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DISTRIBUTION MANAGEMENT PRACTICES AND PERFORMANCE OF LOGISTICS FIRMS IN NAIROBI CITY COUNTY, KENYA

[1] Maina Elizabeth, [2] Dr. Wachiuri Elizabeth

[1]Masters Student, Jomo Kenyatta University of Agriculture and Technology
[2]Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

Logistics firms play a crucial role in the economic development of Kenya, particularly in facilitating trade and ensuring the smooth movement of goods throughout the country. However, logistics firms in Nairobi City County face significant challenges that impede their overall performance. Recent studies indicate that up to 30% of logistics companies in the region struggle with inefficiencies due to outdated technology, inadequate infrastructure, and poor management practices. The general objective of the study was to assess the influence of distribution management practices on performance of logistics firms in Nairobi City County, Kenya. Specifically, the study sought to assess the influence of order fulfillment on performance of logistics firms in Nairobi City County, Kenya and to determine the influence of warehousing on performance of logistics firms in Nairobi City County, Kenya. A descriptive cross sectional survey research design is therefore proposed for this study. This study targeted a total of 250 firms operating in Nairobi County. The study therefore targeted 1500 management employees working in these firms. Yamane formula was adopted to calculate the study sample size. Therefore, the study sample size was 400 respondents. The study collected primary data for analysis. structured questionnaires. The questionnaires were pretested to ensure clarity and content validity prior to them being administered. The collected research data was checked for any errors and omissions, coded, defined and then entered into Statistical Package for Social Science (SPSS Version 23 Descriptive statistics were used to portray the sets of categories formed from the data. The study used multiple linear regression analysis to test the statistical significance of the various independent variables. The study concludes that order fulfillment has a positive and significant effect on performance of logistics firms in Nairobi City County. The study also concludes that warehousing has a positive and significant effect on performance of logistics firms in Nairobi City County. Based on the findings, the study recommends that the management of logistics firms in Kenya should adopt a customer-centric approach by implementing an integrated order management system (OMS). This system should streamline the entire fulfillment process by centralizing information and automating workflows. By providing real-time updates on order status and inventory availability, the OMS can improve communication with customers, leading to increased transparency and trust.

Key Words: Distribution Management Practices, Order Fulfillment, Warehousing, Performance of Logistics Firms In Nairobi City County, Kenya

Background of the Study

Logistics firms serve as the backbone of the economy, facilitating the movement of goods and services across various regions. With the rise of e-commerce and consumer expectations for faster delivery times, the efficiency and effectiveness of logistics operations have become critical determinants of competitive advantage. Understanding the performance of these firms allows stakeholders to identify best practices, optimize resource allocation, and improve overall supply chain resilience (Sarwar, *et al*, 2021). Historically, logistics was often viewed as a cost center, focused primarily on transportation and warehousing. However, as the complexity of supply chains has increased, logistics firms have evolved into strategic partners that contribute significantly to organizational success. The integration of technology, such as automation, data analytics, and real-time tracking systems, has transformed logistics operations, enhancing visibility and responsiveness. As a result, performance metrics have shifted from traditional cost-based indicators to include measures of service quality, customer satisfaction, and sustainability (Tan, Yeo & Low, 2020).

Furthermore, the competitive landscape for logistics firms is constantly changing, driven by factors such as globalization, regulatory challenges, and technological advancements. This dynamic environment necessitates ongoing research to understand the various elements influencing logistics performance. Key performance indicators (KPIs) such as delivery speed, accuracy, inventory management, and cost efficiency are essential for assessing logistics effectiveness. By studying these factors, researchers and practitioners can gain insights into how logistics firms can adapt to evolving market demands and maintain a competitive edge (Adebayo & Aworemi, 2021).

Distribution management practices refer to the strategies, processes, and activities involved in efficiently moving products from manufacturers or suppliers to the end consumers. These practices encompass the planning, implementation, and control of the physical flow of goods, ensuring timely and cost-effective delivery (Keawkunti, *et al*, 2020). Key components of distribution management include inventory management, warehousing, transportation, order processing, and logistics coordination (Ali, Showkat & Chisti, 2022). Effective distribution management practices are essential for maintaining a reliable supply chain, minimizing costs, improving customer satisfaction, and optimizing the overall distribution network (Tan, Yeo & Low, 2020). This study sought to assess the influence of distribution management practices and performance of logistics firms in Nairobi City County, Kenya.

Tan, Yeo and Low (2020) in Malaysia found that distribution management practices have a direct relationship with manufacturing capabilities and thus highlighted the importance of these practices to the manufacturing organization. The result revealed there are specific dimensions of the distribution management practices that have a direct impact on the manufacturing capabilities. The managers shall identify and implement the distribution management practices to influence the specific manufacturing capabilities accordingly.

In Rwanda, Mwizerwa (2024) found that the researcher rejected null hypotheses tested since F calculated is greater than F critical and thus falls in the rejection region, the researcher came to the conclusion that there is no sufficient evidence that supports the argument that distribution management practices had no significant effect on the performance of Gorilla logistics Limited in Rwanda. This suggests that distribution management practices have had a significant effect on the performance of Gorilla logistics Limited in Rwanda.

Mwende and Nyaribo (2023) found that outsourcing practices have a negative but insignificant effect on organizational performance. On the other hand, inventory management practices, lean practices and strategic supplier relationship management practices all have a positive and significant effect on the performance of state corporations.

Kariuki and Ismail (2020) found that proper distribution management with the distributers is essential in ensuring that organizations products reach the customers at the right time and place, empowering them with organizational information so that they are able to answer and give information to the customers as and when needed.

Gudda and Deya (2020) found that the regression coefficients of the study show that distribution management practices have a significant influence on performance of the firms. This implied that increasing levels of distribution management practices by a unit would increase the levels of performance of the firms. This shows that distribution management practices have a positive influence on performance of the firms.

Statement of the Problem

Logistics firms play a crucial role in the economic development of Kenya, particularly in facilitating trade and ensuring the smooth movement of goods throughout the country. These firms are essential for maintaining supply chain efficiency, contributing to job creation, and enhancing customer satisfaction (Mwende & Nyaribo, 2023). As Kenya positions itself as a regional hub for trade and commerce, the effectiveness of logistics operations directly impacts national productivity and economic growth. In this context, efficient logistics practices are vital for supporting local industries and attracting foreign investment, making their performance a key area of focus for policymakers and business leaders alike (Kariuki & Ismail, 2020).

However, logistics firms in Nairobi City County face significant challenges that impede their overall performance. Recent studies indicate that up to 30% of logistics companies in the region struggle with inefficiencies due to outdated technology, inadequate infrastructure, and poor management practices (Shakita & Ndeto, 2023). For instance, a survey conducted by the Kenya Transporters Association revealed that over 40% of firms reported delays in delivery times, primarily due to traffic congestion and poorly maintained road networks. Additionally, a lack of skilled personnel and insufficient training opportunities further exacerbate these performance issues, highlighting the urgent need for targeted interventions to enhance operational effectiveness (Shombe and Ouma (2023).

Distribution management practices are critical in addressing these performance challenges and can significantly enhance the efficiency of logistics firms. By implementing best practices such as optimized route planning, effective inventory management, and real-time tracking systems, firms can reduce operational costs and improve service delivery (Gudda & Deya, 2022). Research has shown that firms employing robust distribution management strategies can achieve a 20-30% improvement in delivery times and a substantial decrease in transportation costs. Moreover, integrating advanced technology in distribution practices not only streamlines operations but also boosts customer satisfaction, fostering loyalty and repeat business(Sarwar, *et al,* 2021). Consequently, a comprehensive understanding of the relationship between distribution management practices and logistics firm performance in Nairobi City County is essential for driving sustainable growth and competitiveness in the sector.

Objectives of the Study

General objectives

The general objective of the study was to assess the influence of distribution management practices on performance of logistics firms in Nairobi City County, Kenya

Specific Objectives

This study was guided by the following specific objectives

i. To assess the influence of order fulfillment on performance of logistics firms in Nairobi City County, Kenya
ii. To determine the influence of warehousing on performance of logistics firms in Nairobi City County, Kenya

Theoretical Framework

Supply Chain Management (SCM) Theory

Supply Chain Management (SCM) Theory founded by Keith Oliver (1982) encompasses the planning, implementation, and control of supply chain activities with the goal of maximizing customer value while minimizing costs. It involves the strategic coordination of various elements, including suppliers, manufacturers, warehouses, distribution centers, and retailers, to ensure that products are delivered to consumers efficiently and effectively (Rahman & Wu, 2021). SCM is not just about managing logistics and transportation; it also includes the flow of information and materials throughout the entire supply chain, from raw materials to end consumers. This holistic approach enables organizations to respond more rapidly to market demands and customer needs, ultimately enhancing competitiveness. A fundamental aspect of SCM is the integration of processes across different functions within an organization, as well as collaboration with external partners. This means that procurement, production, inventory management, and distribution are all interconnected, allowing for better visibility and responsiveness throughout the supply chain. Information technology plays a crucial role in this integration, enabling real-time data sharing and communication among stakeholders. By leveraging advanced tools like Enterprise Resource Planning (ERP) systems and data analytics, organizations can optimize their operations, reduce lead times, and make more informed decisions (Vuyokazi, 2023).

SCM also emphasizes the importance of relationship management within the supply chain. Building strong partnerships with suppliers and distributors can lead to improved quality, innovation, and flexibility. Trust and collaboration among all parties involved can foster a more resilient supply chain, capable of adapting to changes and disruptions. This relational perspective highlights the shift from a transactional view of supply chain interactions to a more collaborative, value-driven approach (Gatobu & Waiganjo, 2021). Moreover, SCM Theory recognizes the significance of sustainability and ethical practices in supply chain operations. As consumers become more conscious of environmental and social issues, organizations are increasingly expected to adopt responsible sourcing and production practices. This includes reducing waste, minimizing carbon footprints, and ensuring fair labor practices throughout the supply chain. By incorporating sustainability into their SCM strategies, companies can enhance their brand reputation and meet the growing demand for socially responsible products (Mwangi, 2020). This theory was relevant in assessing the influence of order fulfillment on performance of logistics firms in Nairobi City County.

Economic Order Quantity (EOQ) Model

The Economic Order Quantity (EOQ) Model developed by Ford Whitman Harris (1913) is a fundamental inventory management tool used to determine the optimal order quantity that minimizes total inventory costs. These costs include ordering costs (the expenses incurred every time an order is placed) and holding costs (the costs associated with storing unsold goods). The primary objective of the EOQ model is to find a balance between these two types of costs, thereby optimizing the overall inventory management process. By calculating the EOQ, businesses can ensure they order the right amount of inventory at the right time, reducing waste and enhancing operational efficiency (Gautié, Jaehrling & Coralie, 2020).

At the core of the EOQ model is the assumption of constant demand and consistent lead times, meaning that inventory needs remain predictable. This allows for a straightforward calculation of when and how much inventory should be ordered. The basic formula for calculating EOQ is derived from the square root of (2DS/H), where D represents annual demand, S is the cost per order, and H is the holding cost per unit. This formula illustrates how various factors influence the optimal order quantity, enabling businesses to make informed decisions based on their specific cost structures and demand patterns (Holloway & Masilonyane, 2022). One of the key advantages of the EOQ model is its ability to streamline inventory management. By providing a clear guideline on order quantities, businesses can avoid the pitfalls of overstocking, which ties up capital and incurs excessive holding costs, as well as understocking, which can lead to stockouts and lost sales. The EOQ model helps organizations maintain a steady flow of inventory, ensuring that they can meet customer demand while minimizing unnecessary expenditures (Wanjiru & Ngugi, 2022). This theory was relevant in determining the influence of warehousing on performance of logistics firms in Nairobi City County.

Conceptual Framework

Maxwell, (2019) avers that a conceptual model is a research tool for modelling theoretical relationships of constructs under study for further investigation. It is the system of concepts, assumptions and expectations about phenomenon under consideration (Maxwell, 2023). Figure 2.1 presents the framework for testing in this study:

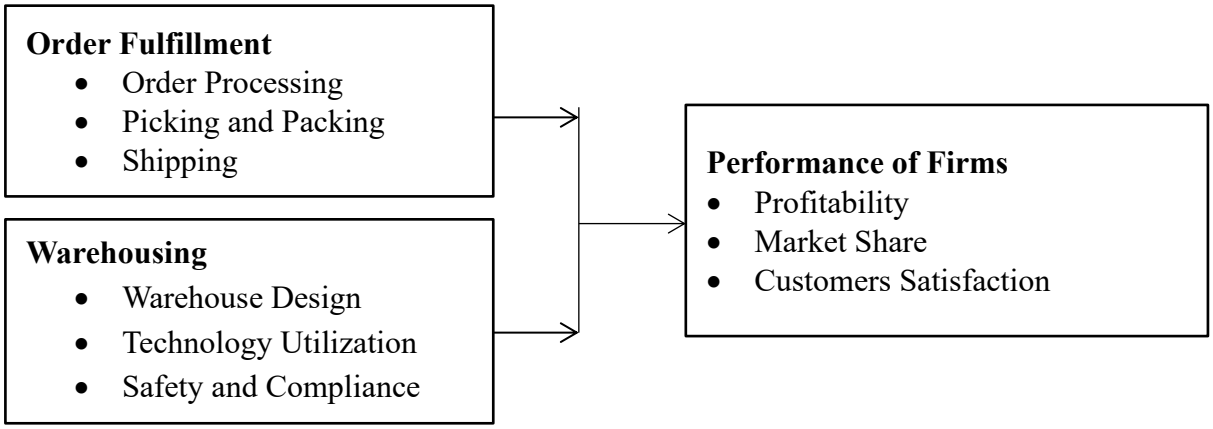

Figure 2. 1: Conceptual Framework

Order Fulfillment

Order fulfillment is the comprehensive process of receiving, processing, and delivering customer orders. It encompasses all steps required to ensure that a customer's purchase is completed efficiently and accurately, from the moment an order is placed to the final delivery of the product (Gatobu & Waiganjo, 2021). Order processing is the initial and crucial step in the order fulfillment process, involving the series of actions taken to ensure that a customer's order is accurately received, verified, and prepared for shipment. This phase begins when a customer places an order, which is then captured in the organization's order management system. Key tasks during order processing include validating payment information, checking inventory availability, and confirming order details, such as product specifications and delivery addresses. Effective order processing is essential for minimizing errors and delays, as any inaccuracies at this stage can lead

to customer dissatisfaction. Automation tools and integrated systems are often employed to streamline this process, enabling faster order verification and improving overall efficiency. By ensuring a smooth order processing experience, organizations can enhance customer satisfaction and build trust, encouraging repeat business (Mwangi, 2020).

Picking and packing are the physical components of order fulfillment that directly impact the accuracy and efficiency of delivering products to customers. During the picking phase, warehouse staff retrieve the items specified in customer orders from storage locations. This process can be made more efficient through the use of technology, such as barcode scanners and automated picking systems, which help streamline the selection of products and reduce errors. Once the items are picked, they move on to the packing stage, where they are carefully prepared for shipment. Proper packing is crucial to protect products during transit and minimize the risk of damage. This involves choosing the right packaging materials, labeling items correctly, and ensuring that all necessary documentation is included. By optimizing the picking and packing processes, organizations can enhance order accuracy, reduce fulfillment times, and ultimately improve customer satisfaction (Gacuru & Kabare, 2020).

Shipping is the final stage of the order fulfillment process, where prepared orders are dispatched to customers. This step involves selecting appropriate shipping carriers based on factors such as cost, delivery speed, and service reliability. Organizations must manage logistics efficiently to ensure timely delivery, which may include coordinating shipping schedules, tracking shipments, and addressing any potential delays or issues. Effective shipping management also involves providing customers with tracking information, allowing them to monitor the status of their orders in real-time. Additionally, organizations may need to consider international shipping regulations and customs procedures when delivering products across borders. By ensuring efficient shipping practices, businesses can enhance customer experience, build loyalty, and improve their reputation in a competitive marketplace. A streamlined shipping process not only leads to satisfied customers but also contributes to operational efficiency and cost-effectiveness (Gacuru & Kabare, 2020).

Warehousing

Warehousing refers to the process of storing goods and materials in a designated space, typically within a facility designed for this purpose. It plays a crucial role in the supply chain by providing a centralized location for inventory management, order fulfillment, and distribution. Warehousing enables businesses to hold stock for various reasons, including balancing supply and demand, managing seasonal fluctuations, and facilitating efficient transportation (Holloway & Masilonyane, 2022). Warehouse design is a critical aspect of warehousing operations, as it involves the strategic layout and organization of storage space to optimize efficiency, workflow, and accessibility. A well-designed warehouse takes into account various factors, such as the types of products stored, the volume of inventory, and the operational processes required for handling goods. Key considerations in warehouse design include the configuration of storage areas, the flow of goods from receiving to shipping, and the placement of equipment such as forklifts and conveyor systems (Wanjiru & Ngugi, 2022). Effective design can significantly reduce the time and labor required for picking and packing orders, minimizing operational costs and improving overall productivity. Additionally, incorporating flexible design elements allows warehouses to adapt to changing business needs and accommodate seasonal fluctuations in inventory. By prioritizing thoughtful warehouse design, organizations can enhance their operational efficiency and better meet customer demands (Mutual, Ngugi & Odhiambo, 2020).

Technology utilization in warehousing has revolutionized the way goods are managed, stored, and distributed. Modern warehouses leverage advanced technologies such as warehouse management systems (WMS), barcode scanning, RFID (Radio Frequency Identification), and automation to

streamline operations and improve accuracy. WMS enables real-time tracking of inventory levels, order processing, and reporting, allowing for informed decision-making and efficient inventory control. Barcode scanning and RFID technologies facilitate quick and accurate data entry, reducing the risk of errors during picking and shipping. Furthermore, automation, including the use of robotic systems and automated guided vehicles (AGVs), enhances productivity by reducing manual labor and increasing the speed of operations. By embracing technology, warehouses can achieve greater efficiency, reduce costs, and enhance overall service levels, leading to improved customer satisfaction (Nyongesa & Shale, 2020).

Safety and compliance are paramount in warehouse operations, as the environment can present various risks to employees and goods. Ensuring a safe workplace involves implementing rigorous safety protocols, conducting regular training sessions for employees, and maintaining clear emergency procedures. Compliance with local and federal regulations, such as those related to hazardous materials handling, workplace safety standards, and environmental protection, is also critical. Warehouses must adhere to guidelines set by organizations like the Occupational Safety and Health Administration (OSHA) to mitigate risks and ensure a safe working environment. Regular inspections and audits help identify potential hazards and ensure that safety measures are effectively implemented. By prioritizing safety and compliance, organizations not only protect their workforce but also reduce the risk of costly accidents and legal liabilities, ultimately fostering a more efficient and productive warehouse operation (Gautié, Jaehrling & Coralie, 2020).

Empirical Review

Order Fulfillment and Performance of Firms

In China, Rahman and Wu (2021) researched on Logistics outsourcing in China: the manufacturer-cum-supplier perspective. A questionnaire-based survey was conducted amongst managers of manufacturing firms in four industries, automotive, telecommunication and computer, household appliance, and electronics, located in the Shanghai region of China. The results indicate that foreign customers place significant emphasis on different services from those of their local counterparts. Results also indicate that many challenges need to be addressed by the manufacturers with respect to HR, customer service, and IT integration. A significant difference between manufacturers' satisfaction levels with local and foreign customers is also noticeable. The report concluded that if manufacturers are left with their traditional production and logistics methods and their organizational structures remain unchanged, Chinese companies and organizations are sure to encounter problems with low efficiency, and inefficient logistics management.

Vuyokazi (2023) examined the effect of lean six sigma on order fulfillment process: evidence from manufacturing Companies in Gauteng, South Africa. Quantitative methodology was adopted in this study with a survey questionnaire to operations managers, supply chain experts, procurement officials, consultants, and financial analysts from various manufacturing organizations. The data were collected using a case study with manufacturing firms in Gauteng Province, South Africa. The findings of this study reveal that if lean six sigma is in place in most South African manufacturing firms, customers would not have any concerns about order quality and orders being delivered on time. This gives the company a competitive advantage in the worldwide market. The study concludes that implementing the lean six sigma performance indicator will result in a decrease in bottlenecks. However, communication is an important issue in applying LSS.

Mwangi (2020) researched on the influence of order fulfillment on the performance of manufacturing firms in Kenya. The study adopted a cross sectional survey research design with descriptive approach. Cross sectional. The target population of the study was 499 supply chain managers in manufacturing firms in Kenya, Population is generally a large collection of individuals or objects that is the main focus of a scientific query and to whose benefit the study is done. The

study found that there is a significant relationship between order fulfillment and the performance of manufacturing firms in Kenya was rejected. Based on the findings, the study concluded that order fulfillment plays a significant role on overall performance of the firms.

Warehousing and Performance of Firms

Gautié, Jaehrling and Coralie (2020) researched on Neo-Taylorism in the Digital Age: Workplace Transformations in French and German Retail Warehouses. the study examines how and to what extent employees and their representatives renegotiate or influence techno-organizational choices The findings point, however, to a general convergence on digitally enhanced 'Neo-Taylorism,' which is characterized by deskilling and intensification of performance control. The limited cross-country variation can largely be explained by the very similar effects across countries of 'lean' supply-chain transformation and the trend toward outsourcing and offshoring, which negatively affect workers' structural power. , the findings provide some evidence of a beneficial impact from the institutional power of worker representatives in both countries: in particular, the rights to veto and co-determine performance management systems. Overall, the companies under study do seem to be converging toward one single socio-productive model: the 'neo-Taylorist' one. At both conventional and semi-automated warehouses, deskilling has led to a loss of knowledge and autonomy. Digital tools are used to optimize tasks and to prescribe and monitor work activity.

Wanjiru and Ngugi (2022) conducted a case study on the effect of e-warehousing on performance of public health institutions in Kiambu county, Kenya. Primary research data was gathered using questionnaires. The questionnaires containing both open-ended and close-ended questions were administered. The research data was analyzed using qualitative techniques. The study established that E-Warehousing enables the execution of a real-time warehouse management system that greatly minimize the paperwork conventionally which are associated with warehouse functions and also makes sure timely and perfect flow of inventory and information. E-Warehousing provides a comprehensive range of fulfillment, warehousing and distribution services for the Public Health Institutions. The study concluded that E-Warehousing plays a significant role in growing Public Health Institutions in Kiambu supply chain operation fast and strong. Help manage routing of the products from the pick-up point to the end point. This integration enables Public Health Institutions in Kiambu to develop pull-based supply chains, rather than push-based supply chains.

Mutual, Ngugi and Odhiambo (2020) researched on the Influence of Lean Warehousing Practices on Performance of Large Manufacturing Firms in Kenya. Data was collected using questionnaires. The study findings indicated a positive significant influence of lean warehousing on performance of large manufacturing firms. The finding conclude that There is a need for the firms to enhance adoption of the lean production practices such as having a continuous improvement programs in terms of production, automation and use of just in time concept to a great extent so as to improve performance significantly.

RESEARCH METHODOLOGY

Research Design

A descriptive cross sectional survey research design is therefore proposed for this study. A descriptive cross-sectional study is a study in which the condition and potentially related factors are measured at a specific point in time for a defined population (Bland, 2019).

The descriptive cross-sectional study design is selected for this study because of its ability to prove and/or disprove assumptions, cost less to perform and does not require a lot of time, capture a specific point in time, contain multiple variables at the time of the data snapshot and the data obtained through the research design can be used for various types of research (Creswell, 2020).

Target Population

In Kenya, there is approximately 1000 logistics firms. This study targeted a total of 250 firms operating in Nairobi County. The study therefore targeted management employees working in these firms. These comprised of top management employees, middle level management employees and lower level management employees.

Table 3. 1: Target Population

Category	Target Population
Top Managers	250
Middle level Managers	500
Lower Level Managers	750
Total	**1500**

Sample Size and Sampling Technique

According to Eric and Marko (2019) sampling is the process of selecting a few individuals for a study in such a way that the individual represents a larger group from which they are selected. A sample is a small group obtained from accessible population (Mugenda & Mugenda 2018). The Yamane formula was adopted to calculate the study sample size as follows;

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

Where n is the sample size, and N is the population size, e- acceptable sampling error (0.05)

$$= \frac{1500}{1+1500(0.05^2)}$$

$$= \frac{1500}{3.75} = 400$$

$n \approx 400$

Therefore, the study sample size was 400 respondents.

Data Collection Instrument

The study collected primary data for analysis; Primary data was obtained by the use of structured questionnaires. Questionnaires are selected upon because of its advantages of being able to collect huge amount of data in a cost effective way and at the same time. Primary data is that research data that is collected for the first time by the researcher hence original in character (Kothari, 2019).The questionnaires comprises of close ended questions so as to improve on the quality of collected data. A five point Likert scale was utilized in various closed ended questions the structured questionnaires were due for ease and convenience in distribution collection, analysis and overall cost-effectiveness in terms of resources utilization and mobilization.

Pilot Test

Kothari (2019) argues that before using a questionnaire as a data collection tool, it is always advisable to conduct pilot study. This helps to bring into light the weaknesses (if any) of the questionnaire and the experience gained in this way can be used to effect improvement. Prior to the survey administration, the researcher distributed (40) questionnaires for pre-testing which was given to employees working in cement manufacturing firms in kenya this is 10% of the target population. The reliability of the questionnaire was improved through pretesting of pilot samples from lecturers.

Data Analysis and Presentation

The collected research data was checked for any errors and omissions, coded, defined and then entered into Statistical Package for Social Science (SPSS Version 23), (Kothari 2019). Descriptive statistics including frequency, percentages, means and standard deviation was used to analyse the findings. Descriptive statistics were used to portray the sets of categories formed from the data. The mean, standard deviation and variance on the dependent and independent constructs were used to show how clustered or dispersed the constructs are. Descriptive statistics enable the researcher to meaningfully describe a distribution of measurements (Creswell, 2018)

The study used multiple linear regression analysis to test the statistical significance of the various independent variables. Regression analysis is a statistical tool for the investigation of relationships between variables. Usually, the investigator seeks to ascertain the causal effect of one variable upon another. Sekaran (2019) stated that a multiple linear regressions is used in situations where the number of independent variables is more than one.

In testing the significance of the model, the coefficient of determination (R2) was used to measure the extent to which the variation in implementation on performance of logistics firms in Nairobi City County, Kenya is explained by the variations of various factors on the distribution management practices F-statistic was computed at 95% confidence level to test whether there is any significant relationship between the influence of distribution management practices and performance of logistics firms in Nairobi City County, Kenya.

DATA ANALYSIS AND FINDINGS

Descriptive statistics

Order Fulfillment and Performance of Firms

The first specific objective of the study was to assess the influence of order fulfillment on performance of logistics firms in Nairobi City County. The respondents were requested to indicate their level of agreement on the statements relating to order fulfillment and performance of logistics firms in Nairobi City County. The results were as shown in Table 4.1.

From the results, the respondents agreed that their order processing system efficiently handles incoming orders without delays (M=3.964, SD= 0.997). In addition, the respondents agreed that they have clear protocols in place for managing order exceptions and issues (M=3.917, SD= 0.831). Further, the respondents agreed that there is clear communication among team members during the picking and packing stages (M=3.858, SD=0.563).

From the results, the respondents agreed that the layout of their warehouse facilitates effective picking and packing operations (M= 3.831, SD= 0.851). In addition, the respondents agreed that their shipping processes are streamlined to ensure timely deliveries (M=3.751, SD= 0.935). Further, the respondents agreed that they use reliable carriers that consistently meet their shipping standards (M=3.742, SD=0.692).

Table 4. 1: Order Fulfillment and Performance of Firms

	Mean	Std. Deviation
Our order processing system efficiently handles incoming orders without delays.	3.964	0.997
We have clear protocols in place for managing order exceptions and issues.	3.917	0.831
There is clear communication among team members during the picking and packing stages.	3.858	0.563
The layout of our warehouse facilitates effective picking and packing operations.	3.831	0.851
Our shipping processes are streamlined to ensure timely deliveries.	3.751	0.935
We use reliable carriers that consistently meet our shipping standards.	3.742	0.692
Aggregate	**3.844**	**0.812**

Warehousing and Performance of Firms

The second specific objective of the study was to determine the influence of warehousing on performance of logistics firms in Nairobi City County. The respondents were requested to indicate their level of agreement on various statements relating to warehousing and performance of logistics firms in Nairobi City County. The results were as presented in Table 4.2.

From the results, the respondents agreed that their warehouse layout is optimized for efficient movement of goods (M=3.943, SD= 0.981). In addition, the respondents agreed that they regularly review and update their warehouse design to improve operational efficiency (M=3.866, SD= 0.850). Further, the respondents agreed that data analytics are regularly used to inform warehouse decision-making (M=3.731, SD= 0.914).

The respondents also agreed that technology has improved their order fulfillment speed and accuracy (M=3.696, SD= 0.947). In addition, the respondents agreed that their warehouse complies with all relevant safety regulations and standards (M=3.689, SD= 0.856). Further the respondents agreed that they conduct regular safety training for all warehouse employees (M=3.671, SD=0.621).

Table 4. 2: Warehousing and Performance of Firms

	Mean	Std. Deviation
Our warehouse layout is optimized for efficient movement of goods.	3.943	0.981
We regularly review and update our warehouse design to improve operational efficiency.	3.866	0.850
Data analytics are regularly used to inform warehouse decision-making.	3.731	0.914
Technology has improved our order fulfillment speed and accuracy.	3.696	0.947
Our warehouse complies with all relevant safety regulations and standards.	3.689	0.856
We conduct regular safety training for all warehouse employees.	3.671	0.621
Aggregate	**3.766**	**0.862**

Correlation Analysis

The present study used Pearson correlation analysis to determine the strength of association between independent variables (order fulfilment and warehousing) and the dependent variable (performance of logistics firms in Nairobi City County). Pearson correlation coefficient range

between zero and one, where by the strength of association increase with increase in the value of the correlation coefficients.

Table 4. 3: Correlation Coefficients

		Firm Performance	Order Fulfilment	Warehousing
Firm Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	341		
Order Fulfilment	Pearson Correlation	.842**	1	
	Sig. (2-tailed)	.002		
	N	341	341	
Warehousing	Pearson Correlation	.910**	.179	1
	Sig. (2-tailed)	.000	.081	
	N	341	341	341

Moreover, the results revealed that there is a very strong relationship between order fulfilment and performance of logistics firms in Nairobi City County (r = 0.842, p value =0.002). The relationship was significant since the p value 0.002 was less than 0.05 (significant level). The findings conform to the findings of López, Salvador and Viñas (2020) that there is a very strong relationship between order fulfilment and firm performance.

The results also revealed that there was a very strong relationship between warehousing and performance of logistics firms in Nairobi City County (r = 0.910, p value =0.000). The relationship was significant since the p value 0.000 was less than 0.05 (significant level). The findings are in line with the results of Nyameboame and Abubaker (2020) who revealed that there is a very strong relationship between warehousing and firm performance

Regression Analysis

Multivariate regression analysis was used to assess the relationship between independent variables (order fulfilment and warehousing) and the dependent variable (performance of logistics firms in Nairobi City County)

Table 4. 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870	.757	.758	.10120

a. Predictors: (Constant), order fulfilment and warehousing

The model summary was used to explain the variation in the dependent variable that could be explained by the independent variables. The r-squared for the relationship between the independent variables and the dependent variable was 0.757. This implied that 75.7% of the variation in the dependent variable (performance of logistics firms in Nairobi City County) could be explained by independent variables (order fulfilment and warehousing).

Table 4. 5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.035	2	4.018	103.02	.000[b]
	Residual	6.568	338	.0194		
	Total	14.603	340			

a. Dependent Variable: performance of logistics firms in Nairobi City County

b. Predictors: (Constant), order fulfilment and warehousing

The ANOVA was used to determine whether the model was a good fit for the data. F calculated was 103.02 while the F critical was 2.398. The p value was 0.000. Since the F-calculated was greater than the F-critical and the p value 0.000 was less than 0.05, the model was considered as a good fit for the data. Therefore, the model can be used to predict the influence of order fulfilment and warehousing on performance of logistics firms in Nairobi City County.

Table 4. 6: Regression Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std. Error**	**Beta**		
1	**(Constant)**	0.205	0.053		3.867	0.000
	order fulfilment	0.486	0.123	0.487	3.951	0.000
	warehousing	0.430	0.113	0.431	3.805	0.001
a Dependent Variable: performance of logistics firms in Nairobi City County						

The regression model was as follows:

$$\mathbf{Y = 0.205 + 0.486X_1 + 0.430X_2 + \varepsilon}$$

The results also revealed that order fulfilment has significant effect on performance of logistics firms in Nairobi City County, β1=0.486, p value= 0.000). The relationship was considered significant since the p value 0.000 was less than the significant level of 0.05. The findings conform to the findings of López, Salvador and Viñas (2020) that there is a very strong relationship between order fulfilment and firm performance.

In addition, the results revealed that warehousing has significant effect on performance of logistics firms in Nairobi City County β1=0.430, p value= 0.001). The relationship was considered significant since the p value 0.001 was less than the significant level of 0.05. The findings are in line with the results of Nyameboame and Abubaker (2020) who revealed that there is a very strong relationship between warehousing and firm performance.

Conclusions

The study concludes that order fulfillment has a positive and significant effect on performance of logistics firms in Nairobi City County. Findings revealed that order processing, picking and packing and shipping influences performance of logistics firms in Nairobi City County.

The study also concludes that warehousing has a positive and significant effect on performance of logistics firms in Nairobi City County. Findings revealed that warehouse design, technology utilization and safety and compliance influence performance of logistics firms in Nairobi City County.

Recommendations

The study recommends that the management of logistics firms in Kenya should adopt a customer-centric approach by implementing an integrated order management system (OMS). This system should streamline the entire fulfillment process by centralizing information and automating

workflows. By providing real-time updates on order status and inventory availability, the OMS can improve communication with customers, leading to increased transparency and trust.

The study also recommends that the management of logistics firms in Kenya should implement a state-of-the-art Warehouse Management System (WMS). By adopting a WMS, firms can automate inventory tracking, optimize space utilization, and streamline picking and packing processes. This technology enables better organization of stock, minimizes errors, and enhances order accuracy, leading to faster fulfillment times.

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