance and the risk of rising fuel costs which affects transportation. Hence, the practices to enhance logistics management include full adoption of technology in supply chain, regular communication with suppliers to ensure that the company is up to date on the status of resources that support operations. Through integrated electronic networks and cutting-edge technologies, the organization should increase supply chain visibility for all participants. The business should also use cloud services to maximize productivity while cutting costs on technology. The most affordable options for business operations on a restricted budget are cloud services.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The summary, conclusion and recommendations are covered. The study aim was to determine LMP and their impact on operational performance of NBL in Nairobi County.

5.2 Summary

The first purpose was to determine the effect of ordering processing on operational performance of NBL. The study found that the Nairobi bottler company achieved timely deliver, company's customer satisfaction was high, company orders are processed on time and minimum order process was followed. It was noted that order processing had a significant and positive relationship with operational performance of NBL. The second objective was to determine the effect of transport management on operational performance of NBL. It was established that there was proper fleet management system in the company, vehicle maintenance and disposal policy was in place, and there was proper maintenance planning. Further, transport management had a significant and positive relationship with operational performance of NBL.

The third purpose was to determine the effect of inventory management on operational performance of NBL. The study revealed that cost of maintenance of stock reduced, less risks of fraud and obsolescence, quality of products remains intact, cost of breakages reduce, and production flow improves. Also, inventory management had a significant and

positive relationship with operational performance. The fourth objective was to determine the effect of information systems on operational performance of NBL. It was also revealed that e-payment was made fast, the results depicted that inquiries of inputs were made quickly, supplies were addressed fast, evaluation of suppliers were carried out quickly, and orders were emailed quickly. Information systems had a significant and positive influence on operational performance of NBL. The study established that NBL provides quality logistics services, the company uses order logistics management policy, the company logistics policy is implemented effectively, the company provides efficient logistics, and the company provides logistics above.

The study found that the challenges of logistics management include high cost of transportation, lack of transparency in the supply chain, loss of products on transit due to theft and failure to meet customer expectations. Other challenges included inability to handle risks timely, lack of visibility in logistics, lack of proper communication along the supply chain, high costs in technology maintenance and the risk of rising fuel costs which affects transportation. The practices to enhance logistics management include adopt full technology in its supply chain as it would ensure efficiency in the supply chain. The respondents also indicated that there should be regular communication with suppliers to ensure that the company is up to date on the status of resources that support operations. Through integrated electronic networks and cutting-edge technologies, the organization should increase supply chain visibility for all participants. The business should also use cloud services to maximize productivity while cutting costs on technology. The most affordable options for business operations on a restricted budget are cloud services.

5.3 Conclusion

The study concluded that order processing had a significant effect on operational performance of NBL. Order processing had a significant and positive relationship with operational performance of NBL. A unit increase in order processing would result to an increase in operational performance of NBL. Systematic ordering process ensure timely delivery, timely order processing and customer satisfaction. The study concluded that transport management had a significant effect on operational performance of NBL. Transport management helped in ensuring proper fleet management, vehicle disposal policy and proper maintenance of vehicle.

The study concluded that inventory management has a significant impact on operational performance of NBL. It was indicated that inventory management had a significant influence on operational performance of NBL. Inventory management help in ensuring reduced stock maintenance, reduced fraud risks, ensuring quality and reduced costs. The study concluded that information systems had a significant impact on operational performance of NBL. Information systems had a significant influence on operational performance of NBL. Information systems at NBL helps in ensuring fast payments, fast inquiries, improved supplies since supplier evaluation is fast and also orders are made fast.

5.4 Recommendations

The study recommended that NBL should ensure full automation of its order processing activities. This would ensure efficiency in order processing and reduce processing

expenses. Though, order processing has a significant impact on operational performance, NBL should ensure full visibility with a robust order management system. Order visibility enables management to keep track of the whereabouts of products at all times, as well as the amount of inventory that is on trucks, in the store, in the warehouse, waiting to be shipped, and anticipated to arrive. Accuracy in ordering is also ensured. The study recommended that NBL can enhance their performance by having a proper plan and preparation of transport management. Efficiency in transport management can be achieved by planning. In transport management planning NBL should consider good procurement, their storage to delivery. The company should also put into account time, transportation, and the costs. Also, transport management can be streamlined through automation. A transportation management solution that is automated simplifies the process of transferring products. Operators would be able to see which modes of transportation are in use, where they are situated, and what is keeping them moving. Employees should also receive frequent training to improve their abilities and agility.

The study recommended that the company should outsource inventory management activities. This would ensure that efficiency in inventory management. Furthermore, NBL should heavily invest in new technologies such as warehouse management systems, which can improve inventory storage management in warehouse sites. Another technology, such as vendor-controlled inventory software, provides a platform for trading partners to communicate supply chain information. Furthermore, successful inventory management requires NBL to use digital transformation technology from a true integration partner. By automating manual tasks, inventory software frees up team members to concentrate on

higher-priority tasks. Moreover, the implementation of automated technology reduces the potential for human error, enabling the organization to accurately fulfill demands each and every time.

The study suggested that NBL should invest in information systems. The organization can also outsource for information systems, this will help to get providers who would help in ensuring efficiency in supply chain. Further, the company should also research so that to adopt improved information systems. This ensures that the functional operations of logistics are turned into a process that aims to satisfy customers at the lowest feasible cost. This also makes it easier to organize and control logistics tasks connected to order fulfillment.

5.5 Suggestions for Further Research

This study determined LMP and their impact on operational performance of NBL in Nairobi County. It was suggested that another study to cover logistic management practices that were not discussed in this study. Further, the study recommends studies to cover the effect of logistic management on performance of manufacturing firms. Also, a qualitative study ought to be one to determine LMP and their impact on operational performance of firms. Also, another study combining both the quantitative and qualitative data should be done. This would help to compare results using the different data collection methods.

5.6 Limitations of the Study

The study was limited to the Nairobi County and in a single company. The NBL is the sole supplier of soft drinks in the region under coca cola as brand name. This should be considered in generalization of findings to other soft drink companies in Kenya. The study mainly utilized primary data obtained using questionnaires. The questionnaire provides limited responses from the respondents since they have to choose from the provided responses. Also, the researcher could not verify the respondent's honesty. Further, incorporation of secondary data could provide deeper insights. The study was limited to establish LMP and their impact on operational performance of NBL in Nairobi County. Majority of the study participants were male and this can result to biasness in regard to the responses provided about logistic management practices.

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APPENDICES

Appendix I Introduction Letter

Dear respondent,

I am a post graduate student pursuing Master of Business Administration degree in operations management at the University of Nairobi. I am currently conducting research on the 'Impact of Logistic Management Practices on Operational Performance of Nairobi Bottlers Limited. You are kindly requested to answer the following questions as genuinely and clearly as possibly. High level of privacy is guaranteed.

Yours faithfully,

Festus Mateli.

Appendix II Questionnaire

SECTION A Performance

Kindly provide data for performance for the following years.

Statement on performance of the organization	2018	2019	2020	2021	2022
Profitability					
Sales growth					
Return of assets					
Return on equity					

SECTION B Effects of Ordering Process Performance

Indicate the extent to which you agree or disagree with the following statements on the effects of ordering logistics management on performance in your company. Strongly Agree [5], Agree [4], Note Sure [3], Disagree [2] Strongly Disagree [1]

Statement	5	4	3	2	1
The company's order processing is automated					
Our company achieves timely delivery					
Company's customer satisfaction is high					
company orders are processed on time					
Minimum order process is followed					
Others; Please specify					

SECTION C Transport Management

Indicate the extent to which you agree or disagree with the following statements on the effects of transport logistics management on performance of your company. Strongly Agree [5], Agree [4], Not Sure [3], Disagree [2] Strongly Disagree [1]

Statement	5	4	3	2	1
There is Proper fleet management system					
Vehicle maintenance policy in place					
Vehicle disposal policy in force					
Proper maintenance Planning					
Others: please specify					

SECTION D Inventory Management

Indicate the extent to which you agree or disagree with the following statements on the effects of Inventory Control logistics management on performance in your company. Strongly Agree [5], Agree [4], Note Sure [3], Disagree [2], Strongly Disagree [1]

Statement	5	4	3	2	1
Cost of maintenance of stock reduces					
Production flow improves					
Cost of breakages reduce					
Quality of products remains intact					
Less risks of fraud and obsolescence					

SECTION E Information Systems

Indicate the extent to which you agree or disagree with the following statements on the effects of Information Systems Logistics management on performance in your company. Strongly Agree [5], Agree [4], Note Sure [3], Disagree [2] Strongly Disagree [1]

Statement	5	4	3	2	1
Inquiries of inputs are made quickly					
Orders are emailed quickly					
Evaluation of suppliers are carried out quickly					
E-payment is made fast					
Supplies are addressed fast					

SECTION F Logistics Management Practices

Statement	5	4	3	2	1
The company uses order logistics management policy					
The company provides logistics above average					
The company provides quality logistics services					
The company provides efficient logistics					
The company logistics policy is implemented effectively					

SECTION H Challenges of Logistics Management Practices

1. Identify some of the challenges you face in using logistics management practices in enhancing company performance

.....

2. Which practices do you suggest if adopted can improve company performance?

.....

3. Gender

Male [] Female []

4. Age (Years)

Under 25 [] 26 – 35 [] 36 – 45 [] 46 – 55 [] Above 55 []

5. Marital Status

Married [] Single [] Single parent []

6. What is your highest professional qualification? (Tick the correct one)

High School [] Diploma [] First degree [] Post Graduate Degree []

7. How many years have you have worked with NAIROBI Bottlers?

Less than a year [] 1- 2 years [] 3-4 years [] 5 years and above []