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ABSTRACT

This study evaluated inventory management activities and the success of supply chain management in Nairobi City County with a particular focus on strategic supplier partnerships, economic order quantities, just-in-time delivery, and material resource planning. The research was grounded on the lean theory, theory of economic order quantity, application control theory, and stock diffusion theory. The study utilized a descriptive research approach and the positivist philosophy. The population of the study consisted of 340 individuals. The research sample size comprised 183 procurement officers that worked for County offices that were housed in the logistics and procurement division and built environment and urban planning. The study adopted a quantitative approach and used a questionnaire as the data-gathering tool. Descriptive statistics were used to measure means, frequencies, and percentages. Inferential statistics were utilized to determine the nature, strength, and statistical significance of the relationship between the variables. The latest version of SPSS was used for analysis. The findings showed that the adoption of Economic Order Quantity, just in Time, and Material Requirements Planning positively impacted supply chain achievement at Nairobi County. Strategic supplier partnerships were found to have an insignificant impact on supply chain performance. The findings were statistically significant and underscored the importance of mainstreaming Economic Order Quantity, just in Time, and Material Requirements Planning across the various departments of the county government of Nairobi. Nairobi County government should prioritize early engagement of suppliers in supply chain processes; proper and continuous communication with suppliers; frequent meetings with suppliers; using fewer rather than many suppliers and long-term partnerships with supplier to bolster the County's supply chain performance. Future studies could explore the reasons behind the poor strategic supplier partnerships practices at Nairobi City County to guide the formulation and implementation of effective strong supplier partnership strategies to improve overall supply chain performance at the different departments of the county government of Nairobi.

Key Words: *Supplier Partnerships, Economic Order Quantities, Just-In-Time, Material Resource Planning*

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INTRODUCTION

All products owned and kept for customer pleasure are included in the inventory. Even though holding inventory comes with several expenses, it is necessary for any business (Alrjoub& Ahmad, 2017). Therefore, to ensure that the customers are satisfied through speedy delivery, a firm ought to have a balance in the stock they have and order while minimizing the costs of holding it (Panigrahi et al. 2021). It has further been argued that managing inventory helps and minimizes cases of disrupted processes (Alrjoub& Ahmad, 2017).

Notably, in almost all practical inventory situations, certainty is hardly present. In other words, the unpredictability and fluctuation of demand and acquisition lead times are common occurrences. Not all inventory issues can be addressed by inventory models like EOQ (Opoku et al. 2020). For instance, the expected demand or usage of an item may vary from the actual because of internal or external factors. Furthermore, the duration of time required for acquisition can change from advantageous to disadvantageous due to complications with suppliers and transshipment. A stock out occurs when there is inadequate inventory of an item when it is needed for whatever reason. This circumstance may result in a decline in earnings, and occasionally even losses (Onikoyi et al. 2017).

Locally, Arasa and Achuora (2020) suggested that inventory management approaches, including the lean inventory management systems, the ABC system, and e-inventory management systems, were crucial in improving operational performance among retail chains. Additionally, Mulandi and Ismail (2019) provided evidence that efficient inventory management techniques were critical to the success of Kenyan commercial state businesses. Particularly, the performance of Kenya's commercial state enterprises was considerably impacted by the JIT inventory system and material need planning. Therefore, regardless of industry, the value of inventory management cannot be denied.

Supply chain performance is an important concept in both the national and county units. Jirma (2017) identified the critical measures of supply chain performance in various Kenyan government ministries. The key determinants included the adoption of Information Technologies to improve flexibility and visibility across the supply chain and enhance inventory control and service delivery. Supply chain relationships also determine supply chain performance in Kenya by fostering stakeholder satisfaction (Jirma, 2017). Procurement regulations, such as those guiding the establishment of purchasing cycle times, also improve efficiency in the inventory control activities. SCP is also critical in the operations of devolved units of government. The supply chain performance determinants in Kisumu County government include seamless information flows across the supply chain, seamless cooperation among supply chain partners, compliance with public sector rules and regulations, funding and management of supply chain processes (Auma, 2015). Like Kisumu County, many devolved units in Kenya are also pursuing robust supply chain management strategies to thrive in the dynamic and competitive environment. Governments and organizations across the world, region, and locally use a wide range of parameters to measure supply chain performance. The present study will utilize reliability, cost, asset management, responsiveness, and flexibility as measures of supply chain performance.

Any corporate organization's ability to succeed largely depends on the inventory management strategies it uses to manage its inventories, particularly when it comes to providing fundamental services such as housing, healthcare, emergency response, waste collection, water, and sanitation among others (Wild, 2017). Inventory management practices (IMP) relate to the various strategies employed by businesses to optimize inventory levels and provide superior service most cost-effectively. The primary focus is to ensure a harmonious alignment between supply and demand, which is achieved through careful monitoring and management of manufacturing and purchase orders, ensuring a seamless flow of materials. Inventory

management strategies empower manufacturing companies to achieve effective and efficient control over their inventories (Aljaaidi & Bagais, 2020). Previous studies have shown that manufacturing companies use a variety of IMP (Oluwaseyi et al. 2017). Nonetheless, some academics concur that certain of these methods are more important than others and are thus used by manufacturing companies in both affluent and developing nations. In most developed and emerging countries, according to a study by Karadag (2018), EOQ is a classic and widely utilized approach for reducing the inventory of businesses. On the other hand, lean production, often known as JIT, was discovered to be the most popular IMP utilized by many businesses in the USA. The key inventory management practices of focus in the present study include strategic supplier partnerships, EOQ, JIT and MRP. The rationale for selecting at least two inventory management practices that include EOQ and MRP inventory management practices in many governments and organizations.

The entity, which replaced the city council, was established under the 2010 Constitution of Kenya. The management of the city is regulated by several Acts, such as the Devolved Governments Act among numerous others. The Nairobi City County is responsible for providing multiple services to citizens within its legal jurisdiction, which encompass both those that were formerly offered by the now-extinct City Council and those assumed by the federal government. The services administered by the federal government include sectors such as fishing, tourism, and industrialization. In contrast, the city administration is responsible for providing services in areas such as physical planning, housing, inspectorate services, and public works.

Statement of the Problem

In Kenya, the performance of the supply chain in counties has been hindered by the failure of the County governments to comply with the established supply chain policies, such as procurement regulations and practices in inventory management. Consequently, many counties grapple with misuse of taxpayers' money, and inability to meet their SCP targets (Owago et al., 2021). Besides, the implementation of budgets by County governments is hindered by poor inventory management practices which lead to slow absorption of funds into development projects and the provision of other critical services (Wandera et al, 2023). For instance, the Nairobi County government's inventory has struggled to keep up with demand as there have been numerous stock outs or complete shortages of a number of stock items when it was evident that the suppliers' delivery schedules weren't being met. The Kenya Medical and Supplies Agency (KEMSA) has on several occasions stopped the supply of drugs to all hospitals in the County due to a Kshs. 285 million debts owed to the agency by the County government (Kinyanjui, 2021). Delivery uncertainty is more likely to occur because the procurement department frequently gives the supplier little notice or asks for frequent schedule modifications. This demonstrates that the department has not established its order and reorder levels, which is a good practice in inventory management (Auditor-General Report, 2020). This motivated an investigation of the inventory management practices at the County and their effect on the SCP.

The various activities being undertaken in regard to procurement, public works, and healthcare supplies underscore the importance of good supply chain performance. This nevertheless appears to be lacking given that the County has been plagued by a surplus inventory of some commodities while there has been a shortage of other vital items in stores needed to meet client needs (Auditor General Report, 2020). Besides, there are numerous reports of delays or failure by the Nairobi County government to pay its suppliers, which could be an indicator of poor inventory control that could weaken strategic supplier partnerships. For instance, the Nairobi County government owed Kshs. 3.4 billion in supplier bills in the run-up to the 2022 general election (Mutai, 2022). This could signal supply chain management problems in the County government and justify the present study.

This study was motivated by the contextual research gaps in previous local studies. Some of the studies have not focused on a County government setting but a private sector context which further complicates the generalization of the findings because of the operational and institutional differences. It is also important to note that every County has its unique supply chain attributes, and the results cannot be necessarily generalized. Previous studies including Kiplagat (2019), Sunza (2018), and Ndiwa (2022) focused on single aspects of supply chain performance in Elgeyo Marakwet, Makueni, and Kiambu Counties respectively but there is little evidence on inventory management practices and their impact on SCP in Nairobi County government. An earlier study by Wafula (2016) concentrated on the effect of EOQ on SCP in Kenya's manufacturing sector, exhorting further research on the same but in county governments. Also, Kyallo et al. (2018) explored the supply chain performance determinants in national government ministries, which exposed a research gap on the same but in county government departments. Notably, no study has examined all the aspects of EOQ, JIT, MRP, and strategic supplier partnerships on supply chain performance. Sedyaningrum et al. (2019) and Uddin (2022) only explored the aspect of strategic supplier partnerships; Rao & Mangal (2018), and Munyao (2015) focused on EOQ while Kaswan et al. (2021) focused on JIT. The current study provides a panoramic view of supply chain performance focusing on strategic supplier partnerships, EOQ, JIT, and MRP. Therefore, this study sought to dissect the root causes of the Nairobi County government's supply chain problems and add meaningful contributions to the existing literature by filling the research gaps exposed in the previous studies.

Research Objectives

This study evaluated inventory management practices and the performance of the supply chain in Nairobi City County. The specific objectives were;

- To determine the effect of strategic supplier partnership on the performance of the supply chain at Nairobi City County Kenya.
- To establish the effect of Economic Order Quantity on the performance of the supply chain at the Nairobi City County Kenya.
- To find out the effect of Just-In-Time on the performance of the supply chain at Nairobi City County Kenya.
- To assess the effect of Material Requirements Planning on the performance of the supply chain at Nairobi City County Kenya.

LITERATURE REVIEW

Theoretical Review

Stock Diffusion Theory

Braglia et al. (2013) propounded the theory. According to the authors, evaluating and assessing appropriate inventory levels is considered a crucial aspect of stock diffusion theory, both in theoretical and practical contexts. The theory considers three factors: the amount of storage space needed, the rate of replenishment, and the avoidance of stockouts. By taking into consideration these three factors, excess inventory costs resulting from storage expenses, such as stock insurance premiums can be avoided (Braglia& Castellano, 2014).

The stock diffusion theory sets the basis for the development of standard practices in inventory management in the present study. By factoring in the three elements of stock diffusion theory, the County government can forge strong supplier partnerships to guarantee continuous delivery with little waste. The theory suggests reexamining the amount of storage needed, the rate of replenishment, and avoidance of stockouts by establishing partnerships with suppliers and maintaining constant contact with them. This directly impacts the implementation of JIT, MRP, and EOQ practices. Finally, by preventing shortages and unnecessary spending, these factors can improve supply chain performance.

Theory of Economic Order Quantity

Wilson (1913) propounded the theory. He gave the concept a thorough critical analysis (Sremac et al. 2018). The application of the model has revealed an increase in certain costs related to ordering and

inventory holding while a decrease in others. The location of the lowest overall inventory costs is another name for it. The inventory level known as EOQ minimizes the sum of ordering and inventory holding expenses.

According to Sanni et al. (2020), the model places orders for inventory volumes that minimize the expenses associated with keeping inventory and reordering. In their study, Sebatjane and Adetunji (2019) delineate the essential assumptions for calculating EOQ as follows: predictable and constant costs related to inventory holding and ordering, a constant rate of demand, a fixed lead time cycle, a consistent price per unit, immediate replenishment, batch delivery in its entirety, and the prevention of stockouts (Sremac et al. 2018).

In relevance to the study, the model sets about important variables to be considered to achieve an optimal inventory that minimizes costs. It documents the importance of rate of demand, lead time cycle, stock holding and ordering costs, and instantaneous replenishment as important factors in ensuring an optimal inventory with minimum costs. It, therefore, sets the basis for the analysis of economic order in this study.

Lean Theory

Propounded by Krafcik (1988), the theory recognizes lean as a system of "tools" for identifying and steadily getting rid of waste. Eliminating waste speeds up production, lowers costs, and improves quality (Krafcik, 1988). Goh and Goh (2019) elaborate that just in time ensures alignment of processes across the supply chain, further defining JIT as an extension of the ideas of lean.

De Jesus Pacheco et al. (2018) evaluated how the lean theory affected financial results. They proposed that lean manufacturing techniques could reduce waste in the production process and eliminate buffer stock. Sahu et al. (2020) demonstrated that adopting lean practices was beneficial in improving a firm's returns. The lean theory describes in detail how organizations increase ordering flexibility, decrease the amount of inventory held on-site, and eliminate the expenses linked to inventory management.

In this study, the application of lean theory will enhance the comprehension of just-in-time practices and their impact on SCP. In particular, the lean theory will provide strategies for aligning the business and production processes across the supply chain, thereby lowering waste and storage expenses and improving supply chain performance.

Application Control Theory

In 2004, Ortega and Lin were the theories' champions. The theory's proponent attempted to minimize ordering restrictions, minimize demand amplification, and limit inventory variance. Other firms may question inventory control in a situation with flexible demand, but application control theory can be quite helpful in addressing demand uncertainty. The theory offers suggestions for reordering operations, including when and how much to reorder in an uncertain demand environment. The absence of a predefined lead time between demand and the reordering level indicates that demand uncertainty is subject to intervals, which can lead to significant procurement efforts. In this circumstance, ensuring customer satisfaction might also call for strong managerial backing and sophisticated procurement techniques that put theory into practice (Arasa & Achuora, 2020).

In relevance to the study, the theory helps link Material Requirements Planning to operational performance. Based on the theory, the uncertainty of demand can have serious consequences on organizational functions and hence there is a need for the development of guidelines on reordering processes. This will guide Material Requirements Planning activities such as demand estimation and production scheduling. Lastly, the theory also justifies the inclusion of economic order quantity as an independent variable.

Empirical Literature Review

Strategic Supplier Partnerships and Supply Chain Performance

Sedyaningrum and her colleagues (2019) investigated the impact of strategic supplier partnerships on SCP among Indonesian farmers. The researchers used an explanatory design and collected data via questionnaires from 200 respondents. The findings suggest that cordial and strong supplier partnerships positively impact supply chain performance. Strategic supplier partnerships encourage commitment among stakeholders across the supply chain to their collective goals, foster information sharing, and improve the quality of service. Nonetheless, the study was done in the private sector whose operations may not be the same as in the public sector. There is considerable interest in doing a study to determine if the findings would be replicated in the public sector. The results corroborate the findings of Khan and Siddiqui (2018), who established the significance of information exchange and strategic supplier collaboration in Pakistan's SCM. The study focused on the pharmaceutical industry in Pakistan. The sample size comprised 35 pharmaceutical firms with offices in Pakistan's largest cities provided the information. Surveys that participants self-reported were used. The results revealed a substantial link and improvement in the productivity of pharmaceutical firms due to strategic supplier partnerships, information sharing levels, and information sharing quality. However, the research was done in the Pakistan context which has a unique public healthcare sector with unique strengths and weaknesses. The findings may not be necessarily generalized in other countries or the public sector, hence the need for the present study. The two studies also agree with Uddin (2022) who found a positive connection between supplier associations and supply chain effectiveness. The study investigated the effect of commitment and collaboration on SCP and found that the two independent variables significantly impacted innovation performance and operational effectiveness across the supply chain. Nonetheless, the study only concentrated on commitment and collaboration as indicators of strong supplier relationships. Further studies could explore other aspects of supplier partnerships, such as consistent communication with suppliers, vendor inventory management, and early supplier involvement.

Regionally, the effects of inventory management among which strategic supplier relationships were included were established on customer satisfaction and operational performance of supermarkets in Nigeria. The study by Ogonu, Mac-Kingsley, and Gladson (2016) indicated that strategic supplier partnership had a little effect in determining customer loyalty and SCP. The research was conducted in Nigeria's retail sector and adopted a survey design to collect data from customers of selected supermarkets. Customer satisfaction was assumed to be a consequence of good strategic supplier relationships. However, the findings rejected the hypothesis and concluded that strategic supplier partnerships had an insignificant impact on customer satisfaction. Note that the study only focused on one aspect of strategic supplier relationship which may not give an accurate picture of the correlation between supplier relationships and SCP. The study contradicts that of Lwiki et al. (2018) who studied the link between inventory management practices and the performance of the supply chain among sugar millers in Kenya. In essence, the study assumed that supply chain performance inevitably translated to financial performance and used the millers' financial performance to measure supply chain performance. The research analyzed the companies' communications with their suppliers, payment schedules with suppliers, and tendering processes. It was evident that strong supplier relationships positively affected supply chain performance, which then improved financial performance. However, the study was conducted in the private sector, and one is needed to be done in the public sector.

Economic Order Quantity and Performance of Supply Chain

Shin et al. (2015) explored the link between inventory management and the profits of firms based in the Northern part of America. A total of 1280 manufacturing companies were sampled throughout three years, from 2005 to 2008. Profit margin was employed in the study as an evaluation tool to assess the profitability of the enterprises, while Economic Order Quantity served as the dependent variable. The results showed a notable association between the variables. However, it is unclear whether a significant association would be found were the study to be replicated in the public sector. Shin et al. (2015) mirrors Wafula (2016) who also showed that effective inventory management practices, such as EOQ positively and significantly affect supply chain performance. Focusing on Oil marketing firms based in Kenya, a study by Wafula (2016) targeted 75 firms to pinpoint the link existing between inventory management and their performance. The investigation confirmed the link between inventory control as well as EOQ and oil marketing companies' operational effectiveness which was positive and significant. Note that Wafula (2016) only focused on point of order determination, one aspect of EOQ. Hence, the present study will explore at least three aspects of EOQ including timely replenishment of inventory and determination of stockholding costs to give a more accurate view of the topic. Seminal contributions by Rao & Mangal (2018) on the effectiveness of using EOQ in inventory management yielded similar findings as Shin et al. (2015). Rao & Mangal (2018) showed that organizations that used EOQ to determine their reorder quantities and reorder levels significantly improved efficiency in the supply chain processes. Inconveniences and costs were minimized on the part of the firm and its stakeholders. For instance, neither the firms nor customers needed extra storage space as their goods were delivered in the right quantities and on time.

In another local focus, Munyao et al. (2015) tested how EOQ among other practices affected manufacturing firm's performance based in the County of Mombasa. Through a sample of 45 such firms, the study demonstrated evidence that EOQ was one of the most practiced practices and that had a strong impact on their achievement. However, the study only measured the financial aspects of the firms' performance. The present study will focus on how EOQ impacts supply chain performance. The study is similar to Otundo and Bichanga (2015) who aimed to impartially assess the influences of various stock control practices, including EOQ on the performance of County governments in Kenya narrowing down to Kisii County. The study showed that effective inventory control procedures such as EOQ, would greatly impact the delivery of services. The present study replicated the same in the Nairobi County government, which is larger, more cosmopolitan, has more departments, and controls a wider supply chain.

Just in Time and Performance of Supply Chain

Locally, Kyalo et al. (2018) tested whether the government public sector, specifically, all 20 government ministries in Kenya, were affected by JIT practices. Through a sample of 680 supply chain management officers, both questionnaires and KII were conducted. The study results suggested that adopting a JIT policy was crucial for assuring lower storage costs. This is because the policy was crucial in controlling stock levels. After all, it ensures that stock arrives exactly when it is needed, preventing stockouts or overstocking. The research was done in the national government context, but this study replicated the same in the county government, specifically in Nairobi County.

In a related local context, a study by Mulandi and Ismail (2019) similarly investigated whether the adoption of stock management practices such as JIT was important in defining the performance of Kenyan state corporations categorized as commercial. It was estimated through a sample size of 33 corporations that JIT helped minimize costs, reduce wastage, and enhance performance. The study agrees with previous studies by Kyallo et al. (2018) but mainly focused on financial outcomes.

The present study covered the gap by studying the effect of JIT on supply chain performance.

Similarly, Kariuki (2017) researched how inventory management methods affect business performance in Laikipia County. The variables included strategies for estimating demand as well as IT-based inventory management systems including JIT, VMI, and ERP. The study population consisted of all 60 County staff and was represented by a descriptive design. The survey found that all businesses must use inventory management strategies to augment their performance. The research made specific notes of JIT's contribution to enhanced relationships, cost savings, and overall efficiency. Like Kyallo et al. (2018) and Mulandi and Ismail (2019), the study also concentrated on financial performance as the dependent variable. Financial performance is broad because many factors contribute to it. Thus, the present study focuses on the more specific supply chain performance.

Material Requirements Planning and Performance of Supply Chain

Khalid and Lim (2018) studied the impact of MRP and other practices on the performance of Melaka manufacturing firms based in Malaysia. Through a qualitative approach, the study demonstrated that one of the most recurrent themes shown was the importance of MRP in enhancing delivery. The study was done in the Malaysian and private sector contexts. The present study seeks to know whether MRP could have a positive influence on delivery in the Nairobi County government, Kenya. Similarly, Imetieg and Lutovac (2015) investigated the use of an MRP system for project scheduling. The study made use of a Libyan building project as its example. Through a purely empirical review, the investigation demonstrated that MRP was important in ensuring minimal wastage, reduced holding costs, and enhanced speed of delivery thus improving performance. The dependent variables in the study were only costs and timely delivery of services. The present study will cover more dependent variables including the impact of MRP on asset management, reliability, flexibility, and responsiveness of the supply chain system to end-user needs.

By using the Kenyan New KCC as a case study, Keitany et al. (2014) tried to ascertain the impact of MRP on an organization's performance. Systematic inventory control and lead time were study variables. Utilizing a stratified random approach, a sample of 49 respondents was taken. To obtain the data, questionnaires were employed. Tables and figures were utilized to present the findings. According to the study, the performance of the firm is positively impacted by lead time and inventory control (as parts of MRP). Note that the study was conducted in a profit-making organization and showed that MRP improved organizational performance. There is a gap in research as to whether the same findings could be realized in a government setup whose primary focus is not to make a profit but deliver services to the people.

Lastly, a study by Akintokunbo & Obom (2021) explored the role of MRP on the supply chain success of firms in the energy sector in Nigeria. An explanatory research approach was used. The sample size comprised 293 oil and gas firms operating in Nigeria’s energy sector. The researchers collected primary data via questionnaires and also collected secondary data from published reports and articles. The study showed that firms that prioritized MRP in their inventory management practices achieved better quality supply chain performance outcomes than those that did not. Consistent with preceding studies, such as Keitany et al. (2014) and Mbah, Obiezekwem, and Okuoyibo (2019), Akintokunbo & Obom (2021) underscored the importance of MRP in supply chain performance. This is because MRP minimized the wastage of resources by ensuring the suppliers provided the required materials at the right time and quantities. Note that the study was done in the Nigerian context and included firms in the public and private sectors. The present study seeks to replicate the same in the Kenyan context but in the SCP of the Nairobi County government.

Conceptual Framework

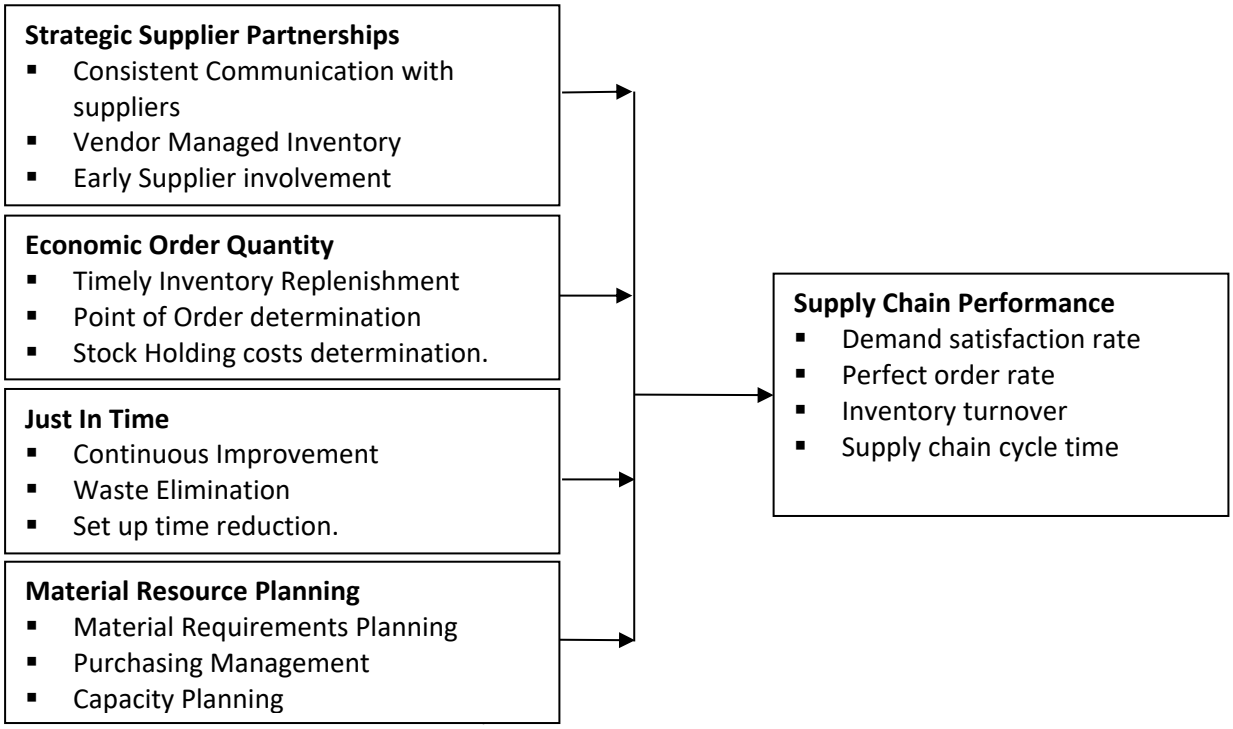

Figure 1: Conceptual Framework

METHODOLOGY

The design describes the framework for conducting a study, and guides the specific approaches designed to gather, analyze, and interpret data (Snyder, 2019). A descriptive research design will be utilized. The target population will be 340 respondents. The targeted departments of Nairobi County government include Built Environment and Urban Planning and Boroughs Administration and Personnel, 302 registered suppliers and the 38 procurement officers working in the county government of Nairobi, Kenya, will make up the study's target population. The sample size of 183 will then be stratified into procurement officers and registered suppliers. Zangirolami-Raimundo et al. (2018) define a research instrument as a tool employed to gather data during a study. Closed-ended and open-ended questionnaires were used in the present study to enable the researcher gain a comprehensive understanding of the research topic. The researcher dropped the questionnaires and then collected them later after the respondents have finished filling them. Duration of three weeks was taken to complete the process. When calculating the correlation between answers on an evaluation tool, the Cronbach alpha test of internal consistency is typically utilized (Sullivan, 2011). Statistical software called SPSS was used.

FINDINGS

Demographic Analysis

Inventory Management Practices and Supply Chain Performance

The current study investigated the effect of inventory management practices on the supply chain performance of Nairobi City County. The research comprised of four independent variables namely, strategic supplier partnerships, economic order quantity, just in time, and material resource planning. The four independent variables were each measured by at least five survey inquiries placed on a 5-point Likert scale to show the extent to which they affected supply chain performance. The highest number on the scale (5) showed that the participants strongly agreed with the survey inquiry while the

least number (1) showed strong disagreement (Appendix II). The four sub-sections below present the research findings on each of the four variables and a discussion of the same.

Strategic Supplier Partnerships and Supply Chain Performance

The investigator asked the participants to show the extent to which they agreed or disagreed with the six statements concerning the implementation of strategic supplier partnerships at Nairobi City County on a 5-point scale whereby; where 1 = ' Not at all', 2 = ' low extent', 3 = 'moderate extent', 4 = 'high extent' and 5 = 'very high extent.' Table 1 showed the findings of the research.

Table 1: Strategic Supplier Partnerships and Supply Chain Performance of Nairobi City County

Statement	Mean	Std. Dev.
Early involvement of suppliers in the process to spell out the quality required by the organization.	2.68	.6451
Consistent, proper and continuous communication with the suppliers to enhance speedy delivery.	2.94	.7084
The organization has the Vendor Managed Inventory (VMI) relationship with some suppliers who are allowed to hold inventory on site or near the customer, allowing instant access to the inventory.	2.80	.6949
Fewer suppliers are used as opposed to many suppliers by the organization.	2.50	.6853
There are frequent meetings between the organization and its suppliers	2.75	.7592
There is a long-term agreement between organization and its suppliers.	3.26	.7815
Aggregate	**2.82**	**.7124**

Source: Field Data 2023

The research participants only agree to a low extent with respect to how well the Nairobi City County implements the above practices related to strategic supplier partnerships (aggregate $\bar{x}$=2.82, D=.7124). The participants agree to a low extent that there is early involvement of suppliers in the process to spell out the quality required by the organization ($\bar{x}$=2.68, D=.6451). This suggests that there is low supplier engagement at the Nairobi County government, and this could easily lead to poor supply chain performance.

Consistent, proper and continuous communication ensures that both the organization and stakeholders understand their mutual expectations and remain committed to honor those. Additionally, the results showed that the implementation of Vendor Managed Inventory (VMI) relationship with some suppliers who are allowed to hold inventory on site or near the customer, allowing instant access to the inventory was only to a low extent (($\bar{x}$=2.80, D=.6451). This suggests that the Nairobi City County government only used many suppliers as opposed to few suppliers. The county government was not keen on maintaining long term partnerships with its suppliers (($\bar{x}$=3.26, D=.7124). Khan & Siddiqui (2018) suggests that maintaining long term partnerships with suppliers improves efficiency in inventory management by saving the firm the costs of tendering or looking for new suppliers. The firm can also enjoy other benefits; such as discounts from suppliers with whom there is a consistent relationship. Without long term partnerships with suppliers, Nairobi City County government cannot optimize supply chain performance. Also, Nairobi City County government has only maintained long-term partnerships with suppliers to a low extent because of failure to mainstream consistent, proper and constant communication with suppliers ($\bar{x}$=2.94, D=.7084). The findings agree with Lwiki et al. (2018) who contend that continuous communication with suppliers is necessary to establish strong supplier partnerships. Constant communication with suppliers enables the suppliers to understand the organization's payment schedules, expected quality, and delivery timelines.

Economic Order Quantity and Supply Chain Performance

The investigator asked the participants to show the extent to which they agreed or disagreed with the six statements concerning the implementation of Economic Order Quantity at Nairobi City County on a 5-point scale whereby; where 1 = ' Not at all', 2 = ' low extent', 3 = 'moderate extent', 4 = 'high extent' and 5 = 'very high extent.' Table 2 showed the findings.

Table 2: Economic Order Quantity and Supply Chain Performance of Nairobi City County

Statement	Mean	Std. Dev.
Inventory is ordered when the current inventory level has reached a defined level	4.05	.7289
On a timely basis i.e., weekly, monthly, quarterly, semiannually or annually, an inventory is replenished by the firm	3.82	.8185
At a specific time, a firm orders the inventory	4.03	.7496
The firm maintains minimum inventory levels to reduce holding costs	3.45	.7311
The amount of inventory ordered by the firm minimizes total ordering costs	3.71	.7955
Aggregate	**3.81**	**.7647**

Source: Field Data 2023

The aggregate means suggests the participants' agreement to a moderate extent that Nairobi City County government implements the economic order quantity principles well ($\bar{x}$=3.81, D=.7647). The present study agrees with Otundo & Bichanga (2015) who showed that the application of EOQ in inventory management improves efficiency in service delivery. The participants also agree to a high extent with the fact that the The findings agree with Wafula (2016) who found a positive association between inventory control as well as EOQ and operational effectiveness of the firms that were under investigation. In essence, the setting of clear ordering levels and quantities ensures that firms do not suffer delays in the delivery of stock thereby safeguarding the continuity of their operations. The current study confirms the findings of an earlier study by Rao & Mangal (2018) who showed that organizations that used EOQ to determine their reorder quantities and reorder levels significantly improved efficiency in the supply chain processes.

Furthermore, the participants agree to a moderate extent that the Nairobi City County government maintains minimum stock levels to reduce holding or storage costs ($\bar{x}$=3.45, D=.7311). While the two studies were conducted in totally different contexts, they both underscore the importance of EOQ in inventory management. Lastly, the participants moderately agree that the Nairobi County government orders volumes of inventory that enable it to minimize the ordering costs. Evidently, the use of EOQ has enabled Nairobi County to minimize ordering costs. This is because EOQ enables firms to determine the optimal stock levels, appropriate reorder timelines and reorder quantities.

Just In Time and Supply Chain Performance

The investigator asked the participants to show the extent to which they agreed or disagreed with the six statements concerning the implementation of Just In Time at Nairobi City County on a 5-point scale whereby; where 1 = ' Disagree', 2 = ' Agree to a low magnitude', 3 = 'agree to a moderate magnitude', 4 = ' agree to a high extent' and 5 = 'agree to a very high extent.' Table 3 presented the findings.

Table 3: Just In Time and Supply Chain Performance of Nairobi City County

Statement	Mean	Std. Dev.
The suppliers deliver the inventory at the right time	3.57	.8224
There is close cooperation with suppliers to facilitate timely delivery of inventory	3.76	.7536
Management encourage quality control at source, suppliers are accountable for quality	4.12	.6692
Minimum inventory to meet demand is always available on hand	4.05	.7253
Inventory is replenished when necessary.	3.69	.6579
Aggregate	**3.84**	**.7357**

According to the aggregate mean, the participants moderately agree that Nairobi City County government implements the Just in Time principles in its inventory management practices (x̄=3.84, D=.7357). This is also evident in the fact that the suppliers deliver the goods at the right time (x̄=3.57, D=.8224. The findings confirm those of Kaswan et al. (2021) who showed that JIT has a beneficial effect on the firm's performance as it improved service delivery and stakeholder satisfaction. The participants also agree moderately that there is close cooperation between the county government and its suppliers (x̄=3.76, D=.7536). This is consistent with Atnafu & Balda (2018) who underscored the importance of close partnerships between suppliers and firms, and the effectiveness of JIT. It is important to note that the participants also agreed to a high extent that minimum inventory is always on hand to meet the demand (x̄=4.05, D=.7523). This could be as a result of the county governments close cooperation with suppliers particularly when preparing to begin new projects. Besides, the fact that minimum stock is always available on hand to meet the demand by Nairobi City government and its stakeholders suggests that JIT has enabled the government to minimize storage or inventory holding costs. The present study concurs with Kyalo et al. (2018) who posited that adopting a JIT policy was crucial for assuring lower storage costs.

The participants also agreed to a high extent that the management encourages quality control at the source where each supplier is held accountable for their quality (x̄=4.12, D=.6692). As a result, the Nairobi County departments minimize inventory wastage and damage. JIT also enables the county government to control quality since the stock levels arriving at any particular time are those able to meet the demand, thereby allowing for easy inspection and ascertainment of its quality. This is consistent with Mulandi & Ismail (2019) who showed that helped minimize costs, reduce wastage, and quality control. Since only the required inventory arrives, the firm has an easy time verifying the products to ensure they match the expected quality.

Material Requirements Planning and Supply Chain Performance

The investigator asked the participants to show the extent to which they agreed or disagreed with the six statements concerning the implementation of Material Requirements Planning at The Nairobi City County c on a 5-point scale whereby; where 1 = ' Disagree', 2 = ' Agree to a low magnitude', 3 = 'agree to a moderate magnitude', 4 = ' agree to a high extent' and 5 = 'agree to a very high extent.' Table 4 presented the findings.

Table 4.: Material Requirements Planning and Supply Chain Performance of Nairobi City County

Statement	Mean	Std. Dev.
There is creation of master production schedule to aid predicting supplies in future	4.07	.9073
There is implementation of purchasing management system to aid ensuring continuity	4.00	.8589
There exists of material requirements planning to ensure product availability and control	4.25	.9243
There exist material requirements planning to ensure effective scheduling and purchasing	4.16	.7689
There is usage of data required to develop a plan for needed capacity of supplies	4.02	.8497
Aggregate	**4.10**	**.8618**

Source: Field Data 2023

According to the aggregate mean where participants agree to a high extent that MRP practices are implemented well at the county government (x̄=4.10, D=.8618). The incorporation of MRP in inventory management has enhanced efficiency in service delivery at the Nairobi City departments. This

confirms the findings of Khalid & Lim (2018) who showed that MRP enhances service delivery by ensuring that materials are available on demand, keeps stock levels to the minimum and reduces customer lead times. The current study agrees with Imetieg & Lutovac (2015) who investigated the use of an MRP system in project scheduling and showed that MRP minimized wastage, reduced holding costs, and enhanced speed of delivery thus improving performance. The county of Nairobi provides a wide range of services to multiple stakeholders and requires an effective master activity schedule to effectively satisfy the needs of its various stakeholders.

The participants further agree to a high extent that there is existence of material requirements planning to ensure product availability and control ($\bar{x}$=4.25, D=.9243), and that there is existence of material requirements planning to ensure effective scheduling and purchasing ($\bar{x}$=4.16, D=.7689). Essentially, the present study shows that the adoption of MRP by the Nairobi City government has enabled the availability of inventory on demand and also helped the government to inspect products and maintain quality. Besides, the county has attained efficiency in the scheduling of its purchases because it is able to forecast the volume of inventory required for its operations. The findings agree with an earlier study by Keitany et al. (2014) who showed that the adoption of MRP reduces lead times and improves inventory control. The adoption of MRP allows organizations to effectively plan and budget for their activities. Besides, the present study agrees with Mbah et al. (2019) who showed that the adoption of MRP improves the financial performance of a firm as it enables it lowers inventory costs. Note that the participants of the present study agreed to a high extent that the Nairobi City County used data to plan for the required volume of supplies ($\bar{x}$=4.02, D=.8497). The usage of data was made possible by the MRP implemented by the county government. The use of data enhanced accuracy in setting the reorder levels and reorders quantities, minimized storage costs, reduced wastage and improved the county government's financial performance. As Mbah et al. (2019) posits, MRP has the beneficial effect of reducing stock holding costs, which in turn translate to improved supply chain and financial performance.

Supply Chain Performance

The present research evaluated the respondents' level of agreement with the five survey inquiries on supply chain performance using a 5-point Likert scale where 1 = ' Disagree', 2 = ' Agree to a low magnitude', 3 = 'agree to a moderate magnitude', 4 = ' agree to a high extent' and 5 = 'agree to a very high extent.' Table 5 presented the findings.

Table 5: Supply Chain Performance

Statement	Mean	Std. Dev.
The county's supply chain department creates strong supplier partnerships to improve inventory control and supply chain performance	2.94	.8517
The adoption of Economic Order Quantity created the perfect order rate in Nairobi City County	4.04	.7355
The implementation of Just In Time optimized the supply chain cycle time in Nairobi City County	4.06	.8299
The implementation of Material Requirements Planning improved demand satisfaction rate and overall supply chain efficiency	3.88	.8071
The county's inventory management practices promote supply chain performance	3.64	.7142
Aggregate	**3.71**	**.7877**

Source: Field Data 2022

The aggregate mean shows the participants moderately agreeing that Nairobi City County's supply chain performance has improved as a result of its inventory management practices ($\bar{x}$=3.71,

D=.7877). However, the participants agree but only to a low extent that the county's strategic supplier partnerships improved inventory control and supply chain performance. This implies that the Nairobi City County government supplier management is marred with inefficiencies. Note that previous studies including Khan and Siddiqui (2018), and Ogonu et al. (2016) showed that strategic supplier partnerships significantly improve supply chain performance. The participants agreed to a high extent that the adoption of EOQ created the perfect order rate for Nairobi City County ($\bar{x}$=4.04, D=.7355). This was also true for Rao & Mangal (2018), and Shin et al. (2015) who showed a positive association between EOQ adoption and overall supply chain efficiency. Also, the participants agreed to a high extent that the implementation of JIT optimized the supply chain cycle at the Nairobi City County, thereby improving supply chain performance ($\bar{x}$=4.06, D=.8299). The present study agrees with Kaswan et al. (2021), and Kyallo et al. (2018) who showed that JIT enhances supply chain efficiency and overall performance. Lastly, the participants moderately agreed that MRP adoption improved the demand satisfaction rate and supply chain efficiency ($\bar{x}$=3.88, D=.8071). MRP allowed the Nairobi City government to schedule its activities and effectively match them with the required inventory levels. The present study concurs with Mbah et al. (2019) who showed that MRP had a beneficial impact on the firm's supplier satisfaction and supply chain efficiency.

Pearson's correlation analysis was further performed to establish the effect of strategic supplier partnerships, EOQ, JIT and MRP on supply chain success. The analysis is presented in table 6 below.

Table 6: Correlation Analysis Results

		Supply chain performance	Strategic supplier partnerships	EOQ	JIT	MRP
Supply Chain performance	Pearson correlation	1				
	Sig(2-tailed)					
	N	143	143	143	143	143
Strategic Supplier Partnerships	Pearson correlation	.5529*	1			
	Sig(2-tailed)	.0621				
	N	143	143	143	143	143
EOQ	Pearson correlation	.8644*	.7297*	1		
	Sig(2-tailed)	.0000	.0000			
	N	143	143	143	143	143
JIT	Pearson correlation	.7816*	.6984*	.8143*	**1**	
	Sig(2-tailed)	0.0000	0.0000	.0000		
	N	143	143	143	143	143
MRP	Pearson correlation	7736*	.8285*	.8925*		
	Sig(2-tailed)	0.0000	0.0000	.0000		
	N	143	143	143	143	143

The correlation analysis indicates a significant positive relationship between EOQ and supply chain performance with a correlation coefficient of 0.8644 at $p<0.05$; a significant positive relationship between JIT and supply chain performance with a correlation coefficient of 0.7816 at $p<0.05$, and a significant

positive correlation between MRP and supply chain performance with a correlation coefficient of 0.7736 at p<0.05. However, the current study found that strategic supplier partnerships did not significantly impact supply chain performance with a correlation coefficient of 0.5529 at p<0.05. The findings contradict Sedyaningrum et al. (2019); and Khan & Siddiqui (2018) who showed that strategic supplier partnerships positively influenced supply chain performance. The variances in the findings could be attributed to the contextual differences in which the studies were conducted.

Inferential Statistics

The present study evaluated inventory management initiatives and the success of the supply chain in Nairobi City County. Regression analysis was carried out to show the relationships governing the four independent variables (strategic supplier partnerships, EOQ, JIT, MRP) and the dependent variable (supply chain performance). The summary of the regression analysis results is presented in table 7 below;

Table 7: Regression Analysis Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square change	F Change	Df1	Df2	Sig. F Change
1	.916(a)	.60.5	.592	.57281	.605	1.356	4	96	.000

Source: Field Data 2023

Table 7 above showed a coefficient determination R=.605 as being equivalent to 60.5% (p<0.05). The regression analysis suggests that strategic supplier partnerships, EOQ, JIT and MRP have a combined influence of 60.5% on Nairobi City County's supply chain performance. Table 7 also shows a p-value of .000, which is below 0.05, indicating significance at 95% degree of confidence.

Table 8: Regression Coefficients

Model	Unstandardized coefficients			Standardized coefficients		
	B	p	Std. Error	Beta	T	Sig.
1. Constant	0.762	0.00	0.049		8.654	0.000
Strategic supplier partnerships	0.034	0.06	0.025	0.106	2.108	0.021
EOQ	0.084	0.00	0.028	0.119	1.826	0.034
JIT	0.063	0.00	0.017	0.138	1.493	0.042
MRP	0.061	0.03	0.032	0.131	1.504	0.033

Source: Field Data 2023

The research used the following regression model

$Y=\beta 0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X_5+\varepsilon$

Where:

$Y =\beta_0 + \beta_1X_1 + \beta_2X_2+ \beta_3X_3 + \beta_4X_4 +\varepsilon$

Where;

Y = Supply Chain Performance

X_1 = Strategic Supplier Partnerships

X_2= Economic Order Quantity

X_3 = Just in Time

X_4 = Material Resource Planning

$\varepsilon\varepsilon$ = Error

β_0= constant

β_i, with numbers as the beta coefficients

$Y= 0.762 + 0.034X_1 +0.084X_2 + 0.063X_3 + 0.061X_4 + 0.049$

In the above regression analysis, it is evident that all the four independent variables impacted Nairobi City County's supply chain performance but to different degrees. The regression coefficients of all the four variables were significant at $p<0.05$, suggesting that strategic supplier partnerships, EOQ, JIT, and MRP all significantly impacted supply chain performance. The findings show that EOQ had the highest impact on supply chain performance (0.084) while strategic supplier partnerships had the least impact (0.034). In other words, a unit change in EOQ practices influenced a corresponding change in supply chain performance by 0.082 units. The same applied to all the other three variables.

The present study concurs with an earlier study by Shin et al. (2015) who found a positive correlation between EOQ adoption and supply chain performance. However, the current study evaluated supply chain performance in terms of demand satisfaction rate, perfect order rate, inventory turnover, and supply chain cycle time. In contrast, Shin et al. (2015) measured supply chain performance in terms of the firm's financial profitability. In other words, firms that posted improved financial profitability were assumed to have achieved better supply chain performance. Regardless of the conceptual and contextual differences, both studies note that the adoption of EOQ minimizes delays in stock reorder, enhances efficiency in inventory reorder quantities, and boosts stakeholder satisfaction. The adoption of EOQ by the Nairobi City County has also fostered timely replenishment of stock, improved point of order determination, and minimized stock holding costs. This explains why EOQ adoption has had the biggest impact on supply chain performance. Thus, the present study agrees with Rao & Mangal (2018) who also found that firms that used EOQ to determine their reorder quantities and reorder levels significantly improved efficiency in the supply chain processes. Inconveniences and costs were minimized on the part of the firm and its stakeholders.

The present study also showed that one unit change in strategic supplier partnerships yielded a corresponding change in Nairobi City County's supply chain performance by 0.034 units. However, the impact was non-significant at $p<0.05$. The present study disagrees with Khan and Siddiqui (2018) who showed that strategic supplier partnerships improved information exchange between the firm and its suppliers. Regular exchange of information ensured that suppliers clearly understood their expectations in terms of quality, quantity and timelines. However, the present study agrees with Ogonu et al. (2016) who found that strategic supplier partnerships had an insignificant impact on customer loyalty. Ogonu et al. (2016) conceptualized customer loyalty as an outcome of effective supply chain management processes. It is important to note that the study ignored other confounding factors that influence customer loyalty. The present study used a more accurate measurement of supply chain performance and found that strategic supplier partnerships significantly impact supply chain performance.

Also, the current study found that one unit change in JIT adoption influenced Nairobi County's supply chain performance by 0.063 units. Note that the change was found to be significant at $p<0.05$, suggesting that JIT adoption significantly influences supply chain performance. The current study confirms the findings of Kaswan et al. (2021) who showed a positively significant correlation between JIT adoption and supply chain performance. The beneficial impact of JIT adoption was found in its capacity to enhance service delivery and stakeholder satisfaction. The current study also agrees with Kyalo et al. (2018) who found a positively significant correlation between JIT adoption and supply chain performance of SMEs. According to Kyalo et al. (2018), JIT adoption enhanced inventory control as the firms were able to know the stock levels that were required at every time to avoid shortages, wastages or surpluses. This translated to reduced stockholding costs. The findings show that Nairobi County's JIT adoption enabled the reduction of the

county government's inventory holding costs, thereby improving supply chain performance. This was also true for Kariuki (2017) who found that JIT adoption reduced inventory costs and overall operational efficiency thereby improving supply chain performance. The availability of stock whenever needed helps to safeguard the operations of the firm and improves performance.

Lastly, the current study showed that a unit change MRP adoption led to a corresponding change in Nairobi County's supply chain performance by 0.061 units. While the change was the least among the four variables, it was still significant at $p<0.05$, suggesting that MRP adoption significantly influences supply chain performance. The current study concurs with with Imetieg & Lutovac (2015) who studied the use of an MRP system in project scheduling and showed that MRP minimized wastage, reduced holding costs, and enhanced speed of delivery thus improving performance. Nairobi City County achieved significant inventory cost reductions and improved service delivery as a result of the adoption of MRP. The current study also agrees with Keitany et al. (2014) who showed that the adoption of MRP helped firms to plan in advance about the stock levels required for their activities and operations. As a result, such firms were able to determine the ideal reorder levels and reorder quantities. This translated to improved supply chain performance. The present study also confirms the findings of Mbah et al. (2019) who showed that MRP adoption gave suppliers ample time to plan for their delivery assignments and minimized delays in deliveries.

CONCLUSION AND RECOMMENDATIONS

The first objective of this research was to determine the role of strategic supplier partnerships on supply chain achievement at Nairobi City County Kenya. The study showed that strategic supplier partnerships had an insignificant impact on the supply chain performance of Nairobi City County. In particular, the study showed that early involvement of suppliers in supply chain processes was limited; there was limited proper, continuous and consistent communication with suppliers, meetings between suppliers and the county were more or less infrequent and the county government was not keen on creating long term engagements with suppliers.

The second objective of this research was to determine the effect of economic order quantity adoption on supply chain performance at Nairobi City government. The investigation found a significantly positive correlation between EOQ adoption and supply chain performance. Specifically, the study showed that EOQ adoption enabled the county to achieve a perfect order rate, improve supply chain efficiency, minimize stock holding costs and reduce damage of inventory.

The third objective of this study was to evaluate the effect of Just In Time adoption on supply chain performance at Nairobi County government. The study showed that JIT was positively correlated to supply chain performance. The findings were statistically significant. In particular, it was evident that JIT adoption helped the Nairobi City County to optimize supply chain efficiency, foster speedy delivery of services to the people of Nairobi County, reduce inventory costs, and improve overall operational efficiency.

The fourth objective of this study was to evaluate the impact of Material Requirements Planning adoption on supply chain performance at Nairobi City County, Kenya. MRP adoption was found to be positively correlated with supply chain performance. The results were statistically significant. Nairobi City County was found to use MRP to forecast future inventory levels which enabled the government to reduce inventory holding costs, optimize supply chain efficiency, save on storage space, improve service delivery and overall supply chain performance.

The study concluded the strategic supplier partnerships did not significantly impact supply chain performance. The findings vary considerably with other studies which found a beneficial relationship between strategic supplier partnerships and supply chain achievement. Nairobi City County involved suppliers in supply chain processes to a low

extent, barely maintained consistent, proper and continuous communication with suppliers, and hardly held frequent meetings with suppliers. Thus, strategic supplier partnerships were found to have little effect on Nairobi City County's supply chain performance.

Secondly, the research demonstrated that EOQ had a significant and positive impact on supply chain performance. The study found that EOQ adoption at Nairobi City County through timely inventory replenishment, point of order determination, and stockholding costs determination led to the attainment of a perfect order rate, and reduced reordering costs.

Further, the research concluded JIT practices had a significant and positive impact on supply chain performance. Specifically, the study showed that adoption of JIT at Nairobi City County enhanced timely delivery of supplies, ensured that minimum stock required on demand was available on hand, enhanced efficiency in the county government's operations, and enabled the county to reduce stockholding costs.

The study also concluded that MRP adoption positively correlated with supply chain performance at Nairobi City County. The mainstreaming of MRP in the county's inventory management practices allowed for the accurate forecasting of inventory levels, effective planning for storage costs, management of logistics, scheduling of the government's purchases, planning of operations and determining the capacity of supplies.

The County Executives of the Built Environment and Urban Planning, and Boroughs Administration and Personnel departments of the Nairobi City County should strengthen strategic supplier partnerships to foster supply chain performance. This recommendation is based on the finding that the two departments did not prioritize strategic supplier partnerships. Early engagement of suppliers in supply chain processes; proper and continuous communication with suppliers; frequent meetings with suppliers; using fewer rather than many suppliers and establishing long-term partnerships with suppliers could bolster Nairobi City County's supply chain performance. It is therefore necessary for the Nairobi County departments to pursue proper and continuous communication strategies with suppliers to strengthen supplier commitment to their shared interests. The county departments should also hold frequent meetings with suppliers to foster the understanding of the expectations of both parties. Additionally, establishing long-term partnerships with suppliers could enable the county to save on time and costs related to tendering processes every other fiscal cycle. Lastly, the county could use fewer rather than many suppliers so that it can enhance consistency in the quality of products and service delivery.

Secondly, the County Executives of all the nine Nairobi City County government departments should mainstream EOQ, JIT and MRP in its supply chain processes to bolster overall supply chain achievement. This is premised on the finding that EOQ adoption, JIT adoption and MRP adoption positively correlates with supply chain performance. It is important to note that the present study only focused on respondents from two county government departments. Incorporating EOQ, JIT and MRP in the supply chain processes of the other departments could improve the overall supply chain performance of the Nairobi City County.

Future Research Directions

The present study only studied the inventory management practices in the Built Environment and Urban Planning, and Boroughs Administration and Personnel departments of the Nairobi City County. Future studies could consider the other seven departments to provide a clearer picture of the influence of inventory management practices and supply chain performance in Nairobi City County.

Additionally, future studies could explore the obstacles to the establishment of strategic supplier partnerships in Nairobi City County. The present study found that practices related to strategic supplier partnerships were only implemented to a low extent in the two departments. There is

considerable interest in determining the reasons behind the limited early involvement of suppliers in supply chain processes, limited continued communication with suppliers, and lack of emphasis on long-term partnerships with suppliers. Identifying these factors could guide the formulation and implementation of effective strong supplier partnership strategies to improve overall supply chain performance at the two departments.

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