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

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ABSTRACT

Many distribution companies have had problems in producing a quality product, therefore, they have turned to computerization of their systems to achieve a balance between business and efficiency. The main objective of this study was to examine the influence of inventory management practices on the performance of distribution companies in Nairobi City Kenya. The study was based on the following objectives; to determine the influence of demand forecasting and inventory recording on the performance of distribution firms in Nairobi City County. This research was guided by various theories including the Economic Order Quantity (EOQ) Model and Resource Based View Theory. A descriptive research design was used in this study. Reliability of the study instrument was established using Cronbach Alpha, internal consistency method. Validity of the research instrument was determined using content and construct validity. The target population for this study was186 distribution firms in Nairobi City County. The unit of observation was one supply chain manager from each distributor firm. Data collected was analyzed using SPSS version 28 to produce frequencies, descriptive. Inferential data analysis was done with regression analysis. Regression analysis was used to establish the relationship between inventory management practices and performance. Data was presented in tables and graphs based on the research questions. Correlation results revealed that inventory management practices influences performance of distribution companies in Nairobi City County. The study concluded that demand forecasting has the most significant positive influence on the performance of distribution firms in Nairobi City County. In addition, the study concluded that inventory recording has a significant positive influence on the performance of distribution firms in Nairobi City County. The study recommends that there is a need to implement effective techniques of demand forecasting, stock reorder level and economic order quantity to improve performance. Demand forecasting techniques such as product analysis, customer engagement, and information technology can improve performance. Organizations should enhance process auditing in the inventory control to enhance efficiency in service delivery. In addition, the study recommends that management should oversee regular stock taking to improve inventory management. Further, there is a need to improve inventory ordering and storage techniques since these would significantly affect the performance of distribution firms.

Key Words: Inventory Management Practices, Demand Forecasting, Inventory Recording, Performance of Distribution Firms

Background of the Study

The current business competition means that all companies need to be efficient at every level, including inventory management (Chow, 2021). We live in an era of consumer awareness; this means that retailers need to be able to provide the best service in product as customers can copy their business elsewhere (Libby, 2020). According to Chow (2021), inventory management is important for the retail industry because inventory is the most valuable item on almost every store's balance sheet. For many businesses, inventory is the largest asset on the balance sheet at any given time. Therefore, purchasing excess inventory increases storage costs and interest costs of "short-term loans to purchase funds," which may result in losses if the inventory cannot be sold at normal prices (Libby, 2020).

In a highly competitive environment in the global economy, inventory management is one of the most important factors in increasing competitiveness (Willems, 2023). The importance of product management in distribution companies has evolved from reducing more work and costs to achieving critical success for the company's competitiveness (Spillin, 2023). Therefore, there is a growing consensus that retailers need to address inventory issues as well as business and marketing issues (Tuttle & Heap, 2022). Product operations are often associated with shipping, inventory costs, and resources. Customers want shorter delivery times and accurate service, and since there is physical movement of products, inventory control is the easiest issue to consider in production. Inventory management of distribution companies plays an important role in the business world, so inventory management has reached a high level in many industries. Successful global supply chain companies have long been aware of the important role that inventory management plays in creating added value (Spillin, 2023).

The top five countries in terms of productivity in 2020 are: Germany (4.11), Singapore (4.09), Sweden (4.08), the Netherlands (4.07) and Luxembourg (3.98). The bottom five are Somalia (1.34), Eritrea (1.70), Sierra Leone (1.97), Namibia (2.02) and Rwanda (2.04), indicating that the country performs poorly in terms of product management. The East African Freight Forwarders' Council (SCEA) confirmed in its 2023 report that a country's ability to conduct international trade depends on the extent to which its international traders have access to good jobs. Most responses from international business people rated the quality of goods and services in East Africa as average (SCEA, 2023).

The importance of product management continues to grow in Kenya; Fast Moving Consumer Goods (FMCG) companies choose this model to deliver products across the country and beyond, but this is not the case in other manufacturing areas (Njambi, 2022). Moreover, most of these companies use third-party suppliers (3PL) for their operations and are less concerned about improving internal inventory management. Therefore, inventory management balances two main objectives: good service and low cost of doing business, while other companies focus more on good service and low cost of production (Brigham, 2021).

Inventory management practices are the activities and functions used by organizations to manage inventory. Optimizing these activities allows companies to reduce waste and costs and increase profits (Zer, 2020). Low-quality products are the result of poor management and limited availability (Saxena, 2020). Improving Inventory Management Processes is important for companies to view inventory as an important role and recognize that inventory impacts sales and profits. Implementing inventory management comes with risks, and organizations need to examine the advantages and disadvantages of inventory management (Chow, 2021).

Distribution companies in Nairobi County continue to grow rapidly. This is due to the purchasing power of the middle class and improved infrastructure facilitating the movement of goods (Nyamao, 2022). This growth is also due to important factors such as improvements in infrastructure facilitating the movement of goods, thus providing customers with better quality at affordable prices again (Willems, 2023). Increased investments by international shipping

companies in Nairobi City and County have strengthened consumer confidence, responding to increased spending and increased demand for international products (Reading, 2022). This study will therefore attempt to analyze the impact of inventory management on the performance of distribution companies in Nairobi City County, Kenya.

The growing importance of inventory arose from Distribution companies becoming globalized to gain access to new markets, realize greater production efficiencies, and tap technological competencies beyond their own geographical borders (Willems, 2023). In today's highly competitive environment, every company aimed at gaining a share of the global market and to take advantage of higher production and sourcing efficiencies. A key determinant of firm‘s performance then was the role of the inventory function‖ in ensuring the smooth flow of materials, products and information throughout a company's supply chains (Nyamao, 2022). This was why in most recently, inventory had become more prominent and was recognized as a critical factor in competitive advantage. Nyabwanga (2022) also observed that too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, spoilage and loss.

Distribution firms consists of a group of individuals or organizations that assist in getting the product to the right place at the right time (Nyamao, 2022). Distribution firms plays a vital role, primarily because it ultimately affects the sales turnover and profit margins of the organization. If the product cannot reach its chosen destination at the appropriate time, then it can erode competitive advantage and customer retention. Therefore, distribution logistics is the link between a company and its customers it comprises all activities related to the provision of finished products and merchandise to a customer. The products can be delivered directly from the production process or from the trader’s stock located close to the production site or, possibly, via additional regional distribution warehouses (Kariuki, 2019)

Statement of the Problem

The performance of distribution companies is important for the Kenyan economy as well as the global economy because they ensure that goods are made available to the public when needed, thus ensuring that needs such as time, place, availability and electronic form are met (Ellickson, 2020). Although decision-making levels are determined, the quantity is still partly determined by previous usage (Jaber, 2021). However, there is no specific rule to help determine the quantity. Inappropriate quantity orders can sometimes lead to unsustainable and overstocked products (Oballah, 2021).

Stock shortages are sometimes caused by lengthy procurement procedures, periodic shortages in the market, lack of sufficient funds to purchase new supplies, suppliers’ reluctance to supply to distribution companies due to delays in payment, under-trained personnel in inventory management departments, and incomplete inventory management systems. Number of retail outlets (KNBS, 2023). The poor performance of Kenya’s distribution firms has contributed to the decline in gross domestic product (GDP) from 7.0% in 2020 to 1.5% in 2019. GDP grew by 2.7% in 2020 and 5.8% in 2021. However, this growth rate has fallen to 4.4% in 2022. The performance of Nairobi County distribution firms has been poor, with local suppliers reporting dismal reports (KNBS, 2023).

Several studies have been conducted on inventory management. For example, Oballah (2021) investigated the impact of inventory management practices on organizational performance in public health facilities in Kenya. The study was conducted on Kenyatta National Hospital. The results of the study showed that investment in inventory and accuracy of inventory records had a positive impact on organizational performance, while inventory reduction had a negative impact on organizational performance in Kenyatta National Hospital. On the other hand, Mathuva (2020) analyzed inventory management practices in hotels by focusing only on physical, warehouse, and moving inventory, without addressing room inventory. The FIFO

(First In, First Out) method was found to be the most commonly used inventory management method among hotels in Mombasa.

Habib (2022) in his study used secondary data to demonstrate supply chain management (SCM) forecasting techniques in various fields, especially in life sciences and retail, and found that there are limitations and few practical forecasting solutions that are useful for organizational business. However, there is no study that focuses on the influence of inventory management practices on the performance of distribution companies in Nairobi County. Therefore, it is against this background that this study sought to analyze the effect of inventory management practices on performance of distribution firms in Nairobi City County, Kenya.

Objectives of the Study

General Objective

The general objective of the study was to examine the influence of inventory management practices on performance of distribution firms in Nairobi City County.

Specific Objectives

i. To determine the influence of demand forecasting on performance of distribution firms in Nairobi City County
ii. To assess the influence of inventory recording on performance of distribution firms in Nairobi City County

Theoretical Framework

Economic Order Quantity (EOQ) Model

Haris is one of the authors in the field of operations management who developed a model to determine the optimal inventory level that an organization should maintain. Blackburn (2021) is one of the authors who agree that the economic order quantity (EOQ) is one of the widely used models for inventory management in many industries. The EOQ model was developed by Haris in 1913 and is also known as the EOQ model by Wilson, who critically analyzed the model in detail according to Arsham (2023). Using the model, it is shown that some costs rise as other costs fall. For example, inventory ordering costs fall while holding costs rise, and there is a minimum point on the total inventory cost curve. It is also known as the point where total inventory cost is minimized. EOQ is the inventory level that minimizes total inventory holding costs and ordering costs.

The EOQ model considers a tradeoff between storage cost and ordering cost when making a decision on the quantity to use when replenishing inventory items. Ordering frequency is usually reduced by a larger amount of quantity ordered, hence reduced ordering cost but increases storage costs and requires a larger space for storage too (Schwarz, 2008). Some costs declines with holding inventory, while others holding costs increases and that the total inventory-associated cost curve has a minimum point (Ogbo, 2021). Ordering costs refers to those costs which are incurred when additional inventories are being procured or purchased while carrying costs are the costs incurred for inventory holding. Thus, EOQ is determined by intersection of ordering cost curve and carrying cost line. At this point total carrying cost and total ordering cost are equal to each other (Kumar, 2021).

This model is the one where the order quantity reduces the cost equally to the inventory holding cost and the reorder cost. Ogbo (2021) explained EOQ in a simple way and the assumptions required to calculate EOQ are as follows: Holding cost is known and constant; known and regular. One of the criticism of EOQ is that it ignores the need for inventory to be held to meet changes in lead times and demand, making it difficult to evaluate in practice (Arsham, 2023).

The EOQ model requires determining the order quantity and maximum order quantity for all products in the store. This model assumes that all other variables are constant, although uncertainty is inherent and present in every business (Blackburn, 2021). For example, uncertainties include changes in demand, damage during transportation, and delivery delays. Therefore, demand uncertainty will force EOQ to adapt to avoid business uncertainty (Arsham, 2023).

Variable economic quantity is an EOQ model that can be used in situations where demand changes frequently occur due to the uncertainty of the business environment. Especially in the healthcare sector, demand depends on many external factors and cannot be predicted accurately ((Blackburn, 2021). There are many important internal and external factors that affect the products sold in the pharmacy for hospital pharmacies. These factors can affect the change of medicines in the hospital, some aspects of the hospital such as doctor preferences are controlled, while others such as war cannot be controlled (Arsham, 2023). As mentioned earlier, considering the limiting assumptions of the simple EOQ model, the situation where all requirements are met is ideal. In fact, demand uncertainty is likely to be encountered in most cases and the EOQ model needs to be adjusted to address this uncertainty (Ogbo, 2021).

Larger orders reduce order frequency and therefore monthly ordering cost, but a larger average inventory needs to be maintained, increasing monthly storage (holding) cost. On the other hand, small orders reduce average inventory but require more frequent orders and higher monthly ordering costs (Edward, 2020). As explained by Gonzalez and Gonzalez (2021), the EOQ model is an important tool that organizations can use to ensure that inventory does not run out of stock. The EOQ model helps organizations reduce inventory control costs by reducing the cost of ordering and holding inventory. The study thus use this theory to find out the effect of demand forecasting a management Practices on the Performance of distribution firms through optimal inventory levels that should be kept by organization.

Resource Based View Theory

This study was based on the resource-based view theory (RVB). The resource-based view theory emphasizes the resources of a company as the fundamental determinant of competitive advantage and performance. It makes two assumptions when analyzing the sources of competitive advantage (Barney, 2010). The resource-based view attempted to explain the internal sources of a company's sustainable competitive advantage (Kraaijenbrink, 2020). The RBV of the company assumed that the company's internal resources are the source of competitive advantage (Tukamuhabwa, 2021). Such resources were valuable, rare, unique, and difficult to replace. Resources considered valuable were those that could facilitate the development or implementation of strategies to increase productivity, exploit market opportunities, or neutralize looming threats (Barney, 2010).

RBV theory seeks to analyze; interprets resources in an organization to understand how these resources can be organized in an organization to create a sustainable competitive advantage. For a resource to be considered as a source of competitiveness, it must fit into the set criteria of being valuable, rare, cannot be imitated, and cannot be substituted. A valuable resource must "enable a firm to do things and behave in ways that lead to high sales, low costs, and high margins or in other ways add financial value to the firm. The opponents argue that RBV is anchored on conceptual and empirical methodology. Charles (2023) argues that the theory ignores the process issues. Aspects of influence of dynamic process oriented issues that relate to RBV have been given little attention despite their importance. Further, RBV uses aggregated findings within the industry when a firm level analysis can present a better reality. An organization will identify the inventory resources and categorize them according to the RBV theory criteria and use the critical inventory resources as a competitive tool (Tukamuhabwa, 2021)

RBV contends that a company is a collection of tangible and intangible assets ((Kraaijenbrink, 2020)). This process is specific to each company, so in the same business, each company can make different decisions from each other (heterogeneous), that is, no two companies can have the same knowledge, have the same assets or skills, or create the same organizational culture (Barney & Clark, 2019). The difference in the resources of the companies is the final decision of decision making (Shang & Marlow, 2019).

According to Barney and Clark (2019), product flexibility and efficiency are considered as sources of competitive advantage for new businesses. Owning unique assets of the company allows companies to create competitive advantage. They also found that a company's competitive advantage comes from the company's ability to combine and use appropriate synergies (Kraaijenbrink, 2020). As the business environment recovers and the tools to achieve better performance and competitive advantage come. This theory is important in grounding the inventory recording in understanding its influence on distribution firms in Nairobi County internal resources as the firm sources of competitive advantage.

Conceptual framework

A conceptual framework is an analytical tool used to visualize and organize ideas to capture something real, and to do so in a way that is easy to remember and use. (Rocco, 2020). The independent variables comprise of demand forecasting and inventory recording. All these variables are expected to influence the Performance of Distribution Firms.

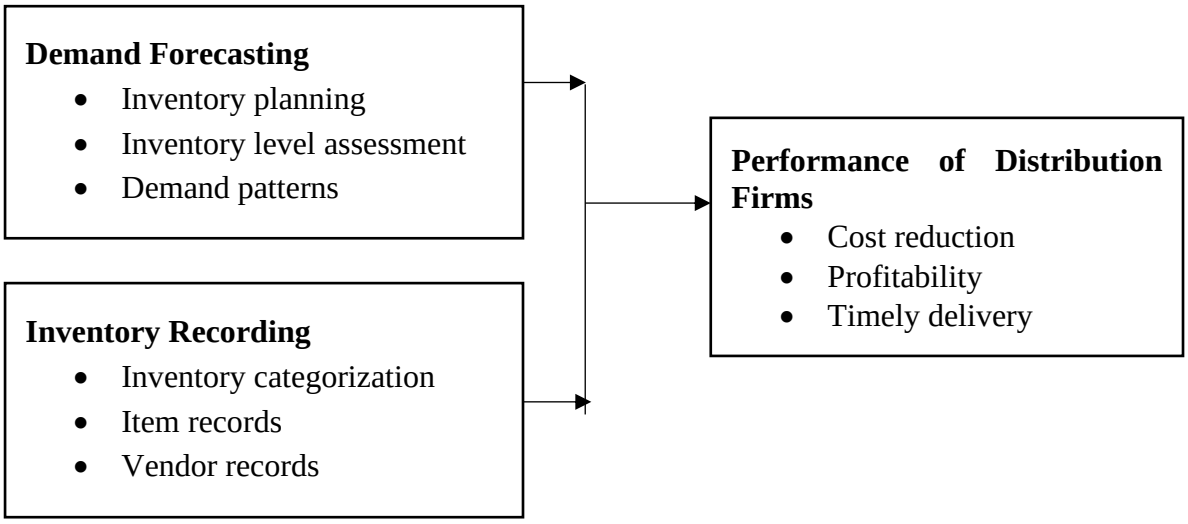

Figure 2. 1: Conceptual Framework

Demand Forecasting

Demand forecasting monitor levels of inventory and determine what levels should be maintained, when stock should be replenished and how large orders should be (Brigham, 2021). This is important for an organization. The inventory management approach of accurate response is an excellent mechanism that helps businesses manages their inventory, which may get overloaded due to improper forecasts. Businesses greatly manage their inventory on the basis of future demand predictions. It has become increasingly important for these forecasts to be accurate for a business to keep itself alive in the cut-throat competition (Brigham, 2021).

Inventory level assessment make inventory management easier and faster and allow reduction of costs as well as improved forecasting. This lead to improved customer service, which then leads to improved customer base (Chaffy, 2021). This in general then leads to overall improved

organizational performance. The goal of demand forecasting should be to provide information needed to improve performance and reduce errors. If the process is not followed or ignored, the input data that management uses to determine the impact of the objection will not be reliable and will not reflect the truth about inventory management (Tuttle & Heap, 2022).

Inventory Recording

Inventory recording involves making a list of stock and noting its location and value. Inventory categorization is the classification of items in stock based on demand, price, revenue, and holding costs. These can be product type, sales participation, sales frequency, and product value (Wild, 2022). Allocation helps apply different levels of control and management authority to different product groups. It improves product quality management by allowing businesses to focus energy and resources where they are needed most (Njambi, 2022).

Empirical Review

Demand Forecasting

Arsham (2023) found that companies are looking for ways to manage inventory and are looking for ways to do so; Almaktoom (2021) claims that computerized inventory control systems are designed to track and record inventory levels. Some older practices are considered time-consuming and inaccurate. Computer products can be easily synchronized with scanners, tablets, and smartphones, as well as various hand tools. This system uses barcodes or quick response codes (Simatupang, 2021).

Ngugi (2019) analyzed the relationship between product distribution and performance of manufacturing companies in Eldoret, Kenya. Material Requirements Planning (MRP), Resource Planning (DRP), Vendor Management Inventory (VMI) systems and Just-in-Time (JIT) systems are different forecasting methods (JIT). The work done is also different. The findings showed that Material Resource Planning (MRP) has a significant and positive impact on the performance of Eldoret Manufacturing Company. However, although this study sheds some light on the existing study, there are differences in terms of the significance of this study for manufacturing companies. In contrast, the current study will focus on delivery companies in Nairobi County whose IMS model is different from the production model. Furthermore, the current study examines other IMS factors such as raw materials, work in process (WIP) from inventory distribution, and materials management.

Naliaka (2019) explored inventory management and its role on competitive advantage of manufacturing firms. The study also identified IT, inventory control systems and inventory management practices as key factors impacting a manufacturing firm's competitiveness. The sole focus of this study was manufacturing firms hence the findings cannot be generalized to the retail sector. Therefore this study intends to bridge this gap by establishing the effect of inventory management practices on firm performance.

Gitau (2021) evaluated the impact of inventory management and performance of warehousing companies in Mombasa, Kenya. The results of the study show that there is a positive relationship between product management and project performance. This study includes product management such as product analysis, customer engagement, and information technology and is related to their work. This study will examine performance based on inventory distribution and firm performance. In addition, the study focused on retail companies with more buildings and backgrounds than distribution companies in Nairobi County.

Oballah (2021) conducted an assessment of inventory management and project performance in healthcare facilities, focusing on Kenyatta National Hospital. Inventory control methods include: inventory shrinkage, inventory turnover, inventory accuracy, and inventory investment. Use descriptive and retrospective studies as analytical tools. The results show that

ensuring accurate inventory and capital stock is beneficial, while inventory shrinkage has a negative impact on performance. This study will examine inventory planning, product automation processes, manufacturing models, and appropriate purchasing processes.

Inventory Recording

Juan and Mertinez (2022), with respect to the study of eight-thousand, eight-hundred and seventy-two small and medium-sized firms in Spain, showed that that the firm's management can create value through minimization of the number of days of inventory. Effectual inventory management techniques enable to enhance to enhance the efficiency of operations of an organization. It also enables to improve the customer service, and reduce the expenses associated with inventories and distribution

Roumiantsev and Netessine (2020) explored the impact of inventory management models, such as the EOQ model and lean inventory systems, on financial performance in USA. The study concluded that reducing inventory levels, as determined by the EOQ model, did not necessarily result in improved financial performance in terms of return on investments. These studies underscore the complex relationship between inventory management strategies, including EOQ, and financial performance, highlighting the need for a nuanced approach to optimize both inventory and financial outcomes.

Nwosu (2019) examined the impact of inventory modeling on performance of Nigeria brewing companies using a sample size of 368 companies. The study used questionnaire and oral interviews to collect data. The study established that inventory modeling and storage has significant effect on profitability of brewing companies. The study also found that materials inventory has a significant contribution to profitability of brewing companies; and that interdepartmental collaboration significantly contributed to the performance of brewing firms. The study concluded that effective materials management is indispensable to brewing firms in making profits.

Agus (2020) conducted research on Malaysian companies and found a positive relationship between inventory management, including the use of EOQ models, and profitability and return on sales (ROS). The study concludes that inventory reduction as determined by the EOQ model does not lead to better financial performance than return on investment. These studies demonstrate the relationship between inventory management strategies, including EOQ, and performance, and highlight the need for a better approach to inventory optimization and financial benefits.

Kim (2019) investigates business model specific products and their impact on power generation performance in Kenya. Studies show that some industries such as electronics manufacturing benefit more from lean manufacturing, leading to greater profitability. However, they emphasized the importance of tailoring the product model to meet the unique needs of each industry. Therefore, this study will evaluate the impact of inventory structure on the performance of distribution companies in Nairobi County.

RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive research design. This design was adopted because it describes the current situation in this study (Babbie, 2020). This was used to show the current status of inventory management practices and performance of distribution companies in Nairobi, Kenya. This design was useful to examine the interaction between the variables already mentioned in the architecture concept (Ngechu, 2019). It is analytical, usually selecting a variable or topic and explaining it in detail.

Target Population

The target population for this study was 186 distribution firms in Nairobi City County. According to Kenya Association of Manufacturers, there are 186 distributor firms operating within Nairobi County. The unit of analysis was 186 distributor firms operating within Nairobi County. The unit of observation was one supply chain manager from each distributor firm.

Sample Size and Sampling Technique

A list of 186 distributor firms operating within Nairobi County comprised the sample size. Data was collected from one supply chain manager from each firm. The study adopted a census approach to collect data from all 186 subjects of study since the number is small. Scholars such as Bernard (2011); Seltman (2014), state that the approach is effective with a small target population, that is below 200 respondents. They also argue that a census reduces bias, which could otherwise arise due to sampling.

Data Collection Instruments

Primary data was collected through self-administered questionnaires. The questionnaire consisted questions that address issues related to inventory management practices in relation to the performance of Nairobi County distribution companies. According to Sekaran (2011), the advantage of using questionnaires is that a large number of people can be reached relatively easily and economically.

Pilot Study

The researcher carried out a pilot study to ensure the data collection tool was reliable and valid. The pilot test helped to correct some of the challenges encountered before undertaking the final study (Robson, 2019). The pretesting sample was made up of 19 respondents, representing 10% of the sample size. According to (Kultar, 2017) a pretest sample ranges from 1-10% depending on the sample size. The respondents included supply chain managers from the distribution companies in Nairobi City County. The results from the pilot test were not be used in the main study. In addition, the respondents will be excluded from the final study.

Data Analysis and Presentation

Noor (2020) states that analysis means classifying, analyzing, managing, and collecting data to get answers to research questions. Data was analyzed using Statistical Package for the Social Sciences (SPSS) (28.0). Descriptive statistics such as frequencies, percentages, mean scores, and standard deviations were estimated for each variable from the range and data provided in frequency tables and figures. Quantitative data was analyzed using both descriptive and inferential statistics. Inferential data analysis was done using regression analysis. Regression analysis will be used to establish the relationship between independence and achievement. Data was presented in the form of tables and graphs based on the main research questions. The relationship between the study variables was tested using multivariate regression model.

RESEARCH FINDINGS AND DISCUSSION

Descriptive Findings and Analysis

This part provides the results of the descriptive analysis carried out by the study consisting percentages, mean and standard deviation. The findings were presented as per each objective.

Demand Forecasting

The study sought to determine the influence of demand forecasting on performance of distribution firms in Nairobi City County. The respondents were asked to indicate the extent to which the agree with the statement on demand forecasting based on a Likert scale where Strongly agree -5, Agree -4, Moderate -3, Disagree -2, Strongly disagree -1. The results of the

study were as shown in table 4.8. From the results, the respondents agreed that the firm uses demand forecasting (M=3.957, SD= 0.756). In addition, the respondents agreed that the firm conducts effective demand planning (M=3.819, SD= 0.872). Further, the respondents agreed that the firm has implemented various demand forecasting techniques (M=3.701, SD= 0.795). The respondents also agreed that there is adequate inventory level assessment (M=3.699, SD= 0.928). In addition, the respondents agreed that demand patterns are accurate (M=3.687, SD=0.838). Further, the respondents agreed that demand forecasting improves inventory management and firm performance (M=3.672, SD=0.685). Majority of the respondents agreed with the statements on demand forecasting as shown by a mean of 3.756. The responses given by the respondents had little variation (standard deviation=0.812).

Table 4.1: Demand Forecasting

	Mean	**Std. Deviation**
The firm uses demand forecasting	3.957	0.756
The firm conducts effective demand planning	3.819	0.872
The firm has implemented various demand forecasting techniques	3.701	0.795
There is adequate inventory level assessment	3.699	0.928
Demand patterns are accurate	3.687	0.838
Demand forecasting improves inventory management and firm performance	3.672	0.685
Aggregate	**3.756**	**0.812**

Inventory Recording

The study sought to influence of inventory recording on performance of distribution firms in Nairobi City County. The respondents were asked to indicate the extent to which the agree with the statement on inventory recording based on a Likert scale where Strongly agree -5, Agree -4, Moderate -3, Disagree -2, Strongly disagree -1. The results of the study were as shown in table 4.9. From the results, the respondents agreed that the firm maintains accurate inventory records (M=3.807, SD= 0.964). In addition, the respondents agreed that the firm keeps accurate vendor records (M=3.768, SD= 0.718). Further, the respondents agreed that the firm has implemented inventory categorization (M=3.744, SD= 0.888). In addition, the respondents agreed that the firm maintains records of all items (M=3.677, SD= 0.690). The respondents also agreed that inventory recording improved inventory management and firm performance (M=3.668, SD=0.815). Majority of the respondents agreed with the statements on inventory recording as shown by a mean of 3.732. The responses given by the respondents had little variation (standard deviation=0.815).

Table 4.2: Inventory Recording

	Mean	Std. Deviation
The firm maintains accurate inventory records	3.807	0.964
The firm keeps accurate vendor records	3.768	0.718
The firm has implemented inventory categorization	3.744	0.888
The firm maintains records of all items	3.677	0.690
Inventory recording improved inventory management and firm performance	3.668	0.815
Aggregate	**3.732**	**0.815**

Correlation Results

The study carried out correlation tests to determine the relationship between the independent and dependent variables. Pearson correlation, which ranges between -1 and +1 was used because the data was discreet. A positive Pearson correlation value indicates a positive relationship while any negative Pearson correlation value indicates a negative relationship. The association between the variables becomes stronger as the Pearson correlation value approaches either +1 or -1. The results of the correlation analysis are shown in table 4.3.

Inventory recording has a strong positive significant correlation with performance of distribution firms in Nairobi City County, Kenya (r=0.707, p=0.000). This implies that change in inventory recording would predict great changes in performance of distribution firms in Nairobi City County, Kenya. Results are in support of Juan and Mertinez (2022), that showed that that the firm's management can create value through minimization of the number of days of inventory. Effectual inventory management techniques enable to enhance to enhance the efficiency of operations of an organization.

Demand forecasting has a strong positive significant correlation with performance of distribution firms in Nairobi City County, Kenya (r=0.787, p=0.000). This implies that change in demand forecasting would predict great changes in performance of distribution firms in Nairobi City County, Kenya. Findings support Gitau (2021) that product management such as product analysis, customer engagement, and information technology improve performance.

Table 4.3: Correlation

		Project Performance	Inventory recording	Demand forecasting
Project Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	140		
Inventory recording	Pearson Correlation	.707**	1	
	Sig. (2-tailed)	.000		
	N	140	140	
Demand forecasting	Pearson Correlation	.787**	.957	1
	Sig. (2-tailed)	.000	.000	
	N	140	140	140

Regression Analysis

The study computed regression analysis to test the effect of independent variables on the dependent variables. Three tables were computed and they are presented and discussed in sub-sections below.

Model summary was used to establish the amount of variation in dependent variable as a result of changes in the independent variables. In this study, model summary was used to test the amount of variation in performance of distribution firms in Nairobi City County, Kenya as a result of changes in demand forecasting and inventory recording. Table 4.4 presents summary of the findings obtained.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845[a]	.714	.706	.829

a. Predictors: (Constant), demand forecasting, inventory recording

The R Square is 0.714, indicating that 71.4% of the variance in performance of distribution firms in Nairobi City County, Kenya can be accounted for by the combined effect warehouse practices, demand forecasting, inventory recording and cross docking. This finding suggests that these factors play a critical role in determining performance of distribution firms in Nairobi City County, Kenya. The multiple correlation coefficient (R) of 0.845 suggests a strong positive relationship between the predictors and the dependent variable. The remaining 28.6% suggests that there are other factors that affect performance of distribution firms in Nairobi City County, Kenya that were not included in the study.

The study used analysis of variance (ANOVA) to test the significance of the study. The model significance was tested at 95% confidence interval. If the p-value is less than 0.05 then the model is considered significant. Table 4.5 presents the ANOVA findings.

Table 4.5: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	232.195	2	116.098	171.489	.000[b]
	Residual	92.798	137	.677		
	Total	324.993	139			

a. Dependent Variable: Performance

b. Predictors: (Constant), demand forecasting, inventory recording

The ANOVA results indicate a p-value of 0.000, which is below the chosen significance level of 0.05. This signifies that the fitted model holds significant predictive power regarding the performance of distribution firms in Nairobi City County, Kenya. Furthermore, the substantial F-critical value of 171.489 further bolsters the significance of the model, affirming its reliability in explaining variations in performance.

Table 4.6: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.425	.382		14.193	.000
	Inventory recording	.496	.166	.477	2.990	.003
	Demand forecasting	1.139	.168	.872	7.981	.000

a. Dependent Variable: Performance

The coefficients were used to fit regression model. From the findings in Table 4.12, the following regression model was fitted.

$$\mathbf{Y = 5.425 + 0.496\ X_1 + 1.139\ X_2}$$

Where Y is the dependent variable (performance); X_1 is inventory recording; X_2 is demand forecasting

Inventory recording show a statistically significant positive coefficient (β = .496, sig = .000), indicating that improvements in inventory recording result to greater changes in performance of distribution firms in Nairobi County. Findings concur with Anichebe & Agu (2021) that inventory management had a significant effect on productivity of an organization and there was a strong positive correlation between inventory management and profitability of an organization.

Demand forecasting show a statistically significant positive coefficient (β = 1.139, sig = .000), indicating that improvements in demand forecasting result to greater changes in performance of distribution firms in Nairobi County. Results show that demand forecasting has the most significant influence on performance of distribution firms. Results are in agreement with Maalim (2022) that improvements in product management and analysis can increase customer satisfaction.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The study findings also revealed that demand forecasting has the most significant positive influence on the performance of distribution firms in Nairobi City County. Therefore, the study concludes that accurate demand forecasting can positively impact the performance of distribution firms.

The study findings revealed that inventory recording has a significant positive influence on the performance of distribution firms in Nairobi City County. Therefore, the study concludes that accurate inventory recording can positively impact the performance of distribution firms.

Recommendations

The findings revealed that demand forecasting has a positive and significant influence on performance of distribution firms. The study recommends that there is a need to implement effective techniques of demand forecasting, stock reorder level and economic order quantity to improve performance. Demand forecasting techniques such as product analysis, customer engagement, and information technology can improve performance. Organizations should enhance process auditing in the inventory control to enhance efficiency in service delivery.

The study findings showed that inventory recording as a positive and significant influence on performance of distribution firms. The study recommends that management should oversee regular stock taking to improve inventory management. Further, there is a need to improve inventory ordering and storage techniques since these would significantly affect the performance of distribution firms. There is a need to improve inventory systems by emphasizing on information systems and skills and at the same time have computerized inventory control systems designed to track and record inventory levels.

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