EFFECTS OF LOGISTICS STRATEGIES ON SUPPLY CHAIN PERFORMANCE OF BEVERAGE MANUFACTURING COMPANIES: A CASE OF COCA COLA EAST AFRICA, NAIROBI

FEISAL ABDOW ISSACK

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE IN PROCUREMENT AND SUPPLIES MANAGEMENT OF

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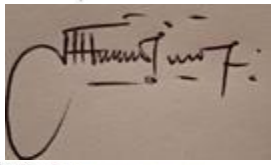
DECLARATION AND APPROVAL

This research project is wholly original with no submissions for a degree or other honors to any other university

Signature 

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Date 08/11/2024.....

Supervisor's Declaration

I certify that I have given my approval for this research project to be submitted for examination as the university supervisor

Signature:

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Date 08/11/2024.....

DEDICATION

My wife Saadia Abdinoor Abdow who supported my studies with love, inspiration, perseverance, and hard work, is the reason this study project is dedicated to her and my children Iztihaar, Munir and Istihaam. Your unwavering commitment to helping me succeed academically is something I could never take away.

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Several people helped make my study proposal possible, and I would like to thank them all for their support. I owe a debt of gratitude to the All-Powerful God who has allowed me to get this far. Secondly, I would want to thank my family and friends for their unfailing moral support and encouragement throughout my academic achievements. Thirdly, I acknowledge Mount Kenya University's role in knowledge dissemination. I also want to express my gratitude to my supervisor, Dr. Peter Wamalwa Barasa, for all of his help and advice in making sure this study is completed successfully.

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LIST OF ABBREVIATION AND ACRONYMS

CSCMP	Council for Supply Chain Management Professionals
ECR	Efficient Customer Response
EDI	Electronic Data Interchange
EOQ	Economic Order Quantity
FIFO	First in First Out
FMCG	First Moving Consumer Goods
HR	Human Resources
JIT	Just in Time
KCC	Kenya Co-operative Creameries
LM	Logistic Management
NACOSTI	National Commission for Science, Technology and Innovation
PLS-SEM	Partial Least Square Structural Equation Modeling
SCM	Supply Chain Management
SPSS	Statistical Package for Social Science

ABSTRACT

Logistics in procurement has recently gained a lot of dominance due to its significance that has not only made management of organizations easier but also more efficient in a competitive global village. With massive changes occurring in the operation models and marketing strategies of public sector organizations, procurement certainly plays a key role and influences how an organization achieves its objectives. Logistics strategies is an umbrella term that incorporates the entire array of activities that in one way or another are involved in obtaining resources and managing their inflow into an organization towards the end user. The purpose of the study was to examine the effects of logistics strategies on supply chain performance of beverage manufacturing companies: A case of coca cola East Africa, Nairobi. The following specific goals served as the study's compass: to find out how inventory management strategies, order fulfillment strategies, transportation strategies, and warehousing management strategies affect supply chain performance. The study was confined at Coca-Cola company head office in Nairobi. The study was guided by four theories that included; Inventory control theory, social exchange theory, lean theory, and Just-In-Time. The study had a focus on all staffs at procurement and supplies department of the company. Out of a target population of 260 employees, a stratified sampling technique was employed in sampling 78 employees that participated in the research. Descriptive survey research design was used by the researcher since it included all measurement techniques that entail asking respondents questions. Data was gathered using questionnaires. Of the 78 questionnaires, fully answered questionnaires that were received back were 68 and which were used in data analysis. In order to determine whether the instruments responded well to the study questions, content validity was used. Measures of the study instruments' internal consistency was made using Cronbach's Alpha Coefficient. Data collected using questionnaires was administered by dropping and then picking them later. Descriptive statistics was analyzed using the Statistical Package for Social Sciences (SPSS) version 24.0 and the findings were presented in form of frequencies and percentages usin tables. Both correlation coefficient and regressions were carried out. From the findings, the result indicated a positive statistical relationship between logistic strategies and supply chain performance. It was conncluded from the findings that transportation strategies were significant in explaining supply chain performance among beverage manufacturing companies, inventory management strategies were significant in explaining supply chain performance among beverage manufacturing companies, order fulfillment strategies were significant in explaining supply chain performance among beverage manufacturing companies, and warehousing management strategies were significant in explaining supply chain performance among beverage manufacturing companies.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Supply chain management (SCM) is a broad term that integrates business operations only within an enterprise; logistics management, on the other hand, refers to the integration of all business processes along the entire supply chain (Kain & Verma, 2018). Applications for the concept were found in the military. The process where goods and products are shipped from the supplier to a warehouse of to a sale location is referred to as transportation (Kenyon & Meixell, 2011). Transportation Management Systems imply the use of technology to achieve the objective of transportation such as low costs, delivery on time, and increase in velocity of transportation and at the same time optimizing the use of resources of the organization (Stock & Lambert, 2010). With time and several eras of change, the appeal of logistics made its way into the mainstream of business. The supply chain of today is extremely complex. Organizations need complete visibility into supply chain performance in order to optimize competitive advantage. Supply chain performance is the assessment of supply chain management and comprises both concrete (like cost) and intangible (like capacity utilization) aspects (Croom & Johnston, 2003). Transportation acts as a very crucial link between a company in SC and it needs proper management in order to meet the needs of clients in time and their requirements of shipping at affordable prices (Wisner et al, 2012). Transportation in logistics is what provides flow of materials, products and persons between facilities of production, warehouses, centers of distribution, terminals, and clients (Kasilingam, 2010). In transportation management, the value chain comprises the

shippers, suppliers, and logistics service providers (Sandberg &Abrahamsson, 2011). Most humanitarian organizations succeeds in logistics management because they incorporate supply chain in their logistics management to effective collaboration with their clients, suppliers and providers of transportation increasing efficiency, accuracy and timely delivery (Kiraga, 2014)\

Michaelides (2010) did a case study on optimization of logistics operations using GPS technology solutions. The study found that the key to consignment sharing of information and confirmation of deliveries is Web-enablement and GPS mobile tracking. The study also found that efficiency is also improved by having daily automated vehicle checks. Automation of scheduling process is advantageous because it leads to fewer interventions by the management and therefore lowering any chances of delays. Managers in charge of transport get to focus on drivers and other business issues like performance of individuals, optimal procedures, and new services to customers rather that calling of the drivers manually to establish where they are located, their status and schedule. As a result of this, managers are able to run their supply chain in a more efficient manner. Cheema (2011) studied the impact of RFID on performance of an organization: The Mediating Role of SC Performance. The focus of the study was examining the effect of RFID used on effectiveness and efficiency of manufacturing in organizations and its ultimate effect on performance of an organization using performance of SC. The findings pointed that the use of RFID results in improved effectiveness and efficiency in manufacturing, and therefore improving SC in the organization. It was also suggested that companies can embrace the technology of RFID in boosting up their performance in regard to effectiveness and efficiency of manufacturing and performance of SC. In Australia, a report provided by Bureau of Transport Economics (BTE)

(BTE 2011) indicated that the economy of Australia is greatly affected by logistics system's performance: it had influence on the structure of cost and Australia's producers' revenue, their competitiveness in time of delivery and quality of products and responsiveness of producers to requirements of customers. Wilson (2017) did note that changes in the logistic service in the US from simple means of reducing cost of transport cost to one stop solution to service encompassing transport, storage, consultation and management of information. Because of globalization, ability of responding to the requirements of customers fast is important to have sustainable competitive advantage.

China faces the challenge of shortage of logisticians who are capable mainly because of longstanding issues with their training systems. Unlikeother countries in Asiasuch as Singapore, Korea and Taiwan where their employees have high qualifications and are well educated; in Chinese companies workers in low positions tend to have low level of education especially in the case of logistic industry (Wang & Sarkis, 2013).Though there is high level of development in transport and logistics industry in United Kingdom with more than 2 million individuals in England working in the transport and logistics industrywhile over 0.57 million individuals deal with the transportation of passengers. Currently, there is shortage of skilled employees in some areas and throughout UK jobs are available. This implies that with proper training, there are opportunities to work both abroad and at home (Rantasila, 2010).

In Nigeria, human development in the transport and logistics sector has been pursued for many years, and incorporates both training and education but it is still far from attaining the needs of the industry while the most important aspect in development of human capital in transport sector is maintaining efficiency of performance at satisfactory levels. For instance,

Ajiboye (2017) note that the efficiency of transport has become the yardstick by which socioeconomic development of a country is measured. The government of Nigeria embraced integrated SCM in its policies of public procurement. The aim of integrated SCM is adding value in every single stage from demand to acquisition of goods and services, management of logistics process and lastly after use to their disposal. By doing that, deficiencies in current practices that relate to procurement, management of contracts, inventory and control of assets and obsolescence planning are addressed (Ochonma, 2010).

Organizations want more information than just inventory positions, delivery schedules, and fill rates in order to proactively manage the overall operation of their supply chains. For improved business outcomes, they need to maximize supply chain effectiveness and comprehend how adjustments in the supply chain affect overall costs or cash flow. This necessitates having complete insight into the performance-influencing elements of the supply chain, such as perfect order fulfillment, cash-to-cash cycle time, and overall cost (Oloruntoba & Gray, 2006). In order to attain operational excellence and provide a superior customer experience, it is necessary to measure the efficacy and efficiency of a given action.

More precise than supply chain management (SCM), the term logistics management integrates all business processes along the entire supply chain, not simply within a single organization (Aćimović et al., 2022). Information about the connection between logistics management (LM) and supply chain management (SCM) is also available from the Council of Supply Chain Management Professionals (CSCMP). Logistics management is based on the distribution of products and raw materials as well as the control of information flows inside the organization (Barczak et al., 2019). In order to meet consumer needs, logistics is

an integrated supply chain component that is in charge of planning, directing, and controlling the movement and storage of items, according to Sweeney et al. (2018). It also keeps track of relevant data.

Mbugi and Lutego (2022) investigated the effects of inventory control management systems on organizational performance in Tanzania's manufacturing sector through a case study of a food and beverage manufacturing company in Mwanza City. The study's conclusions showed that the company maintained a variety of inventories, including finished goods, work-inprogress, and raw materials, all of which were managed using the FIFO method in order to lower costs and boost production efficiency. It was also clear that the business used a perpetual inventory system to carry out periodic inventory control. By linking their inventory system to an electronic database that contains the quantities of inventory at different locations, stores and warehouses can employ barcode scanners to update inventory in real time. Furthermore, the adoption of Economic Order Quantity (EOQ) principles in inventory control management systems was found to have an impact on the profitability, adaptability, and cost reduction of the company.

The CSCMP defines logistics management as the part of supply chain management that plans, executes, and supervises the efficient transportation and storage of goods, services, and related information between the place of origin and the site of consumption in order to meet the needs of customers. The attractiveness of logistics entered the corporate mainstream throughout time and through several eras of change. The process of strategically managing the acquisition, delivery, and storage of components, finished goods, and resources (as well as the associated information flows) through the business and its marketing channels in a way

that links to previous and upcoming actions is known as logistics. This is accomplished through order fulfillment that is both efficient and cost-effective (Frazelle, 2002). Timna, (2017) investigated the efficiency of logistics and transportation practices in Kenyan cooperative creameries. The study's objective was to determine how logistics and transportation impacted the operational efficacy of Kenyan cooperative creameries. To examine the data, both inferential and descriptive statistics were applied. The performance of KCC and logistics and transportation were found to be significantly positively correlated by the study.

A more strategic role in logistics is becoming increasingly important for companies that wish to stay up to date with market changes and supply chain integration. Supply management and logistics have traditionally been the domain of operational level employees in purchasing and distribution divisions. Logistics and supply management are evolving at the moment due to external factors such cycle time compression, technical improvements, strategic partnerships, and a more competitive environment (Daugherty & Pittman, 1995). These changes show that, rather than focusing just on supply chain integration and cycle time shortening, a successful logistics strategy now prioritizes integration with other company operations, such as production and marketing, with a link to the broader corporate strategy. The multiplicity of aspects that need to be taken into account has raised the complexity of strategic logistics alternatives and decisions. These days, logistics includes comprehensive supply networks, which require coordination if not optimization.

A marketing channel is made up of all the organizations and marketing initiatives involved in the marketing process. It is a collection of procedures or actions required to shift ownership

of commodities and move them from the site of production to the point of consumption. The management can benefit from having a marketing channel. This distribution channel is therefore essential. A marketing channel, also sometimes referred to as a distribution channel, is an established network of marketing organizations and the connections among them that enable the ownership and physical movement of products and services from a producer to a customer or business user. The chosen marketing channel ought to work in harmony with the business's overall marketing strategy.

A distribution channel is the only means by which any company can sell its goods. A series of middlemen may often be involved, each of whom moves the product up the chain to the subsequent company before it eventually reaches the end user or customer. Along with the needs of the crucial end-user, the producer must consider the unique requirements of each component in these chains. As a result, when goods are transferred from the producer to the consumer, we refer to this as distribution. A wholesaler is always the person in charge of product distribution for a business or organization. Olsen, (2004) defines a wholesaler as a distributor or middleman who primarily sells to institutions and retailers as opposed to individual customers. A distributor, commonly known as a wholesaler, is a crucial link in the supply chain that connects producers with customers. According to Tretyak & Sheresheva, (2003), wholesaler receives items from a producer, typically in extremely big quantities, and resells them to retail outlets at a premium.

The most well-known soft drink brand in the world is Coke. The Coca-Cola Company owns Sprite, Diet Coke, Fanta, and Coca-Cola, four of the top five soft drink brands. Among its other brands are Barq's, Minute Maid, PowerAde, Novida, and Dasani water. In North

America, it distributes Evian from Groupe Danone. It additionally sells Dr Pepper Snapple Group brands, like Schweppes, Dr Pepper, and Crush, outside of Australia, Europe, and North America. The company manufactures or licenses more than 500 beverage products in more than 200 countries. Although it does not bottle its own product, Coca-Cola owns 35% of Coca-Cola Enterprises, the sole company that bottles Coke worldwide, 32% of Coca-Cola FEMSA in Mexico, and 23% of Coca-Cola Hellenic Bottling in Europe. It is Kenya's leading producer of soft drinks. Its headquarters are on Nairobi's upper highlands.

There has been continuous growth in logistic management in Kenya with companies dealing with FMCG opting to this form of delivery for their products countrywide and beyond but it isn't the case in the manufacturing industry (Njambi & Katuse, 2013). Most of those companies embraced 3PL for their operations and didn't caremuch on improving their management of inter logistics. Njambi and Katuse (2013) indicated that in this era that the life cycle of production is shrinking, there is shift in chain of distribution, proliferation of product line, fast change in technology, logistics has become important for any organization that wants to attain competitive advantage.

Organization performance is described as the way in which a firm accomplishes its marketbased objectives and additionally its financial objectives (Chesire & Kombo, 2015). Performance is an ongoing process and flexible procedure which includes manager and those they manage. They take a role of partners in a system created to empower them accomplish the required outcomes. Practicing strategic management can be supported as long as it enhances the firm's performance. Performance in itself is the final product of the activities that it incorporates and the actual outcome of the strategic administration process. Organizational performance is attainment ofultimate goals of the organization as set out in

the key Organizational plans (Wheelen & Hunger, 2013).Organization performance is a multidimensional construct operationalized by a variety of financial measures (which include sales, value of net assets and profit) and non-financial measures which include number of workers, market share and overall customer satisfaction.

In addition, factors such as overall satisfaction and non-financial goals of the firms are also very important in evaluating performance.Organization performance cannot be adequately determined without considering both financial and nonfinancial measures (Alder, 2012).According to Chesire and Kombo (2015), organizational performance comprises of three distinct areas of company results: Financial performance, commodity market performance and shareholder return. Harzing (2013) noted that an organization performance may essentially be a reflection of changes in the market size or financial conditions rather than sales figures alone. A company's performance in respect to competitors can be measured by its share in the market. Firms try to build their business with respect to competitors essentially expanding their share in the market to profit from the economies of scale. Economies of scale can contribute in working up a cost advantage. Sales increase in a slow industry is the inspiration to enlarge the market share.

1.2 Statement of the Problem

Coke is the most well-known soft drink brand worldwide. The Coca-Cola Company owns Sprite, Diet Coke, Fanta, and Coca-Cola, four of the top five soft drink brands. Among its other brands are Barq's, Minute Maid, PowerAde, Novida, and Dasani water. In North America, it distributes Evian from Groupe Danone. It additionally sells Dr Pepper Snapple Group brands, like Schweppes, Dr Pepper, and Crush, outside of Australia, Europe, and North America. It is Kenya's leading producer of soft drinks.

In order to achieve operational excellence and deliver a better customer experience, the company has recently developed a number of strategic logistic measures in its purchasing and distribution departments to be certain that their marketing channels and the acquisition, transportation, and storage of components, supplies, and completed inventory are all managed strategically. One of the supply-side industries where improvements made possible by information systems are expected to have a major positive impact on businesses is logistics.

According to Brook, (2002) the development of information technology and information systems has resulted in a significant shift in the function of logistics. Rajkumar, (2012) conducted the study and found that an appropriately designed logistics strategy system may manage all contacts between suppliers and businesses, allowing businesses and their business processes to be connected directly. According to a study by Reardon & Hopkins, (2006), large-scale manufacturing companies in Nairobi employ logistics techniques to some extent. According to the report, the majority of large-scale manufacturing companies have a welldefined system of logistics strategies that facilitates information sharing between departments. Even though the above studies were carried out in the manufacturing set up, there were limited information on the studies carried out in Beverages Manufacturing companies and the variables that were being investigated were not similar and hence this study aims at filling that gap

1.3 Purpose of the Study

The purpose of the study was to assess the effect of logistics strategies on supply chain performance of beverage manufacturing companies: A case of coca cola east Africa, Nairobi.

1.4 Specific Objective of the Study

The following objectives were used in guiding the study

i. To evaluate the effect of transportation strategies, on supply chain performance of Coca Cola East Africa.

ii. To establish the effect of Inventory Management Strategies on Supply Chain Performance of Coca Cola East Africa.

iii. To analyze the effect of order fulfillment practices on supply chain performance of Coca Cola East Africa.

iv. To determine the effect of warehousing management strategies on supply chain performance of Coca Cola East Africa.

1.5 Research Questions

The study sought to answer the following questions: i What is the effect of transportation strategies on supply chain performance of Coca

Cola East Africa? ii What is the effect of inventory management strategies on supply chain performance of Coca Cola East Africa?

iii What is the effect of order fulfillment strategies on supply chain performance of Coca Cola East Africa?

iv What is the effect of warehousing management strategies on supply chain performance of Coca Cola East Africa?

1.6 Significant of the Study

The outcome of this study is expected to be of important to various groups including the following;

The results of this study will help Coca-Cola's management, who is in charge of managing the day-to-day operations of their establishments, understand how logistics tactics impact supply chain performance. These results can be used by management to influence choices about supply chain performance and logistics inside the company.

Academicians and other researchers that specialize in logistics strategies and procurement in general will find the study valuable as well. In order to improve future research supporting supply chain performance, they can use the study's findings as a foundation for more studies in the form of secondary data. Furthermore, the study's findings might make it easier for lone researchers to find holes in the body of knowledge and conduct more thorough investigation into those areas.

Regulators and policymakers, particularly those involved in procurement, will obtain a great deal of knowledge on how logistics tactics affect an organization's supply chain performance. This will facilitate the creation of legislation and a regulatory structure that will promote the expansion and long-term viability of procurement inside the nation.

1.7 Scope of the Study

The study's main objective was to investigate how logistics methods affect the supply chain performance of businesses that produce beverages: A case of coca cola East Africa, Nairobi. The study shall be confined to coca cola head quarter located at upper hill Nairobi. The respondents were the employee of the company working at all management levels at the headquarter. Questionnaires were used in data collections where a drop and pick method was deployed with constant calls and reminders to the respondents to fill the questionnaire. The study was intended to take a duration of one month of September 2024.

1.8 Limitation of the Study

During the study, the researcher faced challenges in reaching the respondents because of the privacy concerns surrounding the company's logistics. Management of the organization was somehow reluctant to give information because of the competition associated with the nature of business they are doing.

1.9 Delimitation of the Study

As a way of overcoming the challenges the researcher reassured the respondents that their information was going to be kept private in order to get around the limitations mentioned. The management was also reassured by the researcher that the information was obtained only for academic purposes.

1.10 Assumptions of the Study

The following assumption were considered in guiding the execution of this study:

Respondents were willing to respond to questionnaires by giving honest or true responses on the effects of logistics strategies on supply chain performance of beverage manufacturing companies. The information obtained from the sampled respondents was adequate enough for use in generalizing for the entire population. Employees of Coca-Cola east Africa, Nairobi have adequate information about the effect of logistics strategies on supply chain performance of beverage manufacturing companies.

1.11 Operational Definition of Terms

Logistics Strategies- A supply chain's participants coordinate their plans, objectives, and policies based on a set of values, attitudes, and motivating factors.

Supply Chain Performance- It is the scope of the supply chain's actions to satisfy client needs, such as product availability, timely delivery, and the supply chain's ability to hold all essential inventory and capacity to deliver that performance in a responsive way.

Transportation Strategies- Are operational plans that specify how the transport-dispatching department executes pending transport and driving orders, guides the transport units to their destinations, and manages dispatching in stations and transport nodes with the assistance of transport control.

Inventory Management Strategies- is the process of tracking the goods and materials used by a business to produce or sell products.

Order Fulfillment Strategies- are the strategies applied by the organization for ensuring that receiving, preparing, and delivering customer orders are done effectively and efficiently.

Warehousing Strategies- are the strategies that are put in place for managing the receiving, storage, retrieving and dispatching of the goods to the final receiver.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this section is described empirical studies from various scholars in relation to the variables under study. It also brings out theories that provides a base for the current study. The conceptual framework is also explained.

2.2 Empirical review

There are studies that have been done in relation to logistics strategies with different scholars in both developed and undeveloped countries. This section gives a relationship of other studies pertinent to study objectives.

2.2.1 Effect of Transportation Strategies on Supply Chain Performance of Beverage Manufacturing Companies

The study conducted in 2021 by Muhalia et al. investigated the effect of transportation management systems on the performance of Kenya's FMCG supply chain. The study employed a descriptive research design. For the study's sample, 51 FMCG manufacturers in Nairobi were selected using the census approach, for a total of 51 respondents. The study employed primary data. A mixed methods approach was employed to analyze the data, integrating both descriptive and inferential analysis. The study claims that the performance of Kenya's FMCG supply chain is significantly and favorably impacted by transport management systems. According to the study, transport management systems provide businesses with trade compliance documentation and information, make it easier for them to

manage and optimize their transportation operations, ensure that goods and freight are delivered on time, give them visibility into the day-to-day operations of transportation, and speed up the shipping process. a notable addition to philosophy, practice, and policy.

Wang & Fang (2021) looked at supply chain management's relationship to transportation management systems and the effectiveness of Chinese online retailers' delivery services. The primary focus of the investigation was the KUAIDI system. Determining the relationship between the effectiveness of supply chain management and transportation was the aim of the study. According to the survey, supply chain management and effective transportation go hand in hand.

Ogola et al. (2023) studied the logistics companies operating in Nairobi County with respect to transportation management. This research study, which looks at the effects of logistics management techniques, focuses mostly on the performance of logistics companies in Nairobi County. The purpose of the study was to ascertain how the application of logistics management strategies by Kenyan logistics companies affected their performance. The study's specific goal was to evaluate how Nairobi County logistics companies perform in relation to transportation management. Using stratified random sampling, the respondents were chosen. Quantitative data was analyzed using SPSS software, which supported both descriptive and inferential statistics. The study's conclusions showed that systems, such as those for order processing, warehousing, transportation, and inventory management, all significantly improve the performance of logistics companies in Nairobi County.

Timna (2017) investigated the efficiency of logistics and transportation practices in Kenyan cooperative creameries. The aim of the study was to ascertain the influence of logistics and

transportation on the operational efficiency of cooperative creameries in Kenya. Both inferential and descriptive statistics were used to analyze the data. The study discovered a significant positive correlation between the KCC performance and logistics and transportation. The results of the study indicate that when logistics and transportation activities increase, performance will also increase.

Multiechelon systems that specifically address distribution (or dispatch) policies with shipment consolidation opportunities in combination with demand forecasting plus inventory decisions are limited (Kiplagat, 2019).Using different modes of transport, a standard warehouse or distribution center ships material to various customer locations around the nation. In selecting the mode of transport and the shipping date for the combined shipment, prices, weight constraints on modes, and delivery windows for each of the orders must be taken into account (Mwangangi, 2016).The bottom line of warehouse functions depends on levels of inventory. Asset management is a valuable method for every organization at all stages of the supply chain. Asset management is the company's far-sighted vision, enabling the company to look forward, prevent issues and maximize the business model (Muriuki, 2018). Whereas an RFID (asset management) system would require a reader and RFID tag infrastructure for each inventory item to track the products in real time, a barcode system (inventory tracking) would simply place barcodes on all inventory items (Ngei & Kihara, 2017).

Muhalia et al. (2021) looked at the effect of transportation management systems on supply chain performance of Fast-Moving Consumer Goods Manufacturers (FMCG) in Kenya. The purpose of the study was to determine the effect of transportation management systems on supply chain performance of FMCG in Kenya. The study adopted descriptive research

design. Mixed methods technique of analyzing data was used where both descriptive and inferential analysis were used. The data collected from the field was analyzed using SPSS 23 program. The study found that transport management systems positively and significantly influences Supply chain performance of FMCG in Kenya. The study established that transport management systems provides trade compliance information and documentation; transport management systems make it easier for businesses to manage and optimize their transportation operations, whether they are by land, air, or sea; transport management systems ensures timely delivery of freight and goods; transport management systems provides visibility into day-to-day transportation operations; and transportation management systems helps to streamline shipping process.

Michaelides (2010) did a case study on optimization of logistics operations using GPS technology solutions. The study found that the key to consignment sharing of information and confirmation of deliveries is Web-enablement and GPS mobile tracking. The study also found that efficiency is also improved by having daily automated vehicle checks. Automation of scheduling process is advantageous because it leads to fewer interventions by the management and therefore lowering any chances of delays. Managers in charge of transport get to focus on drivers and other business issues like performance of individuals, optimal procedures, and new services to customers rather that calling of the drivers manually to establish where they are located, their status and schedule. As a result of this, managers are able to run their supply chain in a more efficient manner.

2.2.2 Effect of Inventory Management Strategies on Supply Chain Performance of Beverage Manufacturing Companies

Musau et al. (2017) investigated the effect of inventory management on organizational performance in Kenyan textile manufacturing enterprises. The study's objective was to investigate the effects of inventory management on the cost, profitability, responsiveness, flexibility, and responsiveness of supply chains for Kenyan textile manufacturing enterprises. A convergent parallel mixed methods strategy was used in the investigation. Stratified selection and basic random sample methods were employed in the study to select workers from each textile company's procurement departments. Both qualitative and quantitative data were used in the study. Correlation analysis and hierarchical multiple regression were the inferential statistics employed to examine the relationship between the variable and the hypothesis. The study claims that Kenyan textile manufacturing companies utilize inventory management, and this has an effect on the overall performance of the supply chain. The study concludes that inventory control can raise the productivity of textile companies.

Using a case study of the Gianchore tea factory, Musau et al. (2017) assessed the effect of inventory control systems on operational performance in the tea industry. Data for the study were gathered using a standardized questionnaire and regression analysis. It was discovered that the use of vendor controlled inventory, material need planning, and distribution planning improved the efficiency of operations and, consequently, the performance of the organization.

Ouma & Mwangangi (Ph.D.), (2018) evaluated the effects of material requirement planning, just-in-time delivery, vendor-managed inventory, and bar coding on the performance of soft

drink manufacturing companies in Kenya in order to investigate the relationship between inventory management systems and business performance. Descriptive research design was used in this study. Data analysis techniques that were both quantitative and qualitative were used. The performance of the company is found to be enhanced by most inventory management system KPIs. To show how big of an impact the four determinants had on the success of the firms, regression analysis was employed.

Musau et al. (2017) investigated the effect of inventory control management systems on organizational performance in Tanzania's manufacturing sector using a case study of a food and beverage manufacturing company in Mwanza City. The qualitative approach method was applied. The content analysis of the data was assisted by the use of software designed for qualitative research. The results of the study showed that, in order to save expenses and boost production efficiency, the food and beverage manufacturing company maintained a variety of inventories, including raw materials, work-in-progress, and finished goods, all of which were managed using the FIFO method. It was also clear that the business used a perpetual inventory system to carry out periodic inventory control. By linking their inventory system to an electronic database that contains the quantities of inventory at different locations, stores and warehouses can employ barcode scanners to update inventory in real time. Furthermore, the adoption of Economic Order Quantity (EOQ) principles in inventory control management systems was found to have an impact on the profitability, adaptability, and cost reduction of the company.

The effectiveness of cleaning services in Nairobi City, Kenya, as well as their methods for inventory management, were investigated by Wambui & Miriam in 2024. The study's objective was to find out how Nairobi County, Kenya's commercial cleaning firms fared in comparison to inventory control techniques. One of the specific objectives was to look at how lead times and supplier relationships affected the performance of commercial cleaning companies in Nairobi County, Kenya. The study used a descriptive design of inquiry. Descriptive statistics such as mean, percentage, and frequency were employed in the study. Inferential statistics included correlation and regression. The results indicate that while supplier connections and firm performance have a slightly significant association, lead times and company performance have a highly substantial relationship.

2.2.3 Effect of Order Fulfillment Strategies on Supply Chain Performance of Beverage Manufacturing Companies

Based on Meller (2015) defined that order fulfillment cycle time (OFCT) as the amount of time from customer leaving the sales order to the customer receiving the product he ordered. It is an important factor for customers as it represents the total “time of waiting”. The order fulfillment cycle consists of three different components each requiring different amount of time. These components are: Order Reception Window: The time window in which orders are received be- tween two consecutive order cut-off times.

Order fulfillment cycle (OFC) comprises the process in receiving, processing and delivering a customer order. It refers to all the steps companies must take from the moment they receive an order until the goods land in customers’ hands. There are many types of order fulfillment options such as Engineer-to-Order where the product is completely build and designed to

customer specifications, or Assemble-to-Order where the product is built to customer specifications from an inventory of existing materials, and finally to Make-to-Stock (MTS) where the product is built against a sales forecast, and sold to the customer from an inventory of finished goods. If the product is in digital form, the option might even be Digital Copy where products are digital assets and copies are created on-demand, downloaded by the customer and saved on their storage devices (Orrigo, 2015).

Sarite et al., (2021) conducted research on how Kenyan manufacturing companies perform in relation to order fulfillment. The study design employed was descriptive. The study employed a combination of quantitative and qualitative methodologies, indicating the use of both descriptive and inferential statistics. Quantitative data acquired from the document analysis was statistically examined using the Statistical Package for Social Scientist. The results demonstrated that order fulfillment significantly and favorably affects business success.

A study by Zaieda, Mansour, and Mostafa (2016) evaluated the effectiveness of the order fulfillment process in the supply chain using a defined measuring methodology. There were two sorts of measures in the measurement framework. One assesses the effectiveness of order fulfillment operations, while the other examines the precision of delivered orders. The study's findings demonstrated that the supply chain's order fulfillment procedure was operating well.

Salad et al. (2018) undertook a study on the role of order fulfillment on the performance of manufacturing firms in Kenya. The main purpose of the study was determining role order fulfillment on performance of manufacturing firms in Kenya. A descriptive research design was used. The target population of the study were managers or equivalent from Six (6) departments that is Procurement, finance, legal, stores, human resource and quality control

because they are directly concerned with supply chain. The study adopted the use of a questionnaire and a document analysis as the main research instrument. The study adopted both quantitative and qualitative approaches, implying that both descriptive statistics and inferential statistics were employed. The findings showed that order fulfillment has a positive and significant effect on firm performance.

2.2.4 Effect of Warehousing Strategies on Supply Chain Performance of Beverage Manufacturing Companies.

Muhalia et al., (2021) conducted research on the impact of warehouse management on the performance of organizations, utilizing Africa Global Logistics Rwanda Ltd. as a case study. The goal was to investigate how warehouse management affects the effectiveness of organizations. Among the specific goals were figuring out how order picking affects organizational effectiveness, evaluating how inventory tracking tools affect efficiency, looking into how automated and retrieval inventory control systems affect efficiency, and analyzing how material handling affects efficiency. The study employed both descriptive and correlational research designs. Methods from correlation and regression analysis were applied. The research findings demonstrated that there is a connection between organizational success and warehousing management.

A study on the impact of warehousing techniques on organizational performance in Ethiopia was conducted by Hailu, (2019). Using My Wish Enterprise as a case study, he investigated how warehousing affects organizational performance. Research design for the study was explanatory. The study's conclusions demonstrate that organizational effectiveness and all aspects of warehousing are positively and significantly correlated.

Glavaš, (2022) studied how certain brewery companies performed in relation to warehouse management, using Nigerian breweries as a case study. Purposive sampling and survey design were used in the study. The data were examined using the Pearson correlation analysis. The correlation analysis's findings demonstrated a strong and positive link between organizational productivity and storage expenses. Moreover, a strong and positive correlation has been shown between stock control and organizational success. Furthermore, there is a positive and robust correlation between logistical success and distribution planning. The study found that the performance of a subset of Nigerian brewing enterprises is significantly impacted by warehouse management.

Moh'd Anwer AL-Shboul (2022) carried out an investigation of transportation logistics strategy on manufacturing supply chain responsiveness in developing countries: the mediating role of delivery reliability and delivery speed. The study aimed at investigating and examining the impact of delivery reliability and delivery speed on the relationship between a manufacturing firm's transportation logistics strategy and supply chain responsiveness. Furthermore, it examined the impacts of SCR on manufacturing firm performance (MFP). A quantitative methodology was used for the purposes of gathering and analyzing primary data for this empirical study. The conceptual model was tested by using a hypothesis-testing deductive approach. The findings were based on covariance-based analysis and structural equation modeling (SEM) using AMOS software. The findings showed that delivery reliability is mediating partially the relationship between TLS and MSCR, and that DS is mediating fully the relationship; further, it is pointed out that SCR is supported with improved MFP. The empirical findings can have insightful implications for

managers and practitioners in terms of boosting competitive advantage and financial performance.

Research on the moderating influence of the warehousing policy framework was conducted by Njiru et al., (2024) in relation to supply chain performance and warehousing operations in Kenyan food and beverage manufacturing enterprises. Its goal was to investigate how the policy framework for warehousing might moderate the relationship between supply chain performance and warehousing operations for Kenyan companies that produce food and drink. The study used both qualitative and quantitative methods in a mixed research design. The qualitative data was examined through the use of content analysis. Statistical techniques incorporating both descriptive and inferential data were used to examine quantitative data. Using a multivariate linear regression model, the connection between the variables was examined. Additionally, an analysis of the association was done. According to the study, the bulk of Kenyan companies that produce food and beverages gave top priority to space optimization, preserving sufficient aisle space, and carrying out warehouse maintenance within legal bounds.

The impact of warehouse attributes on supply chain warehouse efficiency in Indonesia was studied by Sae-Lim & Jermsittiparsert, (2019). Operations and layout characteristics were taken into account. The statistical methods PLS-SEM were used to analyze the data. The study's conclusions demonstrated that warehouse characteristics benefit supply chain businesses.

Muhalia et al. (2021) used the Modjo dry port in Ethiopia as a case study to examine the connection between warehouse management and performance. This study aimed to investigate how warehouse management affected the five primary warehousing tasks—receipt, put-away, storage, order picking, and shipping—in the context of Modjo dry port. This study used a mixed research approach in conjunction with an explanatory and descriptive research design. Descriptive and inferential statistical techniques such multiple regressions, correlation, mean, standard deviation, and percentage were used to examine the collected data. The organization's warehouse performance is significantly impacted by order selection, shipping, putting away, receiving, and storage, according to the results of the multiple regression analysis. Therefore, in order to improve warehouse performance, businesses are expected to improve their warehousing management.

Tesfaye et al. (2016), who studied the efficacy and efficiency of warehouse management, claim that in order to beat rivals in lead times, expenses, and customer service, warehousing is now a crucial component of the supply chain. This increase can be attributed to supply chain theories and global competition, which place a premium on thorough inventory control. Timely and reliable information on products, resources, and processes is essential for a planning and control framework to be operationalized and guarantee that warehouse operations achieve the high performance requirements required by the contemporary marketplace.

2.3Theoretical Review

2.3.1 Inventory Control Theory

Inventory control theory was created in 1962 by Starr and Miller. Inventory control includes the actual management of inventories, which might comprise finished commodities, workin-progress, and raw material stocks. No matter what kind of inventory is involved, storage is always necessary, and it is always expensive. As a result, inventory control theory covers every aspect of goods storage, including both advantages and disadvantages. One of the most popular applications of inventory control theory is determining the optimal amount of inventory to hold. This continuous time approach was quickly extended into discrete time by Vassian (1955) with the newly discovered z-transform. Vassian (1955) showed that if WorkIn-Progress (WIP) information were to be incorporated into a discrete version of Simon's inventory replenishment policy, then this would minimize the inventory costs for any forecasting method. Early text books documenting the z-transform approach include Magee (1958), in a production and inventory management context, and Brown (1963), in a forecasting context. The approach became more popular in the 1960s

Inventory control can benefit from the application of a number of mathematical models. The cost of shortages is also taken into account in an effort to balance order costs and storage expenses. Despite its propensity to be somewhat naive when it comes to the non-financial costs of storage and its assumptions about future demand and delivery, inventory control theory is a useful tool for cost reduction and is acknowledged as a component of best practices in manufacturing settings (Liu et al., 2013). Lead-time can benefit from the application of inventory control principles, which ensure that stock levels are appropriately controlled to meet market demands.

In order to minimize inventory costs in a single level of a supply chain, it has long been recognized that accurate forecasts of the demand over the lead time and review period are required. This is because the variance of the forecast error of the demand over the lead time and review period is equal to the inventory variance, for certain inventory control policies. Thus, in a single echelon of a supply chain, optimal forecasts that minimize the mean squared error over the lead time and review period are required. However, if our objective is to minimize inventory costs in a multiechelon supply chain, then the situation is much more complex, as non-optimal forecasts at the first echelon of the supply chain can have a smoothing effect on the demand placed on the supplier. This smoothing effect may mean that it is easier for the supplier to predict his future demand and may even be able to reduce his inventory costs more than the corresponding increase at the first echelon. Thus, the interaction between forecasting and inventory is complex in multi-echelon supply chains. There are many issues that need to be taken into account, including altruistic behaviour, trust and game-playing (Hosoda & Disney, 2006).

2.3.2 Social Exchange Theory

The social exchange hypothesis was created in 1958 by George Homans. Continual stability and a robust exchange relationship provide consistent supply. Achieving preferred buyer status rather than just regular or even exit buyer status is the main goal of supplier relationships. This leads to better treatment and guaranteed supply while reducing risks that may be involved in the supply chain (López-Navarro, 2013).

Social Exchange theory provides an analytic approach to social interactions resulting in the exchange of resources or services and behaviors of mutual value. It also addresses how these

micro-level processes form the basis for the social structures they entail and the pressures they create for social change that often result from power inequalities. Understanding how such interactions emerge, change and alter the groups and networks in which they are embedded is an important undertaking. Social Change is the significant alteration of social structure and cultural patterns through time (Leicht, 2018). Culture here refers to the way individuals or groups do their things –shared ways of living among people.

Social exchange theory (SET) assumes that encouragement activities undertaken between an organization and its employees generates the organizational commitment (Aldhuwaihi, 2013). Grounded on the assumption of SET, the employees with the expectation that organization provide the better working environment and culture, he/she join an organization and utilize their skills and knowledge to achieve their goals. Hence, favorable exchange relationship between employees and an organization are resulted in increased organizational commitment. Based on the SET, a causal model is formulated which postulates the exchange relationship between strategic orientation, organizational culture, and organizational commitment which ultimately affects the organizational performance. The SET deals with three principles (i) rationality (ii) reciprocity and (iii) specificity principle to explain the relationships between employee and employer (Foa & Foa, 2012; Cheung, 2000; Blau, 1994). The first rationality principle reasons that employees will have association with that organization which can provide desirable rewards and satisfy its employees needs and wants. The second reciprocity principle theorize that social relationship is always reciprocal between employee and employer. The third specificity principle postulates that only reciprocity type can endure an exchange relationship between the employees and an organization (Foa & Foa, 2012; Cheung, 2000; Blau, 1994). For the employees, strategic orientation and good

organizational culture would be a strategic focus organizational fair activities which increases employee's commitment towards their employer. While, in exchange of this, the employee's commitment may be a desirable feeling of employees to continue their loyalty with the organization and significantly affects organizational outcomes including performance (Pinho et al., 2014; Aldhuwaihi, 2013; Kidombo et al., 2012; Kidombo, 2007; Cheung, 2000).

Transactions are reciprocal, meaning that in a given situation, one thing must be given in exchange for another, according to the Social Exchange Theory (Cropanzano et al., 2002). Moreover, people only participate in a trade when they think the advantages will exceed the disadvantages, according to the Social Trade Theory. It represents an equitable resource and profit-sharing cooperation between buyers and suppliers.

2.3.3 Lean theory

According to Ardiansyah et al. (2022), continuous supply of standard commodities with independent demand—where a specific number should always be on hand—is what inventory planning, control, and management are all about. This is why lean theory concentrates on inventory system cost optimization. This approach seeks to accelerate choices about production, warehousing, and general supply chain issues (Tempelmeier, 2011). The economic order quantity (EOQ) model, which aims to optimize the quantity of each individual item ordered, provides the foundation for this idea.

The necessity to investigate how inventory management affects organizational performance and the requirement for careful inventory management served as the justification for employing Lean Theory in this study. As a result, the concept highlights how various

operating systems may be used to track stock levels and how various item kinds could need different handling. Green and Inman (2005) assessed the impact of lean theory on financial outcomes. They claim that the hypothesis might eliminate buffer stock and cut down on production waste.

According to research by Eroglu & Hofer, (2011) a company's profitability is positively impacted by its leanness. They contend that the most effective inventory control strategy is inventory leanness. The idea goes into detail on how manufacturers can lower the amount of inventory they keep on hand, purchase with more flexibility, and save money by not having to hold inventory. Lean theory states that inventory management is an essential component of any supply chain, whether it be for goods or services. According to Bozarth et al. (2009), inventory management is essential to ensuring that all parties involved in the supply chain maintain a balance between supply and demand. This, in turn, provides flexibility in reacting to both internal and external events in the fast-paced, globally integrated business environment of today.

2.3.4 Just-In-Time theory

Several Japanese industrial businesses have been using the Just-In-Time (JIT) management philosophy since the early 1970s. Taiichi Ohno initially created and improved it at Toyota's facilities with the intention of speeding up the company's ability to meet consumer expectations. Taiichi Ohno is well known for being the creator of JIT. This idea emphasizes the importance of controlling inventory levels and production schedule in order to avoid waste and optimize the use of leftovers.

Wagner & Silveira-Camargos, (11) state that companies that have attained the highest degree of JIT implementation frequently employ the JIT approach. The vendor can consistently

provide the shop with products on schedule because of their mutual trust and friendship. JIT aims to reduce waiting times associated with production. Zero inventory is prioritized by the Just-in-Time (JIT) concept over standardization or management approach.

One way to delay the delivery of finished items to customers is to receive an unexpectedly urgent purchase order. Toyota Motor Corporation may hold off on placing auto component orders until new ones come in thanks to the renowned JIT inventory technique. Despite the company using the strategy in the 1970s, it took 20 years to perfect (Wadhwa et al., 2024). According to the study's author, a JIT system's primary advantage is that it lowers the quantity of inventory that companies must keep on hand, which helps them save money and become more productive. For quick fulfillment, the Just-In-Time (JIT) delivery technique of inventory management is best when it comes to requests for produced goods and raw materials.

The Just-in-Time (JIT) approach, which prioritizes low inventory and strong supplier connections, fits in nicely with the findings of this investigation of the operation of the warehouse and supply chain at Inyange Industries Ltd. Efficient material flow is the goal of JIT concepts, and warehouse management techniques help assess this. This study can investigate how Inyange Industries achieves efficient production by managing supplier collaboration and inventory levels, which aligns with the main goals of Just-In-Time (JIT).

2.4 Conceptual Framework

A conceptual framework, according to Robson & McCartan (2016), is a group of concepts, theories, assumptions, expectations, and beliefs that support and direct a research process.

According to Ordho (2012), a conceptual framework is a set of guidelines that the study would adhere to while searching for solutions to the issues brought up by the research questions. Waiganjo (2014) defined a conceptual framework as a written or visual product that provides a narrative or graphic explanation of the key concepts to be investigated. The methodology and concepts presented in the literature review of this chapter form the basis of the framework that this investigation is creating. The study's intellectual logic and direction are made clearer by the conceptual framework. It discusses significant issues and helps to support the notions in this study's significance. In Figure1, the Conceptual Framework is displayed.

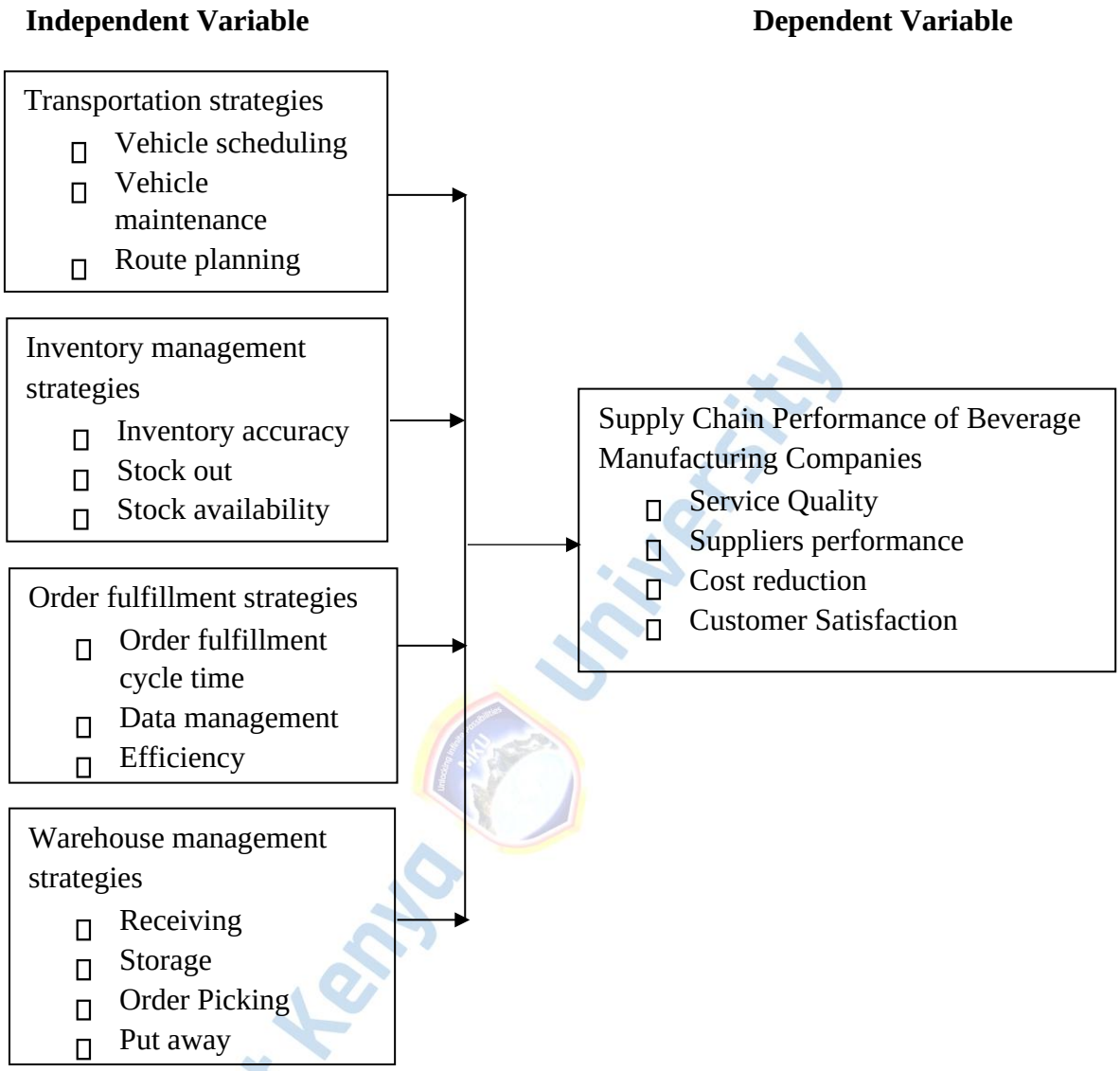

Figure 1: Conceptual Framework
Source: Researcher (2024)

The conceptual framework of figure 1 portrays the relationship between the independent variables and the dependent variable. The independent variable was logistics strategies whose components included transportation strategies that was measured by looking at vehicle scheduling, vehicle maintenance, and route planning. Inventory management strategies were measured by looking at inventory accuracy, stock out, and stock availability. Order fulfillment strategies was measured by considering the order fulfillment cycle time, data management and efficiency. While warehousing management strategies were measured by looking at receiving, storage, order picking and put away. For the dependent variable, it was

measured by looking at service quality, suppliers' performance, cost reduction and customer satisfaction. The direction of the flow shows the cause-effect relationship.

2.5 Recap of Literature

A number of researchers have studied the concept of supply chain performance of firms. A lot has been done on manufacturing industry, supermarkets, and other organizations by different scholars in Kenya. Others have resulted in studying the challenges and effects of outsourcing in organization performance of different manufacturing firms such as study conducted in 2021 by Muhalia et al which claimed that the performance of Kenya's FMCG supply chain is significantly and favorably impacted by transport management systems. According to the study, transport management systems provide businesses with trade compliance documentation and information, make it easier for them to manage and optimize their transportation operations, ensure that goods and freight are delivered on time, give them visibility into the day-to-day operations of transportation, and speed up the shipping process. a notable addition to philosophy, practice, and policy. Wang & Fang (2021) in their study looking at supply chain management's relationship to transportation management systems and the effectiveness of Chinese online retailers' delivery services noted that supply chain management and effective transportation go hand in hand. Ogola et al. (2023) studied the logistics companies operating in Nairobi County with respect to transportation management and the study's conclusions showed that systems, such as those for order processing, warehousing, transportation, and inventory management, all significantly improve the performance of logistics companies in Nairobi County. Timna (2017) while investigating the efficiency of logistics and transportation practices in Kenyan cooperative creameries, discovered a significant positive correlation between the KCC performance and logistics and transportation. The results of the study indicate that when logistics and transportation

activities increase, performance will also increase. Musau et al. (2017) looked at the effect of inventory management on organizational performance in Kenyan textile manufacturing enterprises and the result indicated that Kenyan textile manufacturing companies utilize inventory management, and this has an effect on the overall performance of the supply chain. The study concludes that inventory control can raise the productivity of textile companies.

Using a case study of the Gianchore tea factory, Musau et al. (2017) assessed the effect of inventory control systems on operational performance in the tea industry. The study discovered that the use of vendor controlled inventory, material need planning, and distribution planning improved the efficiency of operations and, consequently, the performance of the organization. Sarite et al., (2021) while conducting research on how Kenyan manufacturing companies perform in relation to order fulfillment, the results demonstrated that order fulfillment significantly and favorably affects business success. A study by Zaieda, Mansour, and Mostafa (2016) evaluated the effectiveness of the order fulfillment process in the supply chain using a defined measuring methodology and the findings demonstrated that the supply chain's order fulfillment procedure was operating well. Muhalia et al., (2021) in a research on the impact of warehouse management on the performance of organizations, utilizing Africa Global Logistics Rwanda Ltd, the research findings demonstrated that there is a connection between organizational success and warehousing management. Glavaš, (2022) studied how certain brewery companies performed in relation to warehouse management, using Nigerian breweries as a case study and the findings indicated that the performance of a subset of Nigerian brewing enterprises is significantly impacted by warehouse management.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1Introduction

The design, study population, sample size and technique, data types and sources, data analysis methodologies, and ethical considerations are all covered in this chapter on the study's methodology. Furthermore, validity and reliability are used to explain the quality of the research.

3.2 Research Design

Research design, as defined by Bryman and Cramer (2012), is the deliberate combination of different study components in a logical and cogent way to solve the research problem. A study design, according to Kothari (2017), is a blueprint outlining the procedures for gathering, measuring, and analyzing data.

A descriptive research design was the one that was used for this investigation. Saunders et al. (2009), opines that this approach makes it possible to collect and analyze quantitative data using both descriptive and inferential statistics. According to Creswell (2014), a descriptive study design is one that guarantees the collection of data to characterize individuals, groups, environments, and phenomena. Kothari (2017), asserts that descriptive research design is crucial since it addresses bias protection and maximizes dependability.

3.3. Location of the study

Only the Coca-Cola headquarters in Nairobi was the site of the investigation. Nairobi is situated in the highlands in the south-central part of the nation at an elevation of around 5,500 feet (1,680 meters). The distance between the city and Mombasa is 480 km, or 300 miles.

3.4 Target Population

According to Agyei & Kilika, (2013), the target population is the larger group from which a sample is drawn. Wang & Fang, (2021) opines that a population consists of all the individuals or objects that the researcher plans to study. It includes everything that has specific qualities, including topics and objects. This study was conducted at Coca-cola headquarter in Nairobi County, targeting all the staffs of the procurement and supplies department. The department has 260 staffs in which 25 are at administrative level, 85 at executive level and 150 at supervisory level (Chinenye Gbemisola Okatta et al., 2024). This is distributed as shown

Table 1: Target Population

Category	Population
Administrative position	25
Executive position	85
Supervisory position	150
Total	**260**

Source: HR department, 2024

3.5 Sampling Procedure and Sample Size

Both stratified and purposive sampling techniques were used in the investigation. According to Kothari (2017), stratified sampling is employed when the study population does not consist of a homogeneous group from which the sample will be taken. The entire population was examined in proportional sampling, with each stratum's size being proportionate to the strata's population size. This implies that the sampling fraction was the same for every stratum. At some point, a random sample was used for selection at every managerial position level (stratum).

According to Mweshi & Sakyi (2020), simple random sampling ensures that each employee in the population has an equal probability of being selected for the sample. According Agyei & Kilika, (2013) a sample size of 10% to 30% of the population is appropriate for generalization. This argument suggests that 78 employees were considered as being able to provide the appropriate sample size for this investigation. Their distribution is as shown in table 2.

Table 2: Sample Size

Category	Population	Sample Size
Administrative position	25	8
Executive position	85	25
Supervisory position	150	45
Total	**260**	**78**

Source: Researcher, 2024

3.6 Data Collection Methods and Instruments

Questionnaires were used in the collection of primary data. Utilizing questionnaires has benefits including cost-effectiveness, expediency in reaching a large number of respondents, and standardization (Agyei & Kilika, 2013). This is due to the fact that data was gathered by the researcher specifically for this investigation. The surveys were designed to be selfadministered in order to minimize interviewer bias, and they were distributed using the drop and pick approach. The researcher collected secondary data directly from sources such as questionnaires, focus groups, experiments, observations, and interviews.

Furthermore, published materials including theses, dissertations, textbooks, and ministryspecific annual government reports were used to capture the secondary data. Aborisade,

(2013) defines secondary data as information gathered by a party other than the researcher.

3.7 Pilot Study

In a pilot study, a small sample of respondents complete the questionnaire to identify and address possible problems (Montejo et al., 2011). The pilot study aims to improve the questionnaire's phrasing and substance and make sure that respondents comprehend it. Usually, 10% of the sample size should be used for a pilot test (Aborisade, 2013). Eight respondents were to be used in completing a pilot version of the questionnaires, and the findings were to be tested for internal consistency using the Cronbach alpha reliability method. In order to prevent responder assessment bias, participants in the pilot study were not to be included in the study population.

3.8 Validity and Reliability of the Research Instrument

3.8.1 Validity of the Research Instrument

According to, Rasmussen & Madsen, (2002), validity refers to whether the instruments measure what they are intended to measure. According to Barasa (2017), a research tool's validity is determined by how well it assesses the intended variables. To determine whether the instruments provided answers to the study questions, the researcher employed content validity. The instrument's content validity was evaluated based on how effectively its items represented a representative sample and captured the relevant notion. The researcher used the expert to determine the content validity.

Face validity, which is the perceived relevance and appropriateness of the instrument, was ensured by aligning the research instruments with the study objectives (Apopa, 2018). According to Gaber & Gaber, (2010) face validity, sometimes referred to as logical validity,

is the degree to which an assessment is perceived as evaluating the idea that it purports to evaluate.

3.8.2 Reliability of the Research Instrument

Reliability is the degree to which a research tool consistently produces the same outcomes over time. The stability and consistency of measurements generated by an instrument are referred to as reliability (Barasa, 2017)**.** To validate it, several measurements are taken on the same subjects. At start, the researcher ensured that appropriate data sources were chosen. The study focused on Coca-Cola's logistics tactics, thus employees in the departments of supplies and procurement were the main target population. By doing this, it ensured that appropriate data was gathered from appropriate sources. The internal consistency of the research instrument was measured using a Cronbach coefficient alpha of 0.7. According to Sekaran & Bougie, (2013) Cronbach's alpha has a range of 0 to 1, with larger values (above 0.7) indicating more dependability.

3.9 Data Collection Procedures

In order to obtain authorization to carry out the study, the researcher made an application to Mount Kenya University for an ethical clearance certificate. The researcher then met with respondents after permission had been obtained, explaining the goal of the study, and requested for their approval to participate. The Ethical Review Certificate was meant to assist the researcher to obtain a permit for gathering data from NACOSTI. The researcher then gave the respondents the questionnaires with the assistance of two research assistants who had been trained on all the aspects around gathering data while in the field.

3.10 Data Analysis and Presentation

The information gathered from the surveys was edited and cleaned up first, then coded and sent for additional examination. In order to score on a 1–5 Point Scale according to the degree of the construct being measured, the Likert scales in the closed-ended questionnaire items were translated to numerical codes. After that, they were input into the computer application known as the Statistical Package for Social Sciences (SPSS), version 24.0.

Frequencies and percentages were used in descriptive statistical analysis to characterize the fundamental features of the data. Pearson's Product-Moment Correlation Coefficient was then used for inferential data analysis. The link between the variables were measured using correlation analyses. This was significant since it allows the analysis's findings to be applied to a wider demographic.

When estimating model parameters and figuring out how several independent variables affect a dependent variable, multivariate statistical techniques like multiple linear regression analysis are employed. For Multiple Regression Analysis, Dependent variable Supply Chain Performance of Beverage Manufacturing Companies were regressed against four variables of transportation strategies; inventory management strategies; order fulfillment strategies and warehousing management strategies

The regressin equation was expressed as follows:

$Y = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + ¢$

Where:

Y = Organizational Performance β0 =

Constant (coefficient of intercept) X_1 =

Transportation Strategies

X_2 = Inventory management strategies

X_3 = Order Fulfillment Strategies

X_4 = Warehousing management Strategies
B_1… B_4 = regression coefficient of four variables.

3.11 Ethical Considerations

Authority from Mount Kenya University together with authority from research regulatory body NACOSTI were pursued prior to the beginning of the data collection process. Out of the respondents that were sampled, consent of participating on voluntary basis was explained before the study was undertaken. The researcher ensured an avoidance of those actions that were likely to cause harm, both of physical or emotional nature to the respondents. This was ensured by having a careful wording of sensitive or difficult questions in the questionnaire. Confidentiality and privacy was put into consideration by ensuring the information got from the respondents was only be for academic purposes.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter tis about key findings of the study on the effect of logistics strategies on supply chain performance of beverage manufacturing companies, a case of Coca-Cola east Africa, Nairobi. It begins by presenting the response rate with regards to questionnaires issued. The chapter talks about descriptive statistics in detailed way.

4.2 Reliability and Validity Test

The study carried out a pilot study to check that the instrument to be used for collecting information is valid and reliable. According Hazzi and Maldaon, (2015), performing a pilot study is important for making sure the tools used to get information are dependable. The instrument will be trusted for its dependability if it will be able to measure what it was supposed to and is truthful. Piloting is done for identification of any weakness in designing of the instrument and getting relevant information that can be used in choosing the sample. The results are in Table 3.

Table 3: Reliability Assessments for the Cronbach Alpha

Element of Variable	Alpha Value
Transportation Strategies	0.741
Inventory Management Strategies	0.724
Order fulfillment Cycle Time	0.713
Warehouse Management Strategies	0.727
Supply Chain Performance	0.714

Source, Researcher (2024)

According to the result of table 3 above we can observe that Cronbach Alpha values for transportation strategies, inventory management strategies, order fulfillment cycle time, warehouse management strategies and supply chain performance all are above 0.7 which confirms the variables were reliable for the study.

The researcher checked if the questionnaires were good by using construct validity method. According to Muganda (2018), construct validity refers to the extent to which a test captures the intended outcome. One way to check how worthy a test may be is to ask people who are experts in it. These experts can look at the questions and decide what they are trying to find out. Experts were asked to check out the instrument and give suggestions on how to make sure it really works well. These recommendations were then incorporated into the new version of the instrument which was then given to a few people in similar jobs. These pilot group was asked how easy it was for them to understand and answer the test questions. Any relevant comment was added to the final version the instruments. the pilot study, the instrument's dependability was evaluated.

4.3 Response Rate

From the questionnaires that were distributed to them, the study aimed to ascertain the response rate. Table 4 presents the findings.

Table 4: Response Rate

	Administrative position		**Executive position**		**Supervisory position**	
Response rate	**Freq**	**Percentage**	**Freq**	**Percentage**	**Freq**	**Percentage**
Respondent	8	100	21	84	39	87
Non-respondent	0	0	4	16	6	13
Total	**8**	**100**	**25**	**100**	**45**	**100**

Source, Researcher (2024)

The population of this study was 8 employees at administrative position, 25 employees at executive position and 45 employees at supervisory position of the Coca-Cola East

Africa, Nairobi Headquarter office. 78 questionnaires were issued to employees of which 68 employees answered the questionnaires and returned them. This response represented 100% for administrative position, 84% from for executive position and 87% for supervisory position. The response rate was satisfactory and in line to Mugenda and Mugenda (2003) which states that when 60% of people respond, it is good for analysis and reporting

4.4 Demographic Information

This part informs about the respondents who answered the questionnaires, based in different groupings categorized in terms of the; age, gender, duration of employment and the education qualifications level they had in the Company. Table 5 shows the results.

Table 5: Demographic Information

Item	Administrative position Freq	Per%	Executive position Freq	Per%	Supervisory position Freq	Per%
Gender						
Male	62	75	13	62	23	59
					16	
	8				**39**	
Female		25	8	38		41
Total	**100**	**21**	**100**	**100**	**Age gap in years**	
18- 20	0	0.0	0	0.0	1	2.6
21 -30	0	0.0	3	14.3	15	38.5
31-40	3	37.5	7	33.3	18	46.2
41 and Over	5	62.5	11	52.4	5	12.8
Total	**8**	**100**	**21**	**100**	**39**	**100**
Academic qualification						
Certificate	0	0.0	2	9.5	9	23.1
Diploma	2	25.0	6	28.6	15	38.5

Degree	2	25.0	9	42.9	10	25.6
Masters	3	37.5	3	14.3	3	3.7
Total		**100**	**21**	**100**		**100**
	1				0	
PhD	**8**	12.5	1	4.8	**39**	0.0
Duration of employment						
Less than 1 year	1	12.5	2	9.5	3	7.7
1-5 years	1	12.5	4	19.0	8	20.5
6-10 years	3	37.5	7	33.3	13	33.3
11-20 years	2	25.0	6	28.6	9	23.8
Above 20 years	1	12.5	2	9.5	6	15.4
Total	**8**	**100**	**21**	**100**	**39**	**100**

Source, Researcher, (2024)

Result of table 5 shows that majority of employees in these companies are men at 6(75%), 13(62%), and 23(59%) for administrative level, executive level and supervisory level respectively. The outcome in table 4 also informs that 5(62.5%), 11(52.4%), and 5(12.8%) of company employees are in the age bracket of 41 and above years for administrative, executive and supervisory levels respectively. 3(37.5%), 7(33.3%), and 18(46.2%) are of between 31-40 years respectively for administrative, executive and supervisory levels of management. Additionally, 0(0.0%), 3(14.3%), and 15(38.5%) are in the ages of between 21-30 years for administrative, executive and supervisory levels respectively. Those in the ages of between 18-20 years are 0(0.0%), 0(0.0%), and 1(2.6%) for administrative, executive, and supervisory levels of management in that respect. This confirms that in Coca-Cola company, has a welldiversified and distributed labor force in terms of the age.

With regards to the academic qualification, those with PhD qualification are 1(12.5%), 1(4.8%), and 0(0.0%) for administrative, executive and supervisory levels of management. For those with Master are represented by 3(37.5%), 3(14.3%), 3(3.7%)

respectively for administrative, executive and supervisory levels of management. Additionally, those with degree represents 2(25.0%), 9(42.9%), and 10(25.6%) correspondingly for administrative, executive and supervisory levels of management. Likewise, those with diploma represents 2(25.0%), 6(28.6%) and 15(15.5%). At last are those with certificate qualification which represents 0(0.0%), 2(9.5%), and 9(23.1%) respectively for administrative, executive and supervisory levels. This finding indicate that employees in these company had relevant education requirement for managers.

Table 5 is also showing results for the duration of the employees in the company. Those who have been with the company for more than twenty years are 1(12.5%), 2(9.5%), and 6(15.4%) of the employees for administrative, executive and supervisory management levels correspondingly. 11 to 20 years' duration are 2(25.0%), 6(28.6%), and 9(23.8%) for administrative, executive and supervisory levels respectively. 6 to 10 years are represented by 3(37.5%), 3(14.3%), and 3(3.7%) in that respect for administrative, executive and supervisory levels. 1 to 5 years are 1(12.5%), 4(19.0%), and 8(20.5%) correspondingly for administrative, executive and supervisory levels of management. Finally, those who have been with the company for not more than one year are 1(12.5%), 2(9.5%), and 6(15.4%) respectively for administrative, executive and supervisory levels of management. The findings inform that the company is able to maintain its work force for longer time hence less turnover rate and that majority at higher management levels are those who have been working for some time in the company.

4.5 Descriptive Statistics with regards to variables under study

The descriptive findings and the debates supply chain performance were examined in this part. Standard deviation, mean, and percentages were used to present the findings.

4.5.1 Descriptive statistics on transportation strategies

The first objective of this was investigate how transportation strategies affect beverage manufacturing companies' supply chain performance. The response was ranked in a scale of 1 to 5, with 1 denoting a strong disagreement, 2 indicating disagreement, 3 indicating neutral, 4 suggesting agreement, and 5 denoting a total agreement. Using mean and standard deviation of descriptive statistics, the replies were assembled.

Results are presented in table 6.

Table 6: Responses to transportation strategies

Opinion	SD %	D %	U %	A %	SA %	M	Std Dev
The organization has enough transportation units	9.6	10.5	7.8	43.4	28.7	3.21	1.15
The way that vehicles are scheduled now has made it easier to transport goods and products	3.2	6.5	7.1	42.4	40.8	3.08	1.12
The organization has a fleet management system in place.	2.6	5.4	6.3	39.7	46.0	3.07	1.11
The company has a tracking system set up.	5.4	6.9	4.7	47.2	35.8	3.13	1.07

The organization has a vehicle maintenance policy to ensure easy maintenance	3.2	5.2	3.1	48.1	40.4	3.09	1.09
The organization has a working customer oriented transportation scheme	4.4	5.1	4.2	39.5	46.8	3.11	1.15

Source: Researcher, (2024)

Key: n = 68, SD is strong disagreement, D is disagreement, N is neutral, A is agreement, SA is strong agreement, M is mean, Std. Dev is standard deviation.

Table 6 results show that all items had a standard deviation of more than 1.0. The statement "The organization has enough transportation units" and the statement "The organization has a working customer oriented transportation scheme" had the highest standard deviation of 1.15. In the statement "The organization has enough transportation units", the figure shows that a small number of people strongly disagreed or disagreed at 9.6% and 10.5% respectively while a large number of people agreed or strongly agreed at 43.4 % and 28.7 % respectively, this shows that, there was no extreme in the item, it makes a good measure. For the statement, "The organization has a working customer oriented transportation scheme" 4.4% and 5.1% strongly disagreed or disagreed in that respect while 39.5% and 46.8% agreed or strongly disagreed with the statement. The statement "The way that vehicles are scheduled now has made it easier to transport goods and products." had a variability of 1.12 which gives extremes. The result show that 3.2% strongly disagreed with the statement and a slightly bigger percentage 6.5% disagreed. However, a bigger percentage at 42.4% agreed with the statement while 40.8% strongly agreed. Therefore, it can be stated from the result that indeed, the way that vehicles are scheduled now has made it easier to transport goods and products. Additionally, result shows that majority of respondents at 39.7% and 46.0% supported the statement "The organization has a fleet management system in place". 47.2% and 35.8% agreed to and strongly agreed to the statement "The company has a tracking system set up.". Regarding the statement "The organization has a vehicle maintenance policy to ensure easy maintenance", an overwhelming majority at 48.1% and 40.4% agreed as well as strongly

agreed to the statement. For the statement, "The organization has a working customer oriented transportation scheme", 39.5% and 46.8% of the respondents it by either agreeing or strongly agreeing to it.

Moreover, the highest mean value was 3.21 and the lowest mean was 3.07. This informs that on average, respondents all had a positive position which is over 3.0. This establishes that, on the whole, the respondents showed optimism with the statements. These findings are validated by the scores from this section which informs that staff at Coca-Cola East Africa concur that transportation strategies are a significant factor in supply chain performance of beverage manufacturing companies.

4.5.2 Descriptive statistics on inventory management strategies

The second objective of the study was to establish the effect of Inventory Management Strategies on Supply Chain Performance of Beverage Manufacturing Companies. The responses were ranked from 1 to 5. The mean and standard deviation of descriptive statistics were used to summarize the response. Findings are presented in table 7.

Table 7: Responses to inventory management strategies

Opinion	SD %	D %	N %	A %	SA %	M	S Dev.
Organization has proper structure of managing inventory	3.8	3.5	4.7	54.5	32.5	3.21	1.13
The organization has skilled labor force to ensure a faster production time	4.9	5.6	4.1	46.4	39.0	3.19	1.17
Organization has a daily schedule commitment for ensuring a faster production time	4.4	5.1	4.2	39.5	46.8	3.11	1.15

The organization has always ensured efficient customer response in preventing inventory build up	5.7	6.5	3.2	39.7	44.9	3.15	1.14
The company only places orders with suppliers for supplies when there is a need from clients.	38.2	45.4	4.1	7.8	4.5	3.06	1.04
The organization has ensured a good relationship with trusted suppliers to facilitate quality supply of materials.	5.8	6.7	3.5	41.2	42.8	3.09	1.09

Source, Researcher (2024)

Key: n = 68, SD= strongly disagree, D =disagree, N = neutral, A = agree, SA = strongly agree, M = mean, Std. Dev = standard deviation

Table 7 shows that all the four items under consideration had standard deviations that were more than 1.0, informing that the items had accurate measures without extremes. The statement “Organization has proper structure of managing inventory” had a variability of 1.13 which shows no extremes. The number shows that very few respondents strongly disagreed at 3.8% or disagreed at 3.5%, but a big number of the respondents either agreed at 54.5% or strongly agreed at 32.5%. The item " The organization has skilled labor force to ensure a faster production time" had a standard deviation of 1.17. This tells that most of the respondents had similar opinions (strongly agree and agree) about the statement as being good measures. Results show that 46.4% and 39.0% either agreed or strongly agreed that “the organization has skilled labor force to ensure a faster production time” respectively, with only 4.9% and 5.6% strongly disagreeing or disagreeing respectively with the same statement. Though a few of the

respondents showed indecisiveness at 4.1%. In addition, the statement " Organization has a daily schedule commitment for ensuring a faster production time" provided a standard deviation of 1.15. A big number of the respondents were in support of this statement with 39.5% and 46.8% either agreeing or strongly agreeing while 5.1% and 4.4% disagreeing or strongly disagreeing respectively. On whether the organization has always ensured efficient customer response in preventing inventory buildup, 39.7% and 44.9% of the respondents agreed or strongly agreed to the statement while 6.5% and 5.7% disagreed or strongly disagreed to the statement. With regards to the statement "The company only places orders with suppliers for supplies when there is a need from clients", a big number of respondents did not support it in that 45.4% and 38.4% disagreed and strongly disagreed respectively. On a small number of the respondents supported the statement at 7.8% and 4.5% showing agreement and strong agreement. Lastly on the statement "The organization has ensured a good relationship with trusted suppliers to facilitate quality supply of materials", 41.2% and 42.8% showed their support with the statement by agreeing and strongly agreeing respectively. Only 6.7% and 5.8% of the respondents expressed lack of support by either disagreeing or strongly disagreeing respectively.

The mean was 3.21 at its highest and 3.06 at its lowest. The findings showed that respondents took a more positive stance of more than 3.0. This indicates that the majority of respondents to the survey agreed with the statements. The majority of employees of Coca-Cola east Africa concurred that having inventory management strategies was essential to supply chain performance of beverage manufacturing companies.

4.5.3 Descriptive statistics on order fulfillment strategies

The third objective was to assess how order fulfillment practices affect the supply chain efficiency of beverage manufacturing enterprises. The response was ranked from 1 to 5 with 1 denoting "Strongly Disagree," 2 "Disagree," 3 "Neutral," 4 "Agree," and 5 "Strongly Agree." The mean and standard deviation of descriptive statistics were used to summarize the response. Results are presented in table 8.

Table 8: Responses on order fulfillment strategies

Opinion Statements	SD %	D %	N %	A %	SA %	M	Std.Dev.
In order to satisfy customers, the company makes sure that order fulfillment cycle times are kept to a minimum.	7.8	8.4	5.3	43.1	35.4	3.72	1.18
The company has made sure that every order is delivered to clients in a timely and effective manner.	7.9	10.7	4.2	44.4	32.8	3.76	1.31
There is a clear structured process in place that is followed in ensuring orders are fulfilled within time	3.6	4.7	4.2	49.6	37.9	3.81	1.46
The company has consistently demonstrated a genuine interest in resolving client issues with order fulfillment.	10.8	14.3	6.3	39.4	29.2	3.67	1.24
Orders from customers are handled quickly by the company, no	6.8	9.1	3.1	43.2	37.8	3.39	1.12

matter how big or
little the order.

Source, Researcher, (2024)

Key: n= 68, SD= strongly disagree, D=disagree, N=neutral, A=agree, SA=strongly agree, M=mean, Std. Dev =standard deviation

Table 8's findings show that the items' highest standard deviation was 1.46. 7.8% and 8.4% of respondents strongly disagreed and disagree respectively with the statement "In order to satisfy customers, the company makes sure that order fulfillment cycle times are kept to a minimum" whereas 43.1% and 35.4% agreed and strongly agreed with the statement. This indicates that indeed one of the main factor in customer satisfaction is order fulfillment cycle times which then affects supply chain performance. In addition, with regards to the statement "The company has made sure that every order is delivered to clients in a timely and effective manner", 7.9% and 10,7% of the respondents did not support the statement by strongly disagreeing and disagreeing respectively while 44.4% and 32.8% agreed and strongly agreed respectively.

3.6% strongly disagreed and 4.7% disagreed to the statement "There is a clear structured process in place that is followed in ensuring orders are fulfilled within time" respectively, though 49.6% and 37.9% indicated agreement and strong agreement in support of the statement. A significant number of respondents at 68.6%, supported the statement that "The company has consistently demonstrated a genuine interest in resolving client issues with order fulfillment" with 37.7% not in support of the statement. In regards to the statement "Orders from customers are handled quickly by the company, no matter how big or little the order", 6.8% and 9.1% of the respondents did not support the statement by strongly disagreeing and disagreeing respectively while 43.2% and 37.8% agreed and strongly agreed respectively.

The highest mean value was 3.81 and the lowest mean was 3.39. This informs that on average, respondents all had a positive position which is over 3.0. This establishes that, on the whole, the respondents showed confidence with the statements. These findings are validated by the scores from this section which informs that staff at Coca-Cola East

Africa concur that order fulfillment strategies are a significant factor in determining supply chain performance of beverage manufacturing companies.

4.5.4 Descriptive statistics on warehousing strategies

The fourth objective of the study was to ascertain how warehousing strategies affect beverage manufacturing companies' supply chain performance. Ranking of responses was from 1 to 5, with 1 denoting "strongly disagree," 2 denoting "disagree," 3 denoting "undecided," 4 denoting "agree," and 5 denoting "strongly agree." The mean and standard deviation of descriptive statistics were used to summarize the response. The outcome was presented in table 9.

Table 9: Responses on warehousing strategies

Opinion Statements	SD %	D %	N %	A %	SA %	M	Std. Dev.
The company keeps aisle spacing sufficient for warehouse machinery to function properly.	15.2	20.7	16.4	30.1	17.6	3.16	1.35
The organization is using a document management system suiting warehouse operations	12.4	23.3	6.2	30.6	27.5	2.97	1.23
There exist standard procedures for managing warehouse activities	5.5	7.6	5.7	45.7	35.5	2.95	1.38
The organization has an automated and well mechanized workflow in the warehouse	2.1	4.4	1.2	37.4	54.9	2.96	1.33

There are adequate regulatory controls in the warehouse	5.4	11.5	4.6	40.2	38.3	3.07	1.14
The company regularly performs maintenance and repairs in the warehouse.	3.9	7.7	5.4	39.6	43.4	3.12	1.19

Source, Researcher (2024)

Key: n= 68, SD= strongly disagree, D=disagree, N=neutral, A=agree, SA=strongly agree, M=mean, Std. Dev. =standard deviation

The outcome in table 9 reveals that all four items had standard deviations that was more than 1.0. The items' maximum standard deviation was 1.38, indicating that the scoring had extremes. 15.2% and 20.7% of respondents gave highly disagree and disagree answers to the question, " The company keeps aisle spacing sufficient for warehouse machinery to function properly," respectively, while 30.1% and 17.6% indicated agree and strongly agree responses to the statement. The substantial standard deviation observed indicates that the respondents were dispersed between the positive and the negative. 12.4% and 23.3% of the respondents disagreed and strongly disagreed with the statement " The organization is using a document management system suiting warehouse operations" with 30.6% and 27.5% either agreeing or strongly agreeing to the same statement. Moreover, as per the statement “There exist standard procedures for managing warehouse activities”, 5.5% and 7.6% strongly disagreed and disagreed respectively though 45.7% and 35.5% agreed and strongly agreed respectively with the statement. In regards to the statement “The organization has an automated and well mechanized workflow in the warehouse”, 2.1% and 4.4% strongly disagreed and disagreed respectively with the statement, with 37.4% and 54.9% agreeing and strongly agreeing to the statement. As to whether there are adequate regulatory controls in the warehouse, 5.4% and 11.5% strongly disagreed and disagreed respectively to the statement though 40.2% and 38.3% of the respondents agreed to and strongly agreed to the statement. Considering the statement “The company regularly performs maintenance and repairs in the warehouse” 3.9% and 7.7% strongly disagreed and disagreed respectively to the statement though 39.6% and 43.4% of the respondents agreed to and strongly agreed to the statement.

The highest mean value was 3.16 and the lowest mean was 2.95. This notifies that on average, all the respondents had a positive position which was over 3.0. This establishes that, on the whole, the respondents showed confidence with the statements. These findings are validated by the scores from this section which informs that staff at Coca-Cola East Africa concur that warehousing strategies are a significant factor in determining supply chain performance of beverage manufacturing companies.

4.5.5 Descriptive statistics on supply chain performance

The study was also concerned with statements in relation to supply chain performance. Ranking of responses was from 1 to 5, with 1 denoting "strongly disagree," 2 denoting "disagree," 3 denoting "undecided," 4 denoting "agree," and 5 denoting "strongly agree." The mean and standard deviation of descriptive statistics were used to summarize the response. The outcome was presented in table 10.

Table 10: Responses on supply chain performance

Opinion Statements	SD %	D %	N %	A %	SA %	M	Std.Dev.
The organization always delivers damage-free products to its customers	4.1	6.8	7.4	44.1	37.6	3.27	1.15
The organization has been able to minimize the costs related to supply chain	6.4	7.3	5.2	43.6	37.5	3.15	1.13
Logistics strategies practices in general have improved supply chain performance	5.5	7.6	5.7	45.7	35.5	3.25	1.21

Within the company, supply chain performance is efficient.	2.1	4.4	1.2	37.4	54.9	2.89	1.17
Customers' requirements have always been met in terms of quality and service delivery	5.4	11.5	4.6	40.2	38.3	3.18	1.16

Source, Researcher (2024)

Key: n= 68, SD= strongly disagree, D=disagree, N=neutral, A=agree, SA=strongly agree, M=mean, Std. Dev. =standard deviation

The outcome in table 10 reveals that all the five items had standard deviations that was more than 1.0. The items' highest standard deviation was 1.38, indicating that the scoring had extremes. 4.1% and 6.8% of respondents gave strongly disagree and disagree answers to the statement, "The organization always delivers damage-free products to its customers," respectively, while 44.1% and 37.6% indicated agree and strongly agree responses to the statement. The substantial standard deviation observed indicates that the respondents were dispersed between the positive and the negative but there was skewedness towards the positive. 6.4% and 7.3% of the respondents disagreed and strongly disagreed with the statement " The organization has been able to minimize the costs related to supply chain" with 43.6% and 37.5% either agreeing or strongly agreeing to the same statement. Moreover, as per the statement "Logistics strategies practices in general have improved supply chain performance", 5.5% and 7.6% strongly disagreed and disagreed respectively though 45.7% and 35.5% agreed and strongly agreed respectively with the statement. In regards to the statement "Within the company, supply chain performance is efficient", 2.1% and 4.4% strongly disagreed and disagreed respectively with the statement, with 37.4% and 54.9% agreeing and strongly agreeing to the statement. As to whether Customers' requirements have always been met in terms of quality and service delivery, 5.4% and 11.5% strongly disagreed and disagreed respectively to the statement though 40.2% and 38.3% of the respondents agreed to and strongly agreed to the statement.

The highest mean value was 3.27 and the lowest mean was 2.89. This notifies that on average, all the respondents had a positive position which was over 3.0. This establishes that, on the whole, the respondents showed confidence with the statements. These findings are validated by the scores from this section which informs that staff at Coca-Cola East Africa concur with the strategies with regards to supply chain performance.

4.6 Correlation Analysis

The study used the Pearson correlation coefficient (r) to examine the strength of the relationship between the variables. The correlations matrix in table 11 provides an illustration of the relationship between the variables.

Table 11: Correlation Matrix of the Variables under Study

Variable		SCP	TS	IS	OS	WS
SCP	Pearson Correlation	1				
	Sig.(2tailed)					
TS	Pearson Correlation	.432*	1			
	Sig.(2-tailed)	0.001				
IS	Pearson Correlation	.395*	.378*	1		
	Sig.(2-tailed)	0.001	0.001			
OS	Pearson Correlation	.377*	.359*	.381*	1*	
	Sig.(2-tailed)	0.001	0.001	0.001		
WS	Pearson Correlation	.455*	.397	.379	.374	1*
		68	68	68	68	68

N

Source, Researcher (2024)

Key: SCP=Supply Chain Performance, TS=Transportation Strategies, IS=Inventory Management Strategies, OS=Order fulfillment Strategies, WS=Warehousing Strategies.

According to table 11's findings, there is a substantial and positive correlation between transportation strategies and supply chain performance: r (TS, SCP) = 0.4322, p. 001.This informs that any positive adjustment in transportation strategies will result in positive supply chain performance.

Results in Table 12 also show that inventory management strategies are strongly linked with supply chain performance, with a positive correlation of r (IS, SCP) = 0.395, p 0.001. Order fulfillment strategies at r (OS, SCP) =0.377, p 0.001, was likewise revealed to be positively linked with green procurement implementation. The results in relation to warehousing management strategies was also found to be positively and significantly correlated with supply chain performance at r (WS, SCP) =0.455, p<0.001.

4.7 Regression Analysis

Multiple Regression analysis was done to establish the relationship between the variables under study

4.7.1 Joint effect of transportation strategies, inventory management strategies, order fulfillment strategies and warehousing strategies on supply chain performance

The study carried out multiple regression analysis to establish the joint effect of transportation strategies, inventory management strategies, order fulfillment strategies and warehousing strategies on supply chain performance. The results are presented in Table 12.

Table 12: Joint effect of transportation strategies, inventory management strategies, order fulfillment strategies and warehousing strategies on supply chain performance.

Model Summary

Model	R Square	Adj. R Square	S.E
	0.573	0.328	0.341

a. Predictors: (Constant), Transportation Strategies, Inventory Management Strategies, Order fulfillment Strategies, Warehousing Management Strategies b. Dependent Variable: Supply Chain Performance

ANOVA[a]

	Sum of Squares	df	Mean Square	F	Sig.
Regression	15.792	3	5.264	16.606	0.043
Residual	20.288	64	0.317		
Total	36.080	67			

a. Predictors: (Constant), Transportation Strategies, Inventory Management Strategies, Order fulfillment Strategies, Warehousing Management Strategies b. Dependent Variable: Supply Chain Performance

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	S. E	Beta		
Constant	2.241	0.352		4.032	0.136
Transport					

ation	0.456	0.233	0.431		2.514	0.149
Strategies						
Inventory						
Managem						
	0.211	0.034	0.206		2.742	0.131
ent						
Strategies						
Order						
fulfillmen						
	0.183	0.042	0.134	2.331		0.158
t						
Strategies						
Warehous						
ing						
managem	0.194	0.039	0.129	2.683		0.142
ent strategies						

a. Predictors: (Constant), Transportation Strategies, Inventory Management Strategies, Order fulfillment Strategies, Warehousing Management Strategies b. Dependent Variable: Supply Chain Performance

From the multiple regression results, as shown in Table 12, the R^2 of 0.573 informs that the joint effect of transportation strategies, inventory management strategies, order fulfillment strategies and warehousing strategies contributed to an extent of (57.3%) for the dependent variable (supply chain performance) of beverage manufacturing companies. The remaining proportion (42.7%) being related to the error as well as other extraneous variables. Besides, the value for R= 0.328 was highly sufficient to indicate that the model adjusted with more variables being incorporated in trying to determine the joint effect of the independent variables on the dependent variable among beverage manufacturing companies.

The results of the ANOVA inform that the mean square (0.317) of the residuals was a bit small compared to the mean square (5.264) of the regression. Further, the results indicate that the $F_{(3, 64)} = 16.606$ was statistically significant ($p<0.05$). This indicates

that in overall, model was a good fit and the coefficients are not equal to zero. Thus the model significantly predicts change in the dependent variable as a result of predictor variables.

According to the equation by taking all other factors constant at zero supply chain performance will increase by 2.241 units. The results also indicate that there exists a positive statistically significant relationship between transportation strategies and supply chain performance of beverage manufacturing companies ($\beta = 0.456$, $P<0.05$). This implies that when transportation strategies are adjusted to the positive by an additional unit, supply chain performance of beverage manufacturing companies increases by 0.456. It was also established that the relationship between inventory management strategies and supply chain performance is positive and statistically significant ($\beta = 0.211$, $P<0.05$, and that when inventory management strategies increases by an additional unit, supply chain performance increases by 0.211. In addition, it was also revealed that there exists a significant positive relationship between order fulfillment strategies and supply chain performance of beverage manufacturing companies with a statistically significant of ($\beta = 0.183$, $P<0.05$) in that when order fulfillment strategies increase by an additional unit, supply chain performance increases by 0.183. Finally, result also showed that warehousing management strategies had a statistically significant connection with supply chain performance of beverage manufacturing companies at ($\beta = 0.194$, $P<0.05$). This means that when warehousing management strategies is increases by one unit, supply chain performance will increase by 0.194 units.

From the regression results, the following regression model was derived;

$$Y= 2.241 + 0.456X_1 + 0.211X_2 + 0.183X_3 + 0.194X_4$$

CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section gives summary, conclusion, recommendation plus suggestion for future study that were driven by objectives.

5.2 Summary of the Findings

The purpose of the study was to assess the effects of logistics strategies on supply chain performance of beverage manufacturing companies: A case of coca cola East Africa, Nairobi. Particularly, the study looked at how transportation strategies, inventory management strategies, order fulfillment cycle time, warehouse management strategies affect supply chain performance.

5.2.1 Transportation Strategies and Supply Chain Performance

The first objective for study was investigate how transportation strategies affect beverage manufacturing companies' supply chain performance. For this objective, the leading question was “What are the effect of transportation strategies on supply chain performance of beverage manufacturing companies?”. The findings from this study indicated a relationship that was positive between transportation strategies and supply chain performance among beverage manufacturing companies. From this result it was a confirmation that transportation strategies were a major determinant in supply chain performance.

5.2.2 Inventory Management Strategies and Supply Chain Performance

In the second objective, the study’s intention was to establish the effect of Inventory Management Strategies on Supply Chain Performance of Beverage Manufacturing Companies. The leading question was “To what extent does inventory management strategies affect supply chain performance of beverage manufacturing companies??”. The outcome confirmed that there was a correlation that was positive between inventory management strategies and supply chain performance among beverage manufacturing companies. The findings consequently established that inventory management strategies are a factor in supply chain performance among beverage manufacturing companies.

5.2.3 Order Fulfillment Strategies and Supply Chain Performance

The third objective in the study aimed at assessing how order fulfillment practices affect the supply chain performance of beverage manufacturing enterprises. The main question

was “iii What are the effect of order fulfillment strategies on supply chain performance of beverage manufacturing companies?”. Result came out exhibiting a positive connection between order fulfillment strategies and supply chain performance of beverage manufacturing companies. This result explains the importance of order fulfillment strategies in supply chain performance of beverage manufacturing companies. The findings accordingly established that order fulfillment strategies are a factor in supply chain performance among beverage manufacturing companies.

5.2.4 Warehousing management Strategies and Supply Chain Performance

The fourth objective of the study intended at ascertaining how warehousing management strategies affect beverage manufacturing companies' supply chain performance. The question was “What are the effect of order fulfillment strategies on supply chain performance of beverage manufacturing companies?”. Result indicated a positive correlation between warehousing management strategies and supply chain performance among beverage manufacturing companies. This result informs of the importance of warehousing management strategies in supply chain performance among beverage manufacturing companies. The findings hence established that warehousing management strategies is a factor in supply chain performance among beverage manufacturing companies.

5.3 Conclusion.

The following conclusions were derived from the findings of study.

5.3.1 Transportation Strategies and Supply Chain Performance

Results indicate that transportation strategies have a positive, significant impact on supply chain performance among beverage manufacturing companies in Nakuru.

Findings show that there is a positive, significant effect of transportation strategies on supply chain performance among beverage manufacturing companies. From the result the researcher was able to conclude that transportation strategies were significant in explaining supply chain performance among beverage manufacturing companies.

5.3.2 Inventory Management Strategies and Supply Chain Performance

Results indicate that inventory management strategies have a positive, significant impact on supply chain performance among beverage manufacturing firms. Findings show that there is a positive, significant effect of inventory management strategies on supply chain performance among beverage manufacturing companies. From the result the researcher was able to conclude that inventory management strategies were significant in explaining supply chain performance among beverage manufacturing companies.

5.3.3 Order Fulfillment Strategies and Supply Chain Performance

Results indicate that order fulfillment strategies have a positive, significant impact on supply chain performance among beverage manufacturing firms. Findings show that there is a positive, significant effect of order fulfillment strategies on supply chain performance among beverage manufacturing companies. From the result the researcher was able to conclude that order fulfillment strategies were significant in explaining supply chain performance among beverage manufacturing companies.

5.3.4 Warehousing Management Strategies and Supply Chain Performance

Results indicate that warehousing management strategies have a positive, significant impact on supply chain performance among beverage manufacturing firms. Findings show that there is a positive, significant effect of warehousing management strategies on supply chain performance among beverage manufacturing companies. From the result the researcher was able to conclude that warehousing management strategies were significant in explaining supply chain performance among beverage manufacturing companies.

5.4 Recommendations

From the result of the study, it is clearly shown that all the four factors considered in the study have positive effect towards supply chain performance among beverage manufacturing companies. Specially, study observed that transportation strategies had

a significant relation that is positive on supply chain performance among beverage manufacturing companies. Recommendation from study is for manufacturing firms to put in place as of proactive process and transportation management strategies and policies that are in support of supply chain performance for ensuring improved organization performance.

The study also confirmed that inventory management strategies have effect on supply chain performance among beverage manufacturing companies. It is revealed that there exists a relation that is positive, and significant concerning inventory management strategies towards supply chain performance among beverage manufacturing companies. The study consequentially makes a recommendation that beverage manufacturing firms should put in place proactive structure of managing and maintaining proper inventory in supporting of supply chain in order to ensure improved firm performance.

Furthermore, because findings of the research confirmed that order fulfillment strategies have effect on supply chain performance among beverage manufacturing companies. It is revealed that there exists a relation that is positive, and significant concerning order fulfillment strategies towards supply chain performance among beverage manufacturing companies. The study consequentially makes a recommendation that beverage manufacturing firms should always ensure a clear and up-to-date process of order fulfillment so as to add effectiveness of supply chain in order to ensure improved firm performance.

finally, study also confirmed that warehousing management strategies is a significant factor with regards to supply chain performance among beverage manufacturing companies. It was revealed that there exists a correlation that is positive, and significant concerning warehousing management strategies towards supply chain performance among beverage manufacturing companies. As such, this study makes a recommendation that beverage manufacturing firms should have a well-structured warehouse management system that supports of supply chain activities of the organization in order to ensure improved firm performance.

5.5 Suggestion for Further Study

The purpose of the study was to assess the Effects of logistics Strategies on Supply Chain Performance of Beverage Manufacturing Companies: A case of coca cola East Africa, Nairobi. Study puts a suggestion for studies of similar nature be extended in other sectors and firms. The study also suggests that a further study on some other factors that are likely to affect supply chain performance that were not covered in the study to be considered.

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Appendix I: Informed Consent Form

Dear sir/madam,

RE: REQUEST FOR YOUR CONSENT TO PARTICIPATE IN A RESEARCH

I kindly write to request for you to participation in a research project. The study title is: ***Effects of logistics strategies on supply chain performance of beverage manufacturing companies: A case of coca cola East Africa, Nairobi*.** The potential risks and discomforts of the study are minimal. This is because you will only be expected to participate in the questionnaire. Before filling the questionnaire, all respondents will be reminded and requested to keep what is discussed to be confidential. There are no potential benefits for you as a person for participating in this study. I am requesting you to volunteer and share your opinions. No payments will be made for the information that you give or for the time that you will spend with us. Confidentiality of any information that you provide will be maintained. Once the study's conclusions are published, the data will be deleted. It will only be used for this reason. This study is completely voluntary to participate in. You free to withdraw at any point and/ or free to refuse to fill out the questionnaire. If you accept to participate in this study, please append your signature below:

Signature of participant…… Date:……

If you have any query, please contact the following:

Mobile phone:

Sincerely,

Appendix II: Questionnaire for The Respondent

Section A: Demographic Data

1. State your Gender

Male [ ] Female [ ]

2. State your age gap

18-20 [ ], 21- 30 [ ], 31- 40 [ ], 41 and Over [ ]

3. State your academic qualification

a) Certificate [ ] b) Diploma [ ] c) Degree [ ]

d) Master's Degree [ ] e) PhD degree [ ]

4. Kindly indicate the number of years you have been with the organization.

a) Less than 1year [ ] b) 2-5Years [ ] c) 6-10Years [ ]

d)11-20Years [ ] e) Above 20Years [ ]

Section B: Transportation strategies and supply chain performance

5. Please indicate your agreement level with the statements below by inserting a mark in a place of choice.

Strongly Disagree (1) Disagree (2) Neutral(3) Agree (4) Strongly agree (5)

Transportation strategies	1	2	3	4	5
The organization has enough transportation units					
The way that vehicles are scheduled now has made it easier to transport goods and products					
The organization has a fleet management system in place.					
The company has a tracking system set up.					
The organization has a vehicle maintenance policy to ensure easy maintenance					
The organization has a working customer oriented transportation scheme					

Section C: Inventory management strategies and supply chain performance

6. Please indicate your agreement level with the statements below by inserting a mark in a place of choice.

Strongly Disagree (1)Disagree (2) Neutral(3) Agree (4) Strongly agree(5)

Inventory management strategies	1	2	3	4	5
Organization has proper structure of managing inventory					
The organization has skilled labor force to ensure a faster production time					
Organization has a daily schedule commitment for ensuring a faster production time					
The organization has always ensured efficient customer response in preventing inventory build up					
The company only places orders with suppliers for supplies when there is a need from clients.					
The organization has ensured a good relationship with trusted suppliers to facilitate quality supply of materials.					

Section D: Order fulfillment strategies and supply chain performance

7. Please indicate your agreement level with the statements below by inserting a mark in a place of choice.

Strongly Disagree (1) Disagree (2) Neutral(3) Agree(4) Strongly agree (5)

Order fulfillment strategies	1	2	3	4	5
In order to satisfy customers, the company makes sure that order fulfillment cycle times are kept to a minimum.					
The company has made sure that every order is delivered to clients in a timely and effective manner.					
There is a clear structured process in place that is followed in ensuring orders are fulfilled within time					
The company has consistently demonstrated a genuine interest in resolving client issues with order fulfillment.					
Orders from customers are handled quickly by the company, no matter how big or little the order.					

Section E: Warehousing strategies and supply chain performance

8.Please indicate your agreement level with the statements below by inserting a mark in a place of choice.

Strongly Disagree (1) Disagree (2) Neutral(3) Agree (4) Strongly agree (5)

Warehousing strategies	1	2	3	4	5
The company keeps aisle spacing sufficient for warehouse machinery to function properly.					
The organization is using a document management system suiting warehouse operations					

There exist standard procedures for managing warehouse activities					
The organization has an automated and well mechanized workflow in the warehouse					
There are adequate regulatory controls in the warehouse					
The company regularly performs maintenance and repairs in the warehouse.					

Section F: Supply chain performance

9.Please indicate your agreement level with the statements below by inserting a mark in a place of choice.

Strongly Disagree (1) Disagree (2) Neutral(3) Agree (4) Strongly agree (5)

	1	2	3	4	5
The organization always delivers damage-free products to its customers					
The organization has been able to minimize the costs related to supply chain					
Logistics strategies practices in general have improved supply chain performance					
Within the company, supply chain performance is efficient.					
Customers' requirements have always been met in terms of quality and service delivery					

Appendix III: ERC Certificate

Mount Kenya University

REF: **MKU/ISERC/4338** Date: 30 August 2024
TO: **FEISAL ABDOW ISSACK**
REG: **MPSM/2023/42111**

Dear Sir/Madam,

RE: EFFECTS OF LOGISTICS STRATEGIES ON SUPPLY CHAIN PERFORMANCE OF BEVERAGE MANUFACTURING COMPANIES: A CASE OF COCA COLA EAST AFRICA, NAIROBI

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **3058.** The approval period is **30/08/2024 - 29/08/2025.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

MOUNT KENYA UNIVERSITY
ETHICS REVIEW COMMITTEE
P. O. Box 342 - 01000,
THIKA

Appendix IV: Introduction Letter

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MPSM/2023/42111

2nd September, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki Way, Upper Kabete,
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: FEISAL ABDOW ISSACK- REGISTRATION NO. MPSM/2023/42111

The purpose of this letter is to introduce the above named student who is pursuing **Master of Science in Procurement and Supplies Management** in the **Department of Management** in the school of **Business and Economics**

The title of the research is **"Effects of Logistics Strategies on Supply Chain Performance of Beverage Manufacturing Companies: A Case of Coca Cola East Africa, Nairobi.** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **September, 2024 and November, 2024.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P.O. Box 342-01000, THIKA
Office of the Director
Graduate Studies

Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

Appendix V: NACOSTI Permit

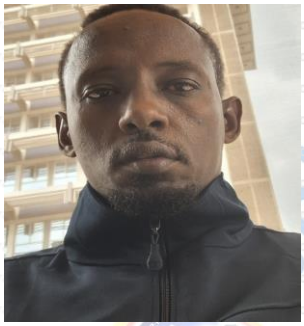
REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **82148**

Date of Issue: **12/September/2024**

RESEARCH LICENSE



This is to Certify that Mr.. FEISAL ABDOW ISSACK of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EFFECTS OF LOGISTICSSTRATEGIES ON SUPPLY CHAIN PERFORMANCE OF BEVERAGE MANUFACTURING COMPANIES: A CASE OF COCA COLA EAST AFRICA, NAIROBI for the period ending : 12/September/2025.

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Appendix VI: Turnitin Report

Feisal Abdow

EFFECTS OF LOGISTICS STRATEGIES ON SUPPLY CHAIN PERFORMANCE OF BEVERAGE MANUFACTURING COMPANIE…

Assignment title

postgraduate

Mount Kenya University

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