



INFLUENCE OF WAREHOUSING MANAGEMENT PRACTICES ON LOGISTICAL PERFORMANCE OF COMMERCIAL STATE CORPORATIONS IN KENYA: A CASE OF KENYA AIRPORTS AUTHORITY

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Accepted: October 5, 2018

ABSTRACT

The purpose of the study was to examine the influence of warehouse management practices on logistical performance of the commercial state corporations in Kenya. The study adopted a descriptive research design, with a population of 120 respondents at KAA. The data was analyzed with the help of SPSS. It was notable that there exists a relationship between independent variables and dependent variable with a correlation coefficient of 0.788. The coefficient of determination was between zero and one. The data showed that the high R square was 0.620. It showed that the independent variables in the study were able to explain 62.00% variation in logistical performance while the remaining 38.00% was explained by the variables or other aspects outside the model. Therefore, the study recommended that managers in commercial state corporations in Kenya should incorporate transport management in their operations processes in order to increase overall cost efficiency, enhanced market share, and reduced lead time thereby impacting positively on their performance. This study established a significant positive relationship between inventory management practices and logistical performance. The study therefore recommended the inclusion of inventory management in the strategic plans of the state corporations. Inventory management as evidenced in this study, of being capable to reducing costs, making sure there was full utilization of resources usage and improved customer service thus impacting positively on logistical performance of the state corporation. Order processing involved all aspects of managing customer requirements, including initial order receipt, delivery, invoicing, and collection with capability of impacting positively on firm performance. This study established that order process management statistically and significantly influences the logistical performance. The organization should impress order process management such as electronic order processing, timely order processing, and timely delivery, tracking of order movement and ensuring zero double payment.

Key Words: Transport Management, Inventory Management, Order Processing, Distribution Planning, Logistical Performance

INTRODUCTION

Warehouse management primarily refers to the coordination of the movement and storage of materials within a warehouse and processes associated and transactions, including shipping, receiving, put-away and picking. Warehousing is one of the important auxiliaries to trade. It creates time utility by bridging the time gap between production and consumption of goods. The effective and efficient management of any organization requires that all its constituent elements operate effectively and efficiently as individual SBUs / facilities and together as an integrated whole corporate. Across the supply chains, warehousing is an important element of activity in the distribution of goods, from raw materials and work in progress through to finished products .It is integral part to the supply chain network within which it operates and as such its roles and objectives should synchronize with the objectives of the supply chain. It is not a 'Stand-alone' element of activity and it must not be a weak link in the whole supply chain network. (Ramaa & Allaini, 2012).

Aberdeen's warehousing analysis points to a number of pressures compelling warehousing logistics professionals to investigate productivity solutions. Dynamic fuel costs have professionals up and downstream in the supply chain scrambling to find cost-cutting measures and higher operating efficiencies. Similarly, ever-rising square footage expenses are forcing enterprises to think critically about maximizing productivity within their current distribution footprint – as opposed to bringing another site online. Large enterprises continue to seek to reduce the number of stocking locations and drive more productivity from the remaining distribution centers. (Aberdeen Group, 2013)

The importance of logistics and supply chain management to a country's economy had been highlighted time and again in the recent past (Ittmenn & King, 2010). A report by the Bureau of Transport

Economics (BTE) of Australia (BTE 2001) states that the performance of the logistics system had a major impact on the Australian economy: —It affected the cost structures and revenues of Australian producers, their competitiveness in areas such as delivery times and product quality, and the responsiveness of producers to consumer requirements. In addition, Tseng, Yue and Taylor (2005) stated that due to the trend of nationalization and globalization in recent decades, the importance of logistics management had been growing in various areas. In a global economy, competitive and dynamic environment, logistics managements is an important strategic factor for increasing competitiveness, (Roman, Parlina & Veronika, 2013). The significance of logistics management had evolved from a more passive and cost minimization oriented activity to a key success factor for firm competitiveness

Africa continent was not performing well in logistics compared to other continents as the report confirmed that the top four countries were from Europe, the fifth one was from Asia however, the bottom five were all from Africa. The top five logistics performers in 2010 were (in order): Germany (4.11), Singapore (4.09), Sweden (4.08), the Netherlands (4.07) and Luxembourg (3.98), and the bottom five were Somalia (1.34), Eritrea (1.70), Sierra Leone (1.97), Namibia (2.02) and Rwanda (2.04). Shippers Council of Eastern Africa (SCEA) in their Annual Publication of 2013 confirmed that, a country's ability to trade globally could highly depend on the extent to which its international traders have access to competent and high quality logistics services. Majority of the international trader's respondents ranked the quality of logistics services in eastern Africa as average (SCEA, 2013). A survey done by SCEA in 2012, revealed an array of factors that were responsible for the efficiency and cost structure of Kenya logistics chain. They included: logistics cost and efficiency indicator; time indicators related to deliver goods; truck turnaround time; complexity indicators

which measured the level of complexity in undertaking trade transactions and customer perception indicators. Comparing the year 2010/2011 with 2012, they came up with the following findings: Increase of 35.2 percent in shipping freight rates was realized in 2012; Aircraft operating costs increased from an average of USD 3.00 per kilogram in 2010/2011 to an average of USD 4.90 per kilogram in 2012; which reduced types of goods transported by air in the year (SCEA, 2013). It was therefore clear that logistics management played a big role in any economy and was a critical contributor to the competitiveness of a country.

Kenya's logistics performance had deteriorated in recent years. From an overall global ranking of 76th in 2007, it was then 122nd out of 155 countries on the Logistics Performance Index (World Bank 2013). Although international shipments, infrastructure and logistics competence had improved marginally since 2007, customs, track & trace and timeliness had all declined significantly over the period (World Bank 2012). While the time to import goods, as well as the number of documents necessary, were comparable to the average in sub-Saharan Africa, the cost to import was significantly higher. Low logistics efficiency was a key concern and business risk for companies importing to or exporting from Kenya as well as the logistics service providers involved (Kenya Shipping Council, (KSC, 2013)..

State corporations in Kenya have gone under a lot of reforms through government task forces and session papers to make them more efficient, effective in the performance of their mandate and to reduce the financial burden of the corporations on the public coffers. A lot of effort has gone in trying to make these corporations not only self-reliant but to make sure they can fund the government through the residual surplus after covering their costs of operations from the revenue they earn. Effective and functioning corporate governance is at the core in

ensuring this is achieved as this would be to the benefit of the whole country as it moves towards the achievement of Vision 2030 (SCAC, 2010).

The Kenya Airports Authority is an autonomous body established in 1991 through an act of parliament and is charged with an umbrella responsibility of providing and managing a coordinated system of all airports in Kenya. Kenya Airports Authority has established warehouse stations all around the country. These stations are used in the transportation of non-perishable and perishable goods. These stations have contributed to many people getting employment. These airports give services of local and international flights.

Statement of the Problem

Commercial State corporations in Kenya have performed poorly compared to their private counterparts. An increasingly vital part of any warehouse operation is an enterprise's ability to deliver on customer demands. However, 58% of companies report that they have not been able to shorten their order fulfillment times since 2004. Historical data and projections of future order volume and activity are being mined by companies to improve warehouse slotting and better plan labor workloads, staff training programs, and labor productivity metrics down to a task level (Zhang, 2012). The problem of poor logistical performance of commercial state corporations represents a drain on the exchequer and also results into non delivery on intended services. This has a negative implication on the welfare of Kenyan Citizens and may also imply that Vision 2030 is not met. The Presidential Task Force on Parastatal Reforms (PTPR) of 2013 identified 17 commercial state corporations that made losses in the Financial year 2011/12 compared to twelve in 2010/11 and sixteen in 2009/10 (PTPR, 2013). This represents 24%, 27% and 35% respectively of all commercial oriented state corporations. The pattern of stock of publicly guaranteed debt to State

Corporations in Kenya shows a decline in 2015 from 2016, but has been on an upward trend since then. The increase in this stock of debt is largely attributed poor warehousing management practices in the commercial state corporations (Mukunga & Karanja, 2017). According to Dimitrios (2008) warehouse management practices have come to be recognized as a vital problem area in the commercial state corporations needing top priority. Warehousing management practices thus deserve utmost attention (Rajeev, 2010).

While all the previous studies had tended to focus more on the developed world (McKinnon, Edwards, Piecyk & Palmer, 2009; Sanchez-Rodrigues, Cowburn, Potter, Naim & Whiteing, 2009). Evidence showed that cultural, social, economic and environmental aspects of each country did influence the link between logistics management and performance (Miguel & Brito, 2011; Kaufmann & Carter, 2006). Keebler & Plank, (2009) agreed that the findings of US firm could not represent the universe of companies nor could findings be generalized to other countries. Furthermore, first world such as Europe, America and part of Asia had more developed infrastructure and business structures that easily supported the implementation of logistics as opposed to developing countries. The effort to achieve generalization of the causal relationship between warehousing management practices and logistical performance calls for empirical confirmation in diverse environments, especially developing economies such as Kenya. This study therefore intended to empirically examine how transport management, inventory management, ordered process management and distribution planning influence logistical performance in the commercial state corporations in the Kenyan setting, with a specific reference to Kenya Airports Authority.

Objectives of the Study

The general objective was to examine the influence of warehouse management practices on logistical performance of the commercial state corporations in Kenya. The specific objectives were:-

- To examine the influence of transport management on logistical performance of the commercial state corporations in Kenya
- To determine the influence of inventory management on logistical performance of the commercial state corporations in Kenya
- To establish the influence of order processing on logistical performance of the commercial state corporations in Kenya
- To assess the influence of distribution planning on logistical performance of the commercial state corporations in Kenya

LITERATURE REVIEW

Theoretical Review

Stochastic Inventory Theory

In 1958, Stanford University Press published *Studies in the Mathematical Theory of Inventory and Production* (edited by Kenneth J. Arrow, Samuel Karlin, and Herbert Scarf), which became the pioneering road map for the next forty years of research in this area. One of the outgrowths of this research was development of the field of supply-chain management, which deals with the ways organizations can achieve competitive advantage by coordinating the activities involved in creating products — including designing, procuring, transforming, moving, storing, selling, providing after-sales service, and recycling.

According to Odadi (2012) for most order quantity/reorder point inventory systems, the stochastic model, which specifies the demands as stochastic processes, is often more accurate than its deterministic counterpart the EOQ model. However,

the application of the stochastic model has been limited because of the absence of insightful analytical results on the model. This paper analyzes the stochastic order quantity reorder point model in comparison with a corresponding deterministic EOQ model. Based on simple optimality conditions for the control variables derived in the paper, a sensitivity analysis is carried out, and a number of basic qualitative properties are established for the optimal control parameters.

The main results include the following: in contrast to the deterministic EOQ model, the controllable costs of the stochastic model due to selection of the order quantity (assuming the reorder point is chosen optimally for every order quantity) are actually smaller, while the total costs are clearly larger; the optimal order quantity is larger, but the difference is relatively small when the quantity is large; the cost performance is even less sensitive to choices of the order quantity; the relative increase of the costs incurred by using the quantity determined by the EOQ instead of the optimal from the stochastic model is no more than $1/8$, and vanishes when the ordering costs are significant relative to other costs (Padgett, 2016).

Just In Time (JIT) Model

JIT is a Japanese management philosophy which has been applied in practice since the early 1970s in many Japanese manufacturing organizations. It was first developed and perfected within the Toyota manufacturing plants by Taiichi Ohno as a means of meeting consumer demands with minimum delays. Taiichi Ohno is frequently referred to as the father of JIT. Toyota was able to meet the increasing challenges for survival through an approach that focused on people, plants and systems. Toyota realized that JIT would only be successful if every individual within the organization was involved and committed to it, if the plant and processes were arranged for maximum output and efficiency, and if quality and production

programs were scheduled to meet demands exactly (Yin, 2014)

JIT manufacturing has the capacity, when properly adapted to the organization, to strengthen the organization's competitiveness in the marketplace substantially by reducing wastes and improving product quality and efficiency of production. When first developed in Japan in the 1970s, the idea of just-in-time (JIT) marked a radical new approach to the manufacturing process. It cut waste by supplying parts only as and when the process required them. The old system became known (by contrast) as just-in-case; inventory was held for every possible eventuality, just in case it came about. This is an inventory management systems method whose goal is to maintain just enough material in just the right place at just the right time to make first the right amount of the product (Lewin, 2012). This was pioneered by the Japanese manufacturing firms where inventory is acquired only when required in business for production process and this aimed at improving the return on investment of the business by reducing in-process inventory and its associated costs (Leonard, 2000). In this system, the supplier has the responsibility of delivering the components and part to the production line "Just in Time" to be assembled. Other names for just in time system is Zero stock inventory and production. For the just in time method to work successfully the quality of the parts must be very high because defective materials could up halt the operations of the assembly line, there must be dependable relationships and smooth co-operation with suppliers, ideally this implies that the supplier should be located near to the company with dependable transportation available (Hendrick & Signal, 2005).

Just in time inventory management systems system helps in reducing inventory costs by avoiding carriages of excess inventories and mishandling of raw materials. According to Lewin (2012), Just in time

purchasing recognizes high costs associated with holding high inventory level and as such it has become important in most organizations to order inventory just in time for production so as to cut costs of holding inventory like storage, lighting, heating, security, insurance and staffing (Lewin, 2012)).

Transaction Cost Theory (TCT)

Transaction Cost Theory was first developed by Ronald Coase in 1937. TCT states that a firm's ownership decision is based on minimizing the sum of its transaction and production costs. Transaction costs occur in the exchange between client and vendor. Williamson (1994) also asserts that transaction costs are comprised of the costs of seeking the suppliers, inspection of goods and establishing and formalizing the terms of agreement, including the means to both guarantee compliance with the terms and protect against the potential expropriation of the investments made, to ensure that contract conditions are fulfilled. These aspects form the pillar to successful outsourcing from third party providers given the delivery by each party to the relationship.

According to Espino-Rodriguez and Gil-Padilla (2006) the greater the transaction costs, that is, the costs of information, negotiation and supervision of compliance entail, the less the tendency to outsource the activity. The primary factors producing transactional difficulties include: bounded rationality; opportunism; small numbers bargaining; information impactedness (McIvor, 2003). This theory implies that firms should consider cost implications of outsourcing initiatives for appropriateness. Management should outsource if the cost of doing the process is expensive than can be done by a service provider. According to the transaction cost theory, firms do exist to maximize profit by reducing their transaction costs; outsourcing to third party logistics service providers helps to minimize a firm's costs because as they grow in their capability they offer services at lower costs to

their clients (Bolumole *et al.*, 2007). It is generally accepted that transaction cost analysis is useful for assessing and taking a decision concerning outsourcing in logistics (Andersson, 1997).

Queuing Theory

According to Sundarapandian (2009), queuing theory is a mathematical study of waiting lines or queues. The theory enables mathematical analysis of several related processes, including arriving at the back of the queue, waiting in queue (a storage process) and being served in front of the queue (Sundarapandian, 2009). The theory permits the derivation and calculation of several performance measures including the average waiting time in the queue or the system, the expected number waiting or receiving service, and the probability of encountering the system in certain states such as empty, full having an available server or having to wait a certain time to be served (Boucher & Couture-Piché, 2015).

Queuing model can be utilized to model the material handling system variations and genetic algorithm can be implemented to solve the integrated optimization problem. It is also demonstrated that the proposed optimization approach can significantly improve a production system with respect to total travelling time, total work-in-progress in the system, utilization and quantity of material handling equipment and required area (Sundarapandian, 2009). In this study, the queuing theory is used to explain the association between warehouse management and organizational performance. The use of the queuing theory helps organization to optimize facilities layout design and material handling systems while minimizing storage cost (Sundarapandian, 2009). Warehouse management in an organization helps to reduce the number of staff required, storage area as well as time taken to store or retrieve various materials for use.

Conceptual Framework

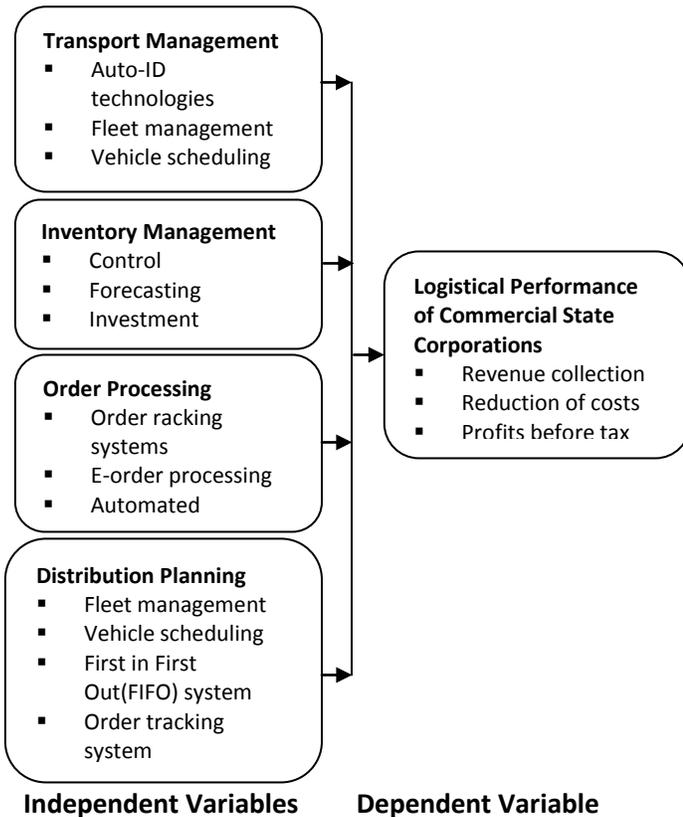


Figure 1: Conceptual Framework

Transport Management

In the early 1990s logistics outsourcing was limited to transportation and warehousing only. The emergence of third party logistics service providers in the early 2000s resulted to higher outsourcing and more value added services such as reverse logistics being provided. Focus on integrating supply chain with the customers to create value (Rushton, 2007). Outsourcing transport and other logistics activities means that it is more rational to buy external logistics services than to operate in-house. Achieving synergies between supply chains leads to the sharing of logistics equipment and transport services with other companies.

Inventory Management

Inventory control is a reliable means in which businesses are been managed to ensure customers are satisfied and organization remains in operations via minimization of losses. Inventories are basically stocks of resources held for the purpose of future production and/or sales. Inventories may be viewed as an idle resource which has an economic value. Better management of inventories would release capital for use elsewhere productively. Hence Inventory control implies the coordination of materials accessibility, controlling, utilization and procuring of material. Throughout the inventory chain from raw material through to retail stocks, inventories are planned and controlled item by item. For each item in every inventory, two questions must be answered again and again: How many of this item should be ordered and when should it be ordered? (Borade & Sweeney, 2015).

Order Processing

In most supply chains, customer requirements were transmitted in the form of orders. The processing of these orders involved all aspects of managing customer requirements, including initial order receipt, delivery, invoicing, and collection. The more quickly an order was transmitted, entered and processed, the more time (lead time) management had for planning transportation and inventory activities while meeting the required customer service levels. The logistics capabilities of a firm could be as good as its order processing competency and more so when managed efficiently.

Distribution Planning

Distribution structure pertains to how the distribution processes are set up. The distribution structure used by a manufacturing firm may also have impact on the ability of its DL to perform. The various aspects of distribution structure that can positively or negatively impact on the performance of the firm's

DL include availability of regional depots, route planning, mode of transport used.

Availability of regional depots refers to whether a manufacturing firm has set up depots in various regions so as to bring distribution near the customers. Regional depots may allow for proper capacity utilization of transport over long distances as this is not dependent on individual customer orders. Regional depots also ensure that the products are in close proximity to the customer thus making it possible for deliveries under short notice.

Route planning pertains to matters of route selection, vehicle capacity utilization as well as panning for dispatches. In route selection, the route selected may impact highly on the ability to deliver goods in time as trucks can avoid traffic congestions or use the shortest routes available, the route selected may also have impact on the cost of delivery.

Performance of State Corporations

Other researchers such as Galbraith and Schendel (2013) support the use of return on assets (ROA), return on equity (ROE) and profit margin as the most common measures of performance. Return on Assets (ROA) is derived by dividing net income of the fiscal year with total assets. Return on Equity (ROE) means the amount of net income returned as a percentage of shareholders equity. It measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Ricardo (2011) emphasize that successful organizations are those with the highest return on equity and those who have established performance management system "aligning" every aspect of the organization from top management to the factory floor. On the other hand, Nicholas (2008) argues that many organizations do not give a balanced picture of organizational performance. There is an over-

emphasis on financial criteria, with pre-occupation with past performance. Performance measures are usually not linked to strategies and goals of the overall organization and they are inward looking and do not capture aspects of performance necessary to gain and retain customers or build long term competitive advantage.

Empirical Review

Onkundi and Bichanaga (2016) sought to establish factors influencing inventory management in Public Health Hospitals in Kisii County. The objectives of the study were: to find out the influence of stock replenishment on inventory management performance Public Health Sector; establish how information sharing influences effective inventory management performance of the Public Health Sector; find out the influence of inventory costs on inventory management performance of the Public Health Sector and establish influences of demand variability on inventory management performance of the Public Health Sector in Kisii County, Kenya. Findings of the study were overstocking and under stocking of inventory of the Public Health Sector in Kisii County was due to inadequate forecasting of requirements, Scheduled time for deliveries, insufficient staff, scheduled time for receiving, issuing and unorganized storage facilities affect information sharing between the customer and supplier thus is affecting effective inventory management of the Public Health Sector; demand variability rating greatly influence inventory management.

This study therefore sought to investigate on the influence of inventory management on the performance of the energy sector in Kenya with a special focus on Kenya Power Limited. The study also sought to establish the influence of process auditing on the performance of Kenya Power Limited. The study found that inventory control influences the performance of Kenya Power especially the lack of process auditing. The study recommends that organization should enhance process auditing in the

inventory control to enhance efficiency in service delivery. Onchoke and Wanyoike (2016) sought to establish the Influence of inventory control practices and procurement performance of Agrochemical Distributors in Nakuru Central Sub-County.. Findings of the study revealed that Internal Inventory Security Procedural Practices, Inventory Auditing and Computerized Inventory Control both individually and collectively have significant positive influence on Procurement Performance.

A significant amount of investment can be saved when organizations have no obsolete and excessive inventory. Any decrease in these numbers can reduce the operational costs and most importantly taxes paid due to inventory stored in the warehouse will also decrease (Van Weele & Van Raaij, 2014). Many business owners have difficulty throwing away products they paid good money for. But holding on to obsolete products just burns up even more investments. Eliminating obsolete stock promptly, and use the cash and space you save for something more profitable. Naudeand Badenhorst-Weiss(2011) argues that once these items have diminished in value, the company must discount the product or discard them, which can cause large losses for a company. A number of organizations collapse due to poor planning and corruption which drives firms to closes down their operations. This can be stopped if proper inventory management is practiced and the technique thoroughly utilized for the benefit of the firm. Liu et al., (2010) noted that management and staff have minimal knowledge on how to apply the economic order quantity which negates the success of an organization

Njoroge (2015) sought to determine the inventory management practices used by Public hospitals in Kenya.. The study further concludes that the main challenges that hindered implementation of inventory management practices in public hospitals were: failure to invest more in the warehouse

management especially with modern technologies. Akintonye (2014) found that inventory management led to improved performance of German Service firms. Mehra (2014) and Lapide (2010) also concluded that use of technology in warehouse inventory management improved efficiency of manufacturing firms and service firms. Gakuru (2012) found that the major factor hindering the application of inventory model is frustrations by the ordering system. Lack of computers to keep track of inventory levels and lack of awareness on how best to implement the models were also cited as constraining factors.

METHODOLOGY

According to Shuttleworth (2008), research design refers to the logical structure of inquiry. The study employed descriptive research design as according to Mugenda &Mugenda (2012) it reports the study the same way as it is without variations from the collected data. The target population in the study was 120 employees; the study targeted each division that is involved in the procurement process at KAA head offices. These were classified as Human resource & Administration, Finance & control, Legal and Audit divisions. The study used structured questionnaires to obtain information from study respondents. The study adopted a content validity which indicates whether the test items represent the content that the test is designed to measure. The study collected both the quantitative and qualitative data. Quantitative data was analyzed using statistical package for social science (SPSS) version 24. The Multiple Regression model that aided the analysis of the variable relationships was as follows:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon,$$

Where, Y_i = Logistical performance;

β_0 = constant (coefficient of intercept),

X_1 = Transport management;

X_2 = Inventory management;

X_3 = Order processing;

X_4 = Distribution planning;

ϵ = Error term;

$\beta_1... \beta_4$ = Regression coefficient of four variables.

FINDINGS

Transport Management

The study sought to assess the influence of transport management on logistical performance of commercial state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 1 presented the findings. The scores of 'Strongly disagree' and 'Disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement

highly agreed upon equivalent to a mean score of 3.5 to 5.0.

A majority of respondents were found to be neutral that the supply chain department had adopted the fleet management system to enhance timely deliveries (2.456). The organization had ensured that there was fleet control system to reduce costs (2.435); Information sharing with their suppliers involves data acquisition, processing, presentation and retrieval (2.546); The organization had ensured that there was always preventive maintenance all the time to enhance customer satisfaction (2.564); The organization ensured that there was a working tracking system all the time to meet customer satisfaction (2.543); they did a route plan/ planning for our fleet to reduce costs, timely deliveries and enhance customer satisfaction (2.541). This finding agreed with an empirical research done by (Tseng, at el., 2005) that the transport management is the key element in a logistics management, which joins the separated activities and it influences the performance of firms hugely.

Table 1: Influence of Transport Management on Logistical Performance of Commercial State Corporations

Description	Mean	Std. Dev
The supply chain department has adopted the fleet management system to enhance timely deliveries	2.456	1.236
The organization has ensured that there is fleet control system to reduce costs	2.435	1.346
The firm has adopted the use of the fuel management system to enhance cost reduction	2.546	1.452
The organization has ensured that there is always preventive maintenance all the time to enhance customer satisfaction	2.564	1.327
The organization ensure that there is a working tracking system all the time to meet customer satisfaction	2.543	1.324
We do a route plan/ planning for our fleet to reduce costs, timely deliveries and enhance customer satisfaction	2.541	1.235

Inventory Management

The study sought to assess the influence of inventory management on logistical performance of commercial state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale

(where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 2 presented the findings. The scores of 'Strongly disagree' and 'Disagree' had been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' had been

taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' have been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

A majority of respondents were found to be neutral that the organization had ensured that there was tracking of inventory to enhance coordination of materials accessibility, controlling, utilization and procuring of materials (2.367). They had the correct forecasting methods thus reduction of stock outs in the organization (2.421). The original equipment manufacturer was used to predict demand beyond a 4 week horizon (2.643); The forecasting accuracy demonstrated improvements and related

observations results in inventory markdowns (2.478); The organization had advanced forecasting tools that could enable improvements in cost reduction (2.521); The forecasting tool accuracy tools synchronizes the supply and demand cycle than the use of real time information (2.623). The organization had adopted Just-in-Time system as the inventory control method designed to minimize inventory, and move it to the field for use exactly when needed (2.652).

These findings were in agreement with the study done by Stevenson (2009) that inventories is —a vital part of business, as they are necessary for operations and they also contributed to customer satisfaction.

Table 2: Influence of Inventory Management on Logistical Performance of Commercial State Corporations

Description	Mean	Std. Dev
The organization has ensured that there is tracking of inventory to enhance coordination of materials accessibility, controlling, utilization and procuring of materials.	2.367	1.346
We have the correct forecasting methods thus reduction of stock outs in the organization	2.421	1.423
The original equipment manufacturer is used to predict demand beyond a 4 week horizon	2.643	1.562
The forecasting accuracy demonstrate improvements and related observations results in inventory markdowns	2.478	1.423
The organization has advanced forecasting tools that can enable improvements in cost reduction	2.521	1.462
The forecasting tool accuracy tools synchronizes the supply and demand cycle than the use of real time information	2.623	1.432
The organization has adopted Just-in-Time system as the inventory control method designed to minimize inventory, and move it to the field for use exactly when needed.	2.652	1.345

Order Processing

The study sought to assess the influence of order processing on logistical performance of commercial state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 3 presented the findings. The scores of 'Strongly disagree' and

'Disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' has been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' had been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

A majority of respondents were found to be neutral that the organization used electronic processing

(2.543); they deliver the right quality of products at the first order (2.387); orders were processed in time (2.543); achieve timely delivery (2.454); ensure zero double payment (2.543); use of order training system (2.543) and achievement of minimum order

processing costs (2.532). Christopher 2010 supports the argument that order process management with accurate information helps to achieving superior logistical performance makes customer appreciate the whole supply chain.

Table 3: Influence of Order Processing on Logistical Performance of Commercial State Corporations

Description	Mean	Std. Dev
Organization make use of electronic processing	2.523	1.234
Deliver right quality of products at first order	2.456	1.345
Orders are processed in time	2.521	1.234
Use of order processing systems	2.488	1.237
Achieve timely delivery	2.562	1.532
Ensure zero double payment	2.567	1.235
Use of order tracking systems		
Achieve minimum order processing costs		

Distribution Planning

The study sought to assess the influence of distribution planning on logistical performance of commercial state corporations in Kenya. This section presented findings to statements posed in this regard with responses given on a five-point likert scale (where 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5= Strongly Agree). Table 4 presents the findings. The scores of 'Strongly disagree' and 'Disagree' have been taken to represent a statement not agreed upon, equivalent to mean score of 0 to 2.5. The score of 'Neutral' had been taken to represent a statement equivalent to a mean score of 2.6 to 3.4. The score of 'agree' and 'strongly agree' had been taken to represent a statement highly agreed upon equivalent to a mean score of 3.5 to 5.0.

A majority of respondents were found to be neutral that measuring the quality of warehouse performance is difficult (2.523). The organization had made internal assessment when planning (2.456). The distribution Planning had ensured timely delivery (2.521); the organization ensured the participatory planning was made (2.488); There was need identification and was well evaluated when planning (2.562); he organization had made external assessment when planning that would affect organizational productivity (2.567). The staff was well trained in the existing IT services provided (2.532). The organization did not deviate from the plans (2.652); resistance to the plans by various departments did not affect performance (2.562).This implied that distribution planning an influence on the logistical performance of commercial state corporations in Kenya.

Table 4: Influence of Distribution Planning on Logistical Performance of Commercial State Corporations

Description	Mean	Std. Dev
Measuring the quality of warehouse performance is difficult	2.523	1.234
The organization has made internal assessment when planning?	2.456	1.345
The distribution Planning has ensured timely delivery	2.521	1.234
The organization ensure the participatory planning is made	2.488	1.237
There is need identification and is well evaluated when planning	2.562	1.532
The organization has made external assessment when planning that would affect organizational productivity	2.567	1.235

The staff is well trained in the existing IT services provided	2.532	1.342
The organizations does not deviate from the plans	2.652	1.223
Resistance to the plans by various departments does not affect performance	2.562	1.432

Logistics Performance

On the extent to which the organization had performed in terms of logistics and data was therefore presented in frequency tables with the mode being used as the appropriate measure of central tendency. The results were presented in Table 5. The first indicator for the dependent variable required knowing what the organization level of cost reduction was, 0% of the respondents had 0-10%, 3% had 11-20%, 11% had 21-30%, 17% had 31-40%, 69% had had over 50%. The modal class was of the respondents who had over 50% level of cost reduction. When the respondents were asked what the level of increase in timely deliveries of procured goods and services, 3% of the respondents 0-10%, 3% had 11-20%, 14% had 21-30%, 26% had 31-50%, 49% had over 50%. The modal class was of the respondents who had over 50% level of increase in timely deliveries of procured goods and services. The mode was found to be 5 which implied that on

average the level of increase in timely deliveries of procured goods and services.

Further, the respondents were asked what the level of increase in customer satisfaction in the organization offered was, 0% of the respondents 0-10%, 3% had 11-20%, 3% had 21-30%, 34% had 31-50%, 60% had over 50%. The modal class was of the respondents who had over 50% customer satisfaction level. The mode was found to be 5 which imply that on average the level of increase in customer satisfaction in the organization is over 50%.

Finally, the respondents were asked what the level of reduction of stock out in the organization was, 0% of the respondents 0-10%, 3% had 11-20%, 20% had 21-30%, 43% had 31-50%, 34% had over 50%. The modal class was of the respondents who had between 31-50% reductions of stock out levels in the organization. The mode was found to be 4 which implied that on average level of reduction of stock out in the organization was between 31-50%.

Table 5: Logistical Performance

Statement	0%-10%	11%-20%	20%-30%	31%-50%	Over 50%	Mode
What is the level of cost reduction in supply chain in the organization?	0	3	11	17	69	5
What is the level of increase in timely deliveries of procured goods and services in the organization?	3	3	14	26	49	5
What is the level of increase in customer satisfaction in the organization?	0	3	3	34	60	5
What is the level of reduction of stock out levels in the organization?	0	3	20	43	34	4

CONCLUSIONS

The study results concluded that inventory management is important factors which can enhance logistical performance in the commercial state corporations in Kenya. The regression coefficients of the study showed that inventory management has a significant and positive influence on logistical performance in the commercial state corporations in Kenya.

The study results concluded that transport management is important factors which can enhance logistical performance in the commercial state corporations in Kenya. The regression coefficients of the study showed that transport management has a significant and positive influence on logistical performance in the commercial state corporations in Kenya

Further, the study results concluded that order processing was important factors which can enhance logistical performance in the commercial state corporations in Kenya. The regression coefficients of the study showed that order processing had a significant and positive influence on logistical performance in the commercial state corporations in Kenya.

Finally, the study results concluded that distribution planning was important factor which can enhance logistical performance in the commercial state corporations in Kenya. The regression coefficients of the study showed that distribution planning had a significant and positive influence on logistical performance in the commercial state corporations in Kenya.

RECOMMENDATIONS

Therefore, the study recommended that managers in commercial state corporations in Kenya should incorporate transport management in their operations processes in order to increase overall cost efficiency, enhanced market share, and reduced lead time thereby impacting positively on their performance.

This study established a significant positive relationship between inventory management practices and logistical performance. The study therefore recommended the inclusion of inventory management in the strategic plans of the state corporations. Inventory management as evidenced in this study, of being capable to reducing costs, making sure there is full utilization of resources usage and improves customer service thus impacting positively on logistical performance of the state corporation.

Order processing involves all aspects of managing customer requirements, including initial order receipt, delivery, invoicing, and collection with capability of impacting positively on firm performance. This study established that order process management statistically and significantly influences the logistical performance. The organization should impress order process management such as electronic order processing, timely order processing, and timely delivery, tracking of order movement and ensuring zero double payment

Areas for Further Research

A review of literature indicated that there had been limited amount of research on influence of warehousing management practices on the logistical performance in commercial state corporations in Kenya. Thus, the findings of this study served as a basis for future studies on logistical performance in commercial state corporations in Kenya. The four independent variables that were studied explain 62.00% of the logistical performance in commercial State Corporation. This therefore meant that other factors not studied in this study contributed 32.00% to the logistical performance in commercial State Corporation. There is need to carry out further study on other factors influencing logistical performance in commercial state corporations in Kenya.

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