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INFLUENCE OF INVENTORY MANAGEMENT PRACTICES ON PROCUREMENT PERFORMANCE OF JUDICIARY; A CASE OF LAW COURTS IN KAKAMEGA COUNTY

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ABSTRACT

This study investigated the influence of inventory management practices on procurement performance of judiciary; A case of Law Courts in Kakamega County. The specific objectives were; to determine the influence of Just in Time inventory management practices on procurement performance of Judiciary in Kenya; investigate the influence of vendor managed inventory management practices on procurement performance of Judiciary in Kenya and establish the influence of economic order quantity inventory management practices on procurement performance of Judiciary in Kenya. The study was guided by Theory of Supply Chain Constraints, lean theory and economic order quantity theory. Correlational research design was applied. The study targeted 71 respondents from four law courts in Kakamega County; Butali, Butere, Mumias and Kakamega Law Courts. Census sampling techniques was adopted. Primary data was collected using self-administered structured questionnaire. Pilot study was conducted in Bungoma Law courts to establish validity and reliability of research instruments. Quantitative data was analyzed using descriptive and inferential statistics. Descriptive analysis summarized data in form of central tendency as well as dispersion and inferential analysis was used to test hypothesis at a significance level of 0.05. Descriptive analysis included; frequencies, Mean, Standard deviation and percentage while inferential analysis involved correlation analysis and multiple linear regression analysis. The study established that Just in Time inventory management practices, vendor managed inventory management and economic order quantity inventory management practices influenced procurement performance of the law courts in Kakamega County. The study concluded that inventory management practices influenced procurement performance of judiciary. The study recommended that the Judiciary should use Just in Time inventory management to reduce the stock and the carrying cost associated in the organization. Further, Judiciary should adopt Economic Order Quantity in order to know the quantity of stock to order at any given time and the Judiciary should also use Vendor Managed Inventory to allow flexibility of the user demand.

Key Words: *Just In Time, Vendor Managed, Economic Order Quantity, Inventory Management*

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INTRODUCTION

There has been increasing demand by the public and other government services consumers' world over for timeliness in materials, goods and services availing by the public procurement entities to enhance efficiency, effectiveness, transparency and accountability by various user departments (Nzau & Njeru, 2014). Procurement performance entails how well organizational procurement objectives have been attained. The extent to which procurement function is able to obtain best value for spent organizational money to purchase goods and services is the best indicator of procurement performance (Kiage, 2017). Procurement commonly involves purchase planning, standards determination, specifications development, supplier research and selection, value analysis, financing, price negotiation, making the purchase, supply contract administration, inventory control and stores, and disposal and other related functions.

Procurement performance of public entities in the thought of the stakeholders has a lot of gray areas ranging from inventory management practices which takes too long thus causing delays in procurement of goods and services. Mbae (2018) in his findings underscores these facts and concludes that one of the major setbacks in public procurement is poor inventory management practices and management of the procurement process. An effective inventory management practices create an environment for continuity by enabling the maintenance of sizeable inventory that does not tie up capital and eliminates prospects for deterioration of stocks.

Globally, 60% of quality systems in public procurement have not delivered the expected benefits (Soudry, 2007). Heeks (2010) reported that 35% of procurement system in public sector in developing countries are total failures, 50% are partial failures, while the remaining 15% are successes. According to OECD (2006), governments across the world tend to spend between 8% and 25% of GDP on goods and services. In the UK, public procurement expenditure is approximately £150 billion (DEFRA, 2007). Furthermore, Charles (2007) pointed out that government is often the single biggest customer within a country and governments can potentially use this purchasing power to influence the behavior of private sector organizations.

The large volume of procurement transactions across various sectors in Nigeria which is plagued with high level of public sector corruption has provided enormous challenges to the public procurement performance in spite of the public procurement Act 2007. This is because of the fact that in various ministries, at federal and state levels as well as agencies and parastatals of government, the Nigerian factor had been introduced in various ways to circumvent in some cases the provisions of the public procurements act hence negatively affecting procurement performance (Nwogwugwu & Adebayo, 2015).

According to PPDA (2005), Public Procurement Act requires Procuring Entities to plan their procurements. In this regard, the Procuring Entity should assess whether or not, a particular procurement is necessary. The assessment should take account of; the need to ensure that the Procuring Entity uses its resources effectively and efficiently; how the proposed expenditure would contribute to the Entity's desired outputs; and the Procuring Entity's overall procurement philosophy in accordance with the provisions of the Public Procurement and Disposal Act (PPDA, 2015).

In Kenya, Judiciary is one of the three State organs established under Chapter 10, Article 159 of the Constitution of Kenya. It establishes the Judiciary as an independent custodian of justice in Kenya. Its primary role is to exercise judicial authority given to it, by the people of Kenya. The judicial system in Kenya is defined by 15 articles spanning from Article 159 (Judicial authority) to article 173 (Judiciary Fund) contained in the new constitution of Kenya (Kenya Constitution, 2010). In Kenya, the courts under the Constitution operate at two levels, namely; Superior and Subordinate courts. The subordinate courts are established under Article

169. They consist of the Magistrates'Courts, Kadhis Courts, Court Martial, and any other court or local Tribunal established by an Act of Parliament.

The Judiciary comprises the judges of the Supreme Court (the highest court in Kenya), judges of the Court of Appeal, judges of the High Court (Puisne judges), magistrates and Kadhis. The Chief Justice is the head of the Judiciary. The Judiciary has its headquarters in Nairobi and High Court stations in major towns. It has 105 magistrates' courts spread all over the country. Currently, the Judiciary has 8 Supreme Court Judges, 82 High Court Judges, 10 Court of Appeal Judges, 331 Magistrates and 16 Kadhis. As of 24th August, 2019, the Judiciary had a total of 5,380 employees (as per the oral information provided by the Chief Court Administrator (CCA)) against a population of 40 million Kenyans.

Directorate of Supply Chain Management is responsible for obtaining quality goods and services at the lowest possible cost to ensure value for money to the Judiciary. The Chief Registrar of the Judiciary has the responsibility of being the Chief Administrator and Accounting Officer of the Judiciary. The Supreme Court, The Court of Appeal, The High Court and The Magistrate's Court all have a Registrar to serve as administrator, record keeper and delegated Accounting Officer in each of the courts. In addition, the Chief Registrar is in charge of the procurement of all stores, management and maintenance of all physical facilities (The Judiciary of Kenya, 2020). The Judiciary being one of the public institutions has been in the limelight for all the wrongs in procurement performance (Kaaria & Mwangangi, 2019). Effective inventory management practices in the Judiciary will therefore bring about great positive impact in the achievement of Kenya's vision 2030.

Statement of the Problem

Efficient handling of inventory has been a policy and management concern as well as a challenge to procurement professionals. Rapid advancement in technology, public-private partnership, privatization, outsourcing of non-core services and increased focus on result base management in the public sector have all contributed to increased importance and sophistication of the public procurement function. Public Procurement in the judiciary is guided by the Public Procurement and Disposal Act 2015 and Regulations 2020. Judiciary has supply chain management directorate that is responsible for the provision of goods services to the judiciary with the aim of providing quality services to the citizens. They maintain inventory management system which is aimed at ensuring that facilities and equipment are supplied and delivered at the right time. The aim of inventory management practices is to reduce costs and improve procurement performance.

However, procurement performance has negatively affected service delivery in various law courts across the country. For instance, increase in case backlog is associated with poor procurement performance for both services and goods (GoK, 2019). There has been notable delays in delivery of office consumables and services due to poor inventory management as indicated by Munyao and Moronge (2017). According to Judiciary Service Charter (2018), requisition should take not more than two days; however, some law courts have experienced delay of up to three months. Further, Kakah (2016) noted that even the Judiciary of Kenya is currently holding on to much unserviceable equipment, which continue to lose value in its parking lot which is againt Public Procurement and Disposal Act 2005 and Regulations 2006.

Inventory management practices have attracted the attention of scholars and researchers on different aspect of performance with mixed outcome. Positive results were revealed by Kobia (2018); Kumar, Anzil, Ashik, Ashwin and Ashok (2017) and Wanyonyi (2017). On the other hand, Panigrahi (2013) established that there is a negative significant relationship between inventory management practices and performance. In this regard, Gitau (2016) suggested that further studies should be conducted on the effects of Inventory Management on the Performance of the

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Procurement Function in Parastatals in Kenya. It is against this backdrop that the current study sought to investigate the influence of inventory management practices on procurement performance of judiciary; A Case of Law Courts in Kakamega County.

Objectives of the Study

The overall objective of this study was to investigate the influence of inventory management practices on procurement performance of judiciary; A Case of Law Courts in Kakamega County. The specific objectives were;

- To determine the influence of Just in Time inventory management practices on procurement performance of Judiciary in Kenya.
- To investigate the influence of vendor managed inventory management practices on procurement performance of Judiciary in Kenya
- To establish the influence of economic order quantity inventory management practices on procurement performance of Judiciary in Kenya

The study was guided by the following research hypotheses;

- H_{01}: There is no significant influence of Just in Time inventory management practices on procurement performance of Judiciary in Kenya
- H_{02}: There is no significant influence of vendor managed inventory management practices on procurement performance of Judiciary in Kenya
- H_3: There is no significant influence of economic order quantity inventory management practices on procurement performance of Judiciary in Kenya

LITERATURE REVIEW

Theory of Supply Chain Constraints

The Theory of Constraints (TOC) was developed by an Israeli physicist E. Goldratt. The TOC concept was initially used only in the production environment, however today there are many examples of TOC application both in distribution, procurement and marketing (Puche, Pino & De la Fuente, 2016). TOC is a method which has a well-developed research apparatus referred to as the Thinking Process. The mechanism makes it possible to analyse systems and to identify and remove any constraints which act like obstacles preventing the company from achieving its goals. Constraints also include "bottlenecks", i.e. weakest links within an enterprise which, in critical situations, are first to become sources of problems. If they are not promptly removed, they adversely affect the development of the enterprise or procurement process (Puche et al., 2016).

To improve the system‘s description, this involves the identification of constrains and prescription of solutions which focus on implementation of corrective measures that must be undertaken. Constrain diagnosis facilitates improvement of systems by enabling organizations to direct limited resources towards the weakest parts of the system. The ultimate goal in the lower-end of a supply chain, for example, can be realized through: Throughput (T), Inventory/Product (I/P) and Operating Expenses (OE). Throughput is defined as the amount of inventory that can be handled in a given period, inventory is list of general items and operating expenses is the amount of money proposed for investment in effectiveness and for responsiveness (Nowakowska-Grunt & Moroz, 2013).

Lean Theory

Lean theory is an augmentation of thoughts of Just In Time. The lean theory is reported to have its origins in the Toyota Company of Japan (Dekier, 2012). According to Deckier, Sakichi Toyoda, the father of the Toyota system, borrowed the ford production system in 1929 with a view to elevating productivity while reducing waste. Lean theory therefore focuses on optimizing costs in inventory management practices. Some of these costs relate to logistics of which warehousing is a key element. Indeed, Tempelmeier (2011) posits that through lean theory, decisions on warehousing among other supply chain functions can be expedited.

According to Trujillo-Barrera (2014) leanness involves five principles: value whereby before

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business practices are changed it is first determined whether applying lean inventory techniques will actually generate business value. The second principle involves flow where to determine both your business value and the economic value you offer customers; you must understand how inventory flows in your warehouse. The third principle involves pull and it states that once you are fully aware of how your inventory flows and you've worked to eliminate inventory waste, pulling inventory only when requested by your customer, will become a natural outcome. The fourth principle is responsiveness and it involves a continuous and rigorous evaluation of your inventory flow along with effective demand management allows you to respond and adapt quickly to changes in the market. It will also keep the inventory at appropriate levels, preventing unnecessary storage costs and obsolete inventory. The last principle is perfection. It requires you to commit to a continuous refinement of your inventory management processes; doing so will result in improved quality, cycle time, efficiency and cost.

Economic Order Quantity (EOQ) Model

EOQ model was developed by was Ford Wilson Harris in 1913 and is also known as Wilson EOQ model, who critically analyzed the model in detailed (Kumar, 2016). The use of the model has shown increase in some costs as other costs decline, an example of ordering costs decline with the inventory holdings, while holding costs rise and the total inventory associated costs curve have a minimum point. It is also known as the point where total inventory costs are minimized. EOQ is the level of inventory that minimizes the total of inventory holding costs and ordering costs.

The economic order-quantity model considers the tradeoff between ordering cost and storage cost in choosing the quantity to use in replenishing item inventories. A larger order-quantity reduces ordering frequency, and, hence ordering cost/ month, but requires holding a larger average inventory, which increases storage (holding) cost/month. On the other hand, a smaller order-quantity reduces average inventory but requires more frequent ordering and higher ordering cost/month (Kazemi et al., 2018). The EOQ model helps organizations to reduce inventory management costs by reducing the cost of ordering and holding stock. The study thus used this theory to find out the influence of economic order quantity on procurement performance.

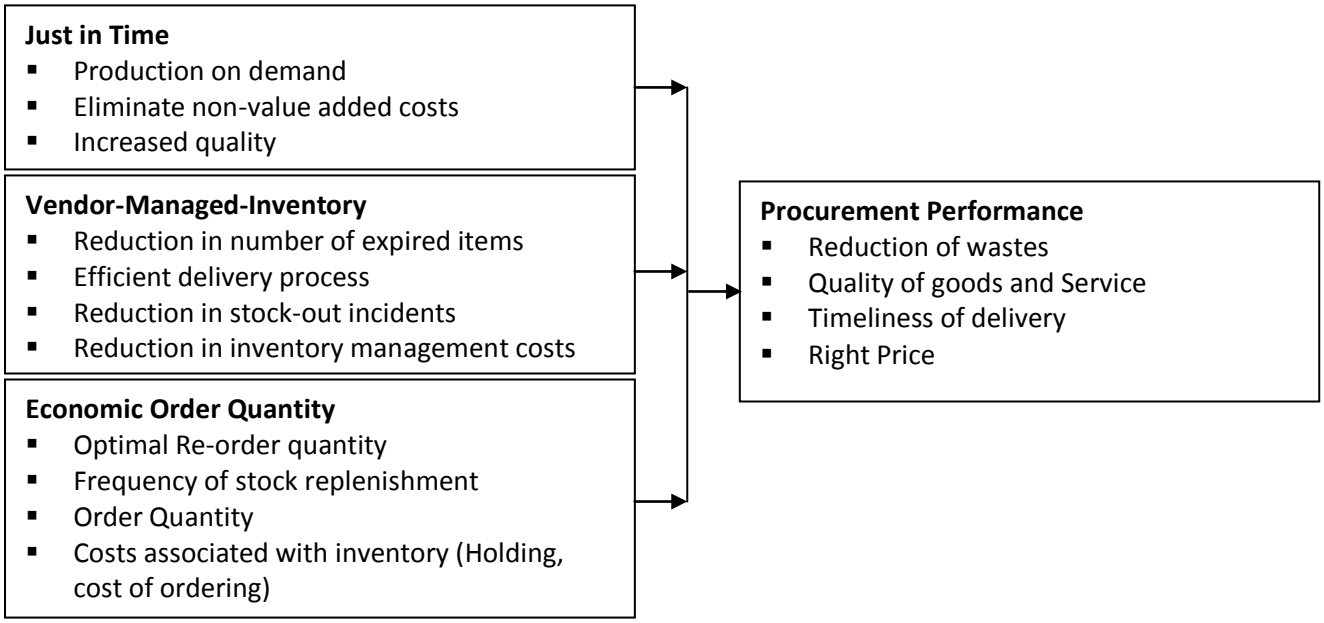

Figure 1: Conceptual Framework

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Empirical Review

Mukopi and Iravo (2015) examined the effect of inventory management on performance of the procurement function of sugar manufacturing companies in the western sugar belt. Descriptive research design, specifically a survey study was employed in carrying out the research. The target population of the study consisted of a sample of procurement personnel of Mumias Sugar Company, West Kenya Sugar Company, Nzoia Sugar Company and Butali Sugar Mills which was 30 procurement personnel out of the total target population that was 100 procurement personnel. The research instrument was structured questionnaires that were self-administered to the respondents. There was strong relationship between just in time and performance of the procurement function of sugar manufacturing companies in the western sugar belt.

Ontita (2016) sought to determine the relationship between inventory management approaches and performance of textile firms in Kenya. A descriptive cross sectional design was used in this study to examine inventory management approaches in textile manufacturing firms in Kenya. The target population included all the 35 textile manufacturing firms in Kenya. This study utilized primary data. Data was obtained using questionnaires developed by the researcher. The study concluded that there was a strong positive correlation between the just in time and operational performance of the textile manufacturing firms.

Mulumba (2016) sought to assess the relationship between inventory management practices and performance of manufacturing firms in Kenya using a case of agro-chemical firms. The study adopted a descriptive survey design on a population of 65 Agrochemicals in Kenya. Data was collected from operation managers, procurement managers, procurement officers and stores managers. This study employed a survey of all the 65 existing firms. The study concluded that VMI is guided by contracts that guide the inventory of the agrochemical firm aimed at improving its performance.

Wanyonyi (2017) studied effect of inventory management practices on the service delivery of the major supermarkets in Nairobi. The researcher used a descriptive research design in carrying out the research study. A survey was conducted with the use of the semi- structured questionnaire to establish the extent and the relationship between the inventory control practices and the service delivery of the major supermarkets in Nairobi. From the analysis of the results, it was established that the major supermarket had employed the JIT, ABC, VMI and EOQ models as their inventory control practices, although it was established that had the Vendor Managed Inventory was adopted in a very large extend.

Njoroge (2015) sought to determine the inventory management practices used by Public hospitals in Kenya. The study used a descriptive survey establishing the relationship between the variables. The study population comprised of the main public hospitals in Nairobi County and former Central Province Counties. The study considered 40 hospitals where inventory management was mostly carried out. The study used primary data that was collected through a semi-structured questionnaire to collect information for quantitative and qualitative analysis. The regression results concluded that inventory management practices specifically economic order quantity were positively related to performance of public hospitals in Nairobi and former Central province.

Panigrahi (2013) sought to establish the relationship between inventory management practices and profitability of the Indian Cement companies. The study through the cross-section research, that covered over a period between 2001 and 2010. The study focused on the effect of the inventory management practices on the gross operating income of the five leading Indian Cement companies. By the use of the inventory control

practices such as EOQ, Continuous Review Systems and Periodic Review, it was established that there is a negative significant relationship between the economic order quantity and the profitability of the Indian Cement companies.

METHODOLOGY

The study adopted correlational research design to examine the influence of inventory management practices on procurement performance. This study targeted 71 respondents from four Law Courts in Kakamega County. The four law courts comprised of Butali Law Courts, Butere Law Courts, Mumias Law Courts and Kakamega Law Courts. A total of 71 respondents were used as the sample size using census sampling technique. The study employed a structured questionnaire to collect data from the participants. The data collected was coded and analyzed using the Statistical Package for Social Sciences (SPSS version 26) tool. Both descriptive and inferential analyses were generated. The regression analysis was guided by the following model:

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$

Where,

Y Represents Procurement Performance

X_1 Represents Economic Order Quantity

X_2 Represents Just-In-Time

X_3 Represents Vendor Managed Inventory

ε Represents error term

α Represents Y intercept, β_1, β_2, β_3 and β_4 are the net changes in Y

FINDINGS AND DISCUSSIONS

Descriptive statistics

Descriptive analysis for this section used percentages, frequencies and means to show the response from the respondents as shown in the tables below for each variable. The respondents were required to state their level of agreement on various statements on each variable. The level of agreement ranged from 1-strongly disagree, 2-disagree, 3-fairly agreed, 4-agree and 5- strongly agree. The results were as follows.

Just in Time inventory management practices and Procurement Performance

The sampled respondents were provided with 6 statements related to Just in Time inventory management practices. Percentages are in parenthesis (). The results were as presented in Table 1.

Table 1: Just in Time inventory management practices

Statements	5	4	3	2	1	Mean
The firm has only the required inventory when needed	14 (22.6)	32 (51.6)	9 (14.5)	5 (8.1)	2 (3.2)	3.823
Inventory is delivered at the right time by the suppliers	16 (25.8)	32 (51.6)	10 (16.1)	2 (3.2)	2 (3.2)	3.935
The firm replenishes inventory just when needed	18 (29)	18 (29)	19 (30.6)	4 (6.5)	3 (4.8)	3.710
The inventory systems are interlinked with those of suppliers to ensure goods and services are available when is needed	12 (19.4)	26 (41.9)	16 (25.8)	6 (9.7)	2 (3.2)	3.645
There is regular interaction with suppliers in mutual information exchanges regarding inventory levels	16 (25.8)	18 (29)	20 (32.3)	6 (9.7)	2 (3.2)	3.645
The Judiciaries objectives of inventory are aligned to those of suppliers in order to reduce holding cost	10 (16.1)	18 (29)	28 (45.2)	4 (6.5)	2 (3.2)	3.484

From Table 1, the results revealed that 51.6% of the respondents agreed that the Judiciary had only the required inventory when needed while 22.6% strongly agreed. A mean of 3.8 postulated that the Judiciary had only the required inventory when needed. Similarly, 51.6% of the respondents agreed

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that Inventory was delivered at the right time by the suppliers and additional 25.8% of the respondents strongly agreed. A mean of 3.9 revealed that inventory was delivered at the right time by the suppliers

The results also revealed that 29.0% and 29.0% of the respondents agreed and strongly agreed respectively that the judiciary replenishes inventory just when needed. However, 30.6% of the respondents were undecided whether the Judiciary replenishes inventory just when needed. Slight majority of the respondents (41.9%) agreed that the inventory systems are interlinked with those of suppliers to ensure good and services are available when needed. This assertion was supported by 19.4% of who strongly agreed although 25.8% of the respondents were undecided whether the inventory systems are interlinked with those of suppliers to ensure goods and services are available when needed.

The results further revealed that 29.0% and 25.8% of the sampled respondents agreed and strongly agreed respectively that there is regular interaction with suppliers in mutual information exchanges regarding inventory levels. However, 32.3% of the sampled respondents were undecided whether there is regular interaction with suppliers in mutual information exchanges regarding inventory levels. Lastly, 29% of the sampled were in agreement that the Judiciary objectives of inventory are aligned to those of suppliers in order to reduce holding cost and further, 16.1% strongly agreed. On the other hand, 45.2% of the respondents were undecided with a mean score of 3.48.

It was evident that just in time inventory management practices influence procurement performance among the four law courts in Kakamega County. According to Shin et al. (2015), Just in Time is a strategy that is meant to improve the procurement performance of a business by reduction of excess inventory together with associated cost.

Vendor managed inventory management practices and Procurement Performance

The sampled respondents were provided with 6 statements related to Vendor managed inventory management practices. The pertinent results were as shown in Table 2.

Table 2: Vendor managed inventory management practices

Statements	1	2	3	4	5	Mean
The supplier has access to the Judiciary's inventory data ensuring supply chain is seamless for higher productivity	15 (24.2)	24 (38.7)	10 (16.1)	12 (19.4)	1 (1.6)	3.645
VMI is guided by a contracts that guide the inventory of the Judiciary aimed at improving its performance	11 (17.7)	26 (41.9)	18 (29)	4 (6.5)	3 (4.8)	3.613
VMI clears inventory constraints to meet performance target and expectations.	12 (19.4)	16 (25.8)	14 (22.6)	18 (29)	2 (3.2)	3.290
Vendors are fully tasked with the responsibility of replenishing inventory on time	11 (17.7)	28 (45.2)	12 (19.4)	8 (12.9)	3 (4.8)	3.581
Once an item of stock has been consumed the same information is passed to the vendor for replenishment.	9 (14.5)	32 (51.6)	16 (25.8)	3 (4.8)	2 (3.2)	3.694
The Judiciary uses Vendor Managed Inventory to eliminate the need to reorder and avoid stock-outs being experienced in the courts.	9 (14.5)	22 (35.5)	25 (40.3)	4 (6.5)	2 (3.2)	3.516

The results in Table 2, indicated that 38.7% of the respondents agreed that the supplier had access to the Judiciary's inventory data ensuring supply chain is seamless for higher productivity while 24.2% strongly agreed on the same. However, 19.4% of the respondents disagreed that the supplier has

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access to the Judiciary's inventory data ensuring supply chain is seamless for higher productivity. The results further revealed that, 41.9% and 17.1% of the respondents agreed and strongly agreed respectively that VMI is guided by a contract that guide the inventory of the Judiciary aimed at improving its performance. However, 29.0% of the respondents were undecided that VMI is guided by a contract that guide the inventory of the Judiciary aimed at improving its performance.

The results also revealed that 25.8% of the respondents agreed that VMI clears inventory constraints to meet performance target and expectations while 19.4% strongly agreed on the same. On the other hand, 22.6% of the respondents were undecided while 29.0% of the respondents disagreed that VMI clears inventory constraints to meet performance target and expectations. The results further revealed that 45.2% and 17.7% of the respondents agreed and strongly agreed that Vendors are fully tasked with the responsibility of replenishing inventory on time. A mean of 3.581 indicated that

Majority of the respondents agreed that once an item of stock has been consumed the same information is passed to the vendor for replenishment as shown by 51.6% while 14.5% strongly agreed on the same. However, 25.8% of the respondents disagreed that once an item of stock has been consumed the same information is passed to the vendor for replenishment. Lastly, slight majority of the respondents were undecided whether the Judiciary uses Vendor Managed Inventory to eliminate the need to reorder and avoid stock-outs being experienced in the courts as shown by 40.3%. However, 14.5% and 35.5% of the respondents strongly agreed and agreed respectively that the Judiciary uses Vendor Managed Inventory to eliminate the need to reorder and avoid stock-outs being experienced in the courts.

These findings were in agreement with Mulumba (2016) sought to assess the relationship between inventory management practices and performance of manufacturing firms in Kenya using a case of agro-chemical firms. The study concluded that VMI is guided by contracts that guide the inventory of the agrochemical firm aimed at improving its procurement performance. Further, Kerubo (2017) posited that Vendor Managed Inventory (VMI) is one of the maximum extensively discussed partnering tasks for improving multi-company deliver chain performance and that it is also referred to as continuous replenishment or supplier-managed inventory.

Economic order quantity inventory management

The sampled respondents were provided with 6 statements related to Economic order quantity inventory management. The relevant results were as shown in Table 3.

Table3: Economic order quantity inventory management

Statements	1	2	3	4	5	Mean
The Judiciary orders inventory when current inventory level has reached a certain defined level	4 (6.5)	30 (48.4)	19 (30.6)	7 (11.3)	2 (3.2)	3.435
The Judiciary maintains that level of inventory that minimizes the total inventory holding costs	20 (32.3)	15 (24.2)	21 (33.9)	5 (8.1)	1 (1.6)	3.774
The Judiciary orders amounts of inventory that minimizes the total ordering costs	4 (6.5)	27 (43.5)	20 (32.3)	10 (16.1)	1 (1.6)	3.371
The Judiciary observes periodical replenishment of stocks	15 (24.2)	28 (45.2)	12 (19.4)	5 (8.1)	2 (3.2)	3.790
Wastage of materials and evaporation is reduced through the use of EOQ	8 (12.9)	24 (38.7)	19 (30.6)	8 (12.9)	3 (4.8)	3.419
EOQ helps prevent stock out and disruption of distribution of inventories	9 (14.5)	26 (41.9)	19 (30.6)	6 (9.7)	2 (3.2)	3.548

From Table 3, slight majority of the sampled respondents (48.4%) agreed that the Judiciary orders inventory when current inventory level has reached a certain defined level while 6.5% strongly agreed. However, 30.6% of the respondents were undecided whether the Judiciary orders inventory when current inventory level has reached a certain defined level. The results further revealed that 32.3% of the respondents strongly agreed that the Judiciary maintains that level of inventory that minimizes the total inventory holding costs and further 24.2% agreed on the same. However, 33.9% of the respondents were undecided whether the Judiciary maintains that level of inventory that minimizes the total inventory holding costs.

In regard to the Judiciary orders amounts of inventory that minimizes the total ordering costs, 43.5% agreed and 6.5% strongly agreed on the same. However, 32.3% of the respondents were undecided whether the Judiciary orders amounts of inventory that minimizes the total ordering costs. The results also revealed that 45.2% and 24.2% of the sampled respondents agreed and strongly agreed respectively that the Judiciary observes periodical replenishment of stocks. A mean of 3.8 indicated that the Judiciary observes periodical replenishment of stocks.

The results also indicated that 38.7% of the sampled respondents agreed that wastage of materials and evaporation is reduced through the use of EOQ and further 12.9% strongly agreed on the same. However, 30.6% of the respondents were undecided whether wastage of materials and evaporation is reduced through the use of EOQ. Lastly, 41.9% and 14.5% of the respondents agreed and strongly agreed respectively that EOQ helps prevent stock out and disruption of distribution of inventories. On the other hand, 30.6% of the respondents were undecided that EOQ helps prevent stock out and disruption of distribution of inventories.

These results were supported by other previous studies, for instance, Kiswii (2019) sought to establish the effects of pharmaceutical inventory management on procurement performance in coast provincial general hospital in Kenya. The study showed that economic order quantity had a significant effect on the dependent variable with inventory management contributing the most to the dependent variable (procurement performance of CPGH.

Procurement Performance

The sampled respondents were provided with 7 statements related to procurement performance of Judiciary in Kenya. The relevant results were as shown in Table 4.

Table 4: Procurement Performance

Statements	1	2	3	4	5	Mean
Inventory management practices has resulted to reduction in wastes	13 (21)	27 (43.5)	10 (16.1)	6 (9.7)	6 (9.7)	3.56
The quality of goods and services procured has improved as a result of proper inventory management practices	14 (22.6)	27 (43.5)	11 (17.7)	9 (14.5)	1 (1.6)	3.71
Inventory management practices has led to timely delivery of goods and services	21 (33.9)	28 (45.2)	5 (8.1)	5 (8.1)	3 (4.8)	3.95
Inventory management practices has ensured services and goods are acquired at right price	14 (22.6)	30 (48.4)	7 (11.3)	10 (16.1)	1 (1.6)	3.74
Due to inventory management practices, right quantity of goods and services are procured.	20 (32.3)	25 (40.3)	6 (9.7)	10 (16.1)	1 (1.6)	3.85
Inventory management practices has ensured reduction in procurement process cost	13 (21)	25 (40.3)	11 (17.7)	10 (16.1)	3 (4.8)	3.56
Inventory management practices has resulted to reduction in user complaint	18 (29)	21 (33.9)	12 (19.4)	8 (12.9)	3 (4.8)	3.69

From Table 4, 43.5% of the respondents agreed that inventory management practices had resulted to reduction in wastes while 21.0% strongly agreed with a mean of 3.56. The results also revealed that 43.5% and 22.6% of the respondents agreed and strongly agreed respectively that the quality of goods and services procured had improved as a result of proper inventory management practices. This was supported by a mean of 3.71 implying that the quality of goods and services procured has improved as a result of proper inventory management practices.

Slight majority of the respondents agreed that inventory management practices have led to timely delivery of goods and services as shown by 45.2% while 33.9% of the respondents strongly agreed on the same. A mean of 3.95 implied that inventory management practices have led to timely delivery of goods and services. Similarly, 48.4% of the respondents agreed that inventory management practices has ensured services and goods are acquired at right price while 22.6% strongly agreed on the same. However, 16.1% of the respondents disagreed that inventory management practices has ensured services and goods are acquired at right price

The results also revealed that 40.3% of the respondents agreed that due to inventory management practices, right quantity of goods and services are procured and 32.3% of the respondents strongly agreed on the same. Nevertheless, 16.1% of the respondents disagreed that due to inventory management practices, right quantity of goods and services are procured.

The results further revealed that 40.3% of the respondents agreed that inventory management practices has ensured reduction in procurement process cost and further 21.0% strongly agreed. However, 17.7% of the respondents were undecided. Lastly, slight majority of the respondents (33.9%) agreed that inventory management practices have resulted to reduction in user complaint and further 29.0% strongly agreed on the same. However, 19.4% of the respondents were undecided that inventory management practices have resulted to reduction in user complaint.

Inferential Analyses

Table 5: Multiple Correlation Matrix

		JIT	VMI	EOQ	PP
JIT-Just in Time	Pearson Correlation	1	.541**	.541**	.644**
	Sig. (2-tailed)		.000	.000	.000
	N	62	62	62	62
VMI-Vendor managed	Pearson Correlation	.541**	1	.506**	.598**
	Sig. (2-tailed)	.000		.000	.000
	N	62	62	62	62
EOQ-Economic order quantity	Pearson Correlation	.541**	.506**	1	.675**
	Sig. (2-tailed)	.000	.000		.000
	N	62	62	62	62
PP=Procurement Performance	Pearson Correlation	.644**	.598**	.675**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	62	62	62	62

**. Correlation is significant at the 0.01 level (2-tailed).

From the correlation Table 6, Just in time inventory management practices is positively correlated to procurement performance the coefficient is 0.644 (p value < 0.01) this was significant at 99% confidence level. Thus increase in Just in time inventory management practices would make

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procurement performance to increase as a result of linear relationship between variables. These findings are in agreement with Mukopi and Iravo (2015) examined the effect of inventory management on performance of the procurement function of sugar manufacturing companies in the western sugar belt. There was strong relationship between just in time and performance of the procurement function of sugar manufacturing companies in the western sugar belt.

Similarly, the correlation coefficient for vendor managed inventory management practices was 0.598, P=0.000, suggesting that there is significant positive relationship between vendor managed inventory management practices and procurement performance of Judiciary in Kenya. Increase in vendor managed inventory management practices would results to increase in procurement performance. Panigrahi, Das, Jena and Tanty (2015) aimed to empirically examine the impact of Inventory Management Practices on the Production Performances of the manufacturing industry. Findings revealed that VMI has strong relationship with Production Performances.

Lastly, there is significant positive relationship between economic order quantity inventory management and procurement performance of Judiciary in Kenya as indicated by .675**, p=0.000. This implied that increase in economic order quantity inventory management would results to increase in procurement performance. Njoroge (2015) sought to determine the inventory management practices used by Public hospitals in Kenya. The correlational results concluded that inventory management practices specifically economic order quantity were positively related to performance of public hospitals in Nairobi and former Central province.

Multiple Regression Analysis

The study was interested in knowing the effect of each of the inventory management practices constructs on procurement performance when all these constructs were entered as a block on the model. The results of multiple linear regression analysis were presented in Table 6.

Table 6: Model Summary and ANOVA

Model Summary

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	.775[a]	.601	.580	.498525	.601	29.125	3	58	.000

a. Predictors: (Constant), Economic order quantity inventory, Vendor managed inventory, Just in Time inventory

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.715	3	7.238	29.125	.000[b]
	Residual	14.415	58	.249		
	Total	36.129	61			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Economic order quantity inventory, Vendor managed inventory, Just in Time inventory

The results from the model summary in Table 6 give us information on the overall summary of the model. Looking at the R square column, we can deduce that inventory management practices accounted for 60.1% significant variance in performance (R square =.601, P=0.000) implying that 39.9% of the variance in procurement performance of Judiciary in Kenya is accounted for by other variables not captured in this model. In order to assess the significance of the model, simply

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whether the study model is a better significant predictor of the procurement performance rather than using mean score which is considered as a guess, the study resorted to F Ratio. From the findings, the F value is more than one, as indicated by a value of 29.125, which means that enhancement as a result of model fitting is much larger than the model errors/inaccuracies that were not used in the model (F (3,58) = 29.125, P=0.000). This implies that the final study model has significant improvement in it is prediction ability of procurement performance of Judiciary in Kenya.

The presented in Table 7 showed unstandardized coefficients, standardized coefficients, t statistic and significant values.

Table 7: **Coefficients on effect of Inventory Management Practices Constructs on Performance**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.827	.462		-1.789	.079
	Just in Time inventory	.396	.137	.306	2.886	.005
	Vendor managed inventory	.292	.128	.235	2.276	.027
	Economic order quantity	.484	.128	.390	3.770	.000
a. Dependent Variable: Procurement Performance						

A regression of the three predictor variables against procurement performance established the multiple linear regression model as indicated in the table.

Y=-0.827 + 0.396 X_1**+0.292** X_2**+0.484** X_3

Where Y is the dependent variable (Procurement Performance),

X_1 is Just in Time inventory management practices

X_2 is Vendor Inventory managed

X_3 is Economic order quantity inventory management

From the findings, all inventory management practices construct had significant effect on the performance. If inventory management practices are held at zero or it is absent, the procurement performance of Judiciary in Kenya would be -0.827, p=0.079. Though be negative but insignificant. It was revealed that Just in Time inventory management practices had unique significant contribution to the model with B=.396, p=.005 suggesting that controlling of other variables (Vendor managed inventory management practices and Economic order quantity inventory management) in the model, a unit change in Just in time inventory management practices would result to significant change in performance by 0.396 in the same direction. The results are supported by the work of Mukopi and Iravo (2015) examined the effect of inventory management on performance of the procurement function. There was strong relationship between just in time and performance of the procurement function of sugar manufacturing companies in the western sugar belt. Ontita (2016) also concluded that there was a strong positive correlation between the just in time and operational performance of the textile manufacturing firms. This was arrived at after adopting descriptive cross sectional design was to examine inventory management approaches in textile manufacturing firms in Kenya.

The coefficient of Vendor managed inventory management practices was 0.292, which was significant (p=.027) and also positive. When the variance explained by all other variables (Just in Time inventory management practices and Economic order quantity inventory management) in the model is controlled, a unit change in vendor managed inventory management practices would result to change in performance by 0.292 in the same direction. These findings compare favorably with Mulumba (2016) who sought to assess the relationship between inventory management practices and performance of manufacturing firms in Kenya using a case of agro-chemical firms. The

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study concluded that VMI is guided by contracts that guide the inventory of the agrochemical firm aimed at improving its performance. Similar results were also established by Panigrahi, Das, Jena and Tanty (2015) who aimed to empirically examine the impact of Inventory Management Practices on the Production Performances of the manufacturing industry. Findings revealed that VMI has strong relationship with Production Performances. Study concluded that effective management of vendor managed inventory will able to provide competitive advantages for manufacturing industry to survive in long run.

Lastly, Economic order quantity inventory management had also unique significant contribution to the model with B=0.484, p=.000 implying that when other variables in the model are controlled (Vendor managed inventory management practices and Just in Time inventory management practices), a unit change in Economic order quantity inventory management would result to significant change in performance by 0.484 in the same direction. These findings are in agreement with Njoroge (2015) who sought to determine the inventory management practices used by Public hospitals in Kenya. The regression results concluded that inventory management practices specifically economic order quantity were positively related to performance of public hospitals in Nairobi and former Central province. Shiferaw (2015) sought to examine the effects of inventory management practices on organizations operational performances: the case of Ethiopian Airlines. While there are different inventory management practices, the findings of this research study establish that Ethiopian Airlines more likely to benefit from Economic Order Quantity model.

Hypothesis testing

First, study hypothesis one (H_{01}) stated that there is no significant influence of Just in Time inventory management practices on procurement performance of Judiciary in Kenya. Multiple regression results indicated that Just in Time inventory management practices has significant influence on procurement performance of Judiciary in Kenya (β = 0.396 (0.137) at *p<0.01*). Hypothesis one was therefore rejected. The results indicated that a single improvement in Just in Time inventory management practices will lead to 0.396 unit improvement in procurement performance of Judiciary in Kenya.

Secondly**,** study hypothesis two (H_{02}) stated that there is no significant influence of vendor managed inventory management practices on procurement performance of Judiciary in Kenya. Multiple regression results indicate that Vendor Inventory managed practice has significant influence on procurement performance of Judiciary in Kenya (β = 0.292 (0.128) at *p<0.05*). Hypothesis two was therefore rejected. The results indicated that a single improvement in inventory management practices will lead to 0.292 unit improvement in procurement performance of Judiciary in Kenya.

Thirdly, study hypothesis four (H_{03}) stated that there is no significant influence of economic order quantity inventory management practices on procurement performance of Judiciary in Kenya. Multiple regression results indicate that Economic order quantity inventory management has significant influence on procurement performance of Judiciary in Kenya (β = 0.484 (0.128) at *p<0.05*). Hypothesis three was therefore rejected. The results indicated that a single improvement in Economic order quantity inventory management will lead to 0.484 unit improvement in procurement performance of Judiciary in Kenya.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that Just in Time inventory management practices has significant influence on procurement performance of Judiciary in Kenya. An increase in Just in Time inventory management practices would results to significant increase in procurement performance of Judiciary in Kenya. Procurement performance of Judiciary in Kenya is influenced by just in time management practices such as holding the required inventory when

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needed, delivering at the right time by the suppliers and replenishes inventory just when needed.

The study concluded that Vendor managed inventory management practices has significant influence on procurement performance of Judiciary in Kenya. Therefore, Vendor managed inventory management practices is a useful predicator of procurement performance of Judiciary in Kenya. In the four law courts in Kakamega, once an item of stock has been consumed the same information is passed to the vendor for replenishment. The supplier accessed the Judiciary's inventory data ensuring supply chain is seamless for higher productivity. Vendor managed inventory was guided by a contracts that guide the inventory of the Judiciary aimed at improving its performance. This vendor managed inventory management practices has increased procurement performance in the four law courts in Kakamega County.

The study concluded that Economic order quantity inventory management has significant effect on procurement performance of Judiciary in Kenya. Hence, Economic order quantity inventory management is a significant predicator of procurement performance of Judiciary in Kenya. The Judiciary maintained that level of inventory that minimized the total inventory holding costs. The Judiciary observed periodical replenishment of stocks. Further, Economic Order Quantity helps prevent stock out and disruption of distribution of inventories.

The following recommendations have been made based on the study conclusions as shown below.

The study recommended that the Judiciary should use Just in Time inventory management to reduce the stock and the carrying cost associated in the organization. The law courts should only store what is being required in the production process. To avoid carrying of excess inventory that might be a risk to the Judiciary, accurate forecast, should be in place. This will help in reducing stock outs/lost sales and carrying of excess inventory and associated risks.

The study recommended that the Judiciary adopt Economic Order Quantity in order to know the quantity of stock to order at any given time. Further, reliable communication practices should be adopted among the suppliers and the buying organization so as to curb costs from quantity and product deviations through the use of Economic Order quantity.

The study also recommended that the Judiciary should also use Vendor Managed Inventory to allow flexibility of the user demand. Further, the Judiciary should consider implementation of a vendor managed inventory with a purpose to lower incidences of stock-out situations, increase the levels of user services and reduce costs due to an increase in inventory turns and a decrease in the levels of safety stock and greater transparency in procurement performance.

Suggestion for Further Studies

The study examined three inventory management practices, the findings indicated that the three inventory management practices did not contribute 100% to procurement performance, therefore, future studies should consider to examine other inventory management practices such as warehouse management system and new technologies that facilitate inventory management.

There is need to replicate the study to other counties across the country other than Kakamega County to know the extent of implementation of inventory management practices and their procurement performance. This will create a platform to make a comparison on the findings upon which reliable conclusion can be made based on solid facts.

Further, a study should be conducted focusing on factors affecting the choice of inventory management practices. This would help establish why organizations choose different inventory management practices.

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