

International Journal of **Supply Chain and Logistics**

(IJSCL)

**Modern Inventory Control Techniques and Supply Chain
Performance of Major Retail Stores in Kisii Town**



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Modern Inventory Control Techniques and Supply Chain Performance of Major Retail Stores in Kisii Town

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Accepted: 30th September 2025 Received in Revised Form: 14th October 2025 Published: 28th October 2025

Abstract

Purpose: The aim of this study was to find out the influence of modern inventory control techniques on supply chain performance of retail stores in Kisii Town.

Methodology: The study adopted a cross sectional study design. The unit of analysis for this study was 83 stores managers of the retail stores. Purposive sampling was be used to select the samples for the study. The study made use of questionnaires to collect primary data. A pilot test was conducted to test the reliability and validity of the data collection instruments. SPSS software program was used to facilitate data processing and analysis. Descriptive and inferential statistics were used to analyze quantitative data.

Findings: The findings indicated that economic order quantity inventory control technique, re-order point, fixed stock levels and FSN analysis techniques positively influenced supply chain performance of retail stores in Kisii Town.

Unique Contribution to Theory Practice and Policy: The study recommended that management of retail stores should use the inventory control techniques to only store what was being required in the production process but to enhance the overall store performance.

Keywords: *Modern Inventory Control Techniques, Supply Chain Performance, Retail Operations and Efficiency*

INTRODUCTION

Globally, inventory control has evolved into a strategic imperative for retail supply chains facing increasing complexity and customer expectations. Ajitotutu et al. (2024a), highlight how inefficiencies in inventory and logistics management can lead to stockouts, overstocking, and customer dissatisfaction. In response, structured frameworks such as the U.S. General Accounting Office's 2002 executive guide and the University of Mississippi's 2012 reference guide have been developed to enhance inventory accuracy and reliability. Empirical studies continue to validate modern techniques: Salehi et al. (2010), found that Just-in-Time (JIT) improves both financial and non-financial performance, while Eroglu and Hofer (2011) demonstrated that inventory leanness significantly boosts profit margins. These global insights underscore the value of predictive analytics, lean inventory systems, and structured control mechanisms in driving supply chain performance.

Regionally, inventory optimization is gaining traction across African economies as a lever for competitiveness and cost efficiency. Tadayonrad & Ndiaye (2023), and Ehidiemen & Oladapo (2024a) emphasize inventory forecasting as essential for balancing demand and minimizing excess stock. In Nigeria, Idris and Solomon (2017) found a strong link between inventory control policies and profitability, recommending JIT, MRP, and EOQ frameworks. Atnafu and Assefa (2018), studying Ethiopian micro and small enterprises, concluded that robust inventory practices directly enhance organizational performance and competitiveness. These findings suggest that inventory control is not merely operational but strategic and yet despite regional progress, there remains a gap in translating these practices into the Kenyan retail context, where empirical validation is still limited.

In Kenya, the collapse of major retail chains like Tuskys and Nakumatt (Malakooti, 2013), signals persistent inefficiencies in inventory management. Recent studies show promising results across sectors: Mwangangi and Senelwa (2018), found that EOQ and other techniques significantly improve service delivery in parastatals, while Onchoke and Wanyoike (2016) linked computerized inventory systems to procurement performance in agrochemical distribution. Wangari and Kagiri (2015), and Ngei and Kihara (2017) demonstrated that inventory investment, RFID, and ERP systems predict competitiveness and performance in telecom and gas firms. Mukopi and Iravo (2015) further emphasized strategic supplier partnerships and IT integration in the sugar sector. However, Zipkin (2016) and Ogbo & Onekanma (2014) caution that many firms still rely on informal, experience-based ordering without structured policies. This study addresses that gap by empirically examining how modern inventory control techniques such as EOQ, re-order point, fixed stock levels, and ABC analysis affect supply chain performance in Kenyan retail stores, thereby contextualizing global and regional insights within a local framework.

Problem Statement

The efficiency is anticipated to be of high standards in the retail activities to achieve efficiency in streamlining processes, waste minimum, and productivity maximization accompanied by consistent customer satisfaction (Kondo & Vicente, 2023). At the heart of this is proper inventory management that helps the retailers to satisfy the demand without incurring too much carrying costs or forcing the capital into idle stock (Fisher & Raman, 2010). The modern competitive enterprise world does not need supply chain efficiency to remain operational, but rather it is strategic (Barathi, 2024). As pointed out by Camarena et al. (2024), the retail stores play a big role in the development of the economy, and their competitiveness depends on the way they manage the inventory. Nevertheless, Zipkin (2016) observes that even with re-order levels in place, in most cases, most companies have been operating on a non-formal and experience-based ordering without a well-established policy, which results in a high rate of stockouts and overstocking.

The issue has a very broad spectrum of stakeholders, and especially those in management of the retail stores and people in the supply chain who have to strike a balance between the inventory and the varying demand. Research like Mwangangi and Senelwa (2018) indicate that inventory management strategies play a rich and substantive role in serving Kenyan parastatals, but there is scanty research on the practical and intangible advantages of the strategy in retailing. Previous studies in healthcare supply chain by Karimi and Namusonge (2014) and Oballah and Waiganjo (2015) have found that ineffective inventory management results in shortages, inefficiency, and high costs. Ogbo and Onekanma (2014), also emphasized the dangers of unmanaged inventory such as shrink, billing mistakes, and swelling inventories. In spite of these findings, the effects of modern inventory management methods that include the EOQ, re-order point, fixed stock levels and the ABC analysis method on the performance of supply chains in Kenyan retail outlets have not been quantitatively studied. The proposed research will address that gap by offering empirical evidence to inform inventory policy and enhance operational performance.

LITERATURE REVIEW

Theoretical Framework

The study is anchored on three key theories that inform its investigation into inventory control and supply chain performance. The Economic Order Quantity (EOQ) Theory, developed by F.W. Harris in 1913 and later refined by Wilson, is one of the most widely applied models in inventory management (Blackburn, 2010). It provides a mathematical framework for determining the optimal order quantity that minimizes total inventory costs, including ordering and holding costs. This theory directly informs the study's focus on EOQ as a modern inventory control technique,

offering a structured approach to balancing inventory levels and cost efficiency in retail operations. By applying EOQ principles, the study seeks to evaluate how retail stores in Kisii Town can reduce excess stock and avoid shortages, thereby improving supply chain performance.

The second theory, Stock Diffusion Theory was proposed by Forrester in 1958. It explains how inventory levels fluctuate over time due to delays in information and material flow. It emphasizes the dynamic nature of inventory systems and the importance of timely decision-making to avoid inefficiencies. This theory supports the study's examination of re-order points and fixed stock levels, highlighting how delayed responses can lead to overstocking or stockouts. Lastly, the Resource Dependency Theory by Pfeffer and Salancik (1978) posits that organizations must manage external dependencies to secure critical resources. In the context of this study, it underscores the strategic role of inventory control in managing supplier relationships and ensuring consistent supply. Together, these theories provide a comprehensive lens for analyzing how modern inventory techniques such as EOQ, re-order point, fixed stock levels, and ABC analysis can enhance operational efficiency and supply chain performance in Kenyan retail settings.

Conceptual Framework

Conceptual framework provides the link between the research title, the objectives, the study methodology and the literature review. Figure 1 highlights the relationship between the independent and dependent variables.

Independent Variables

Dependent Variable

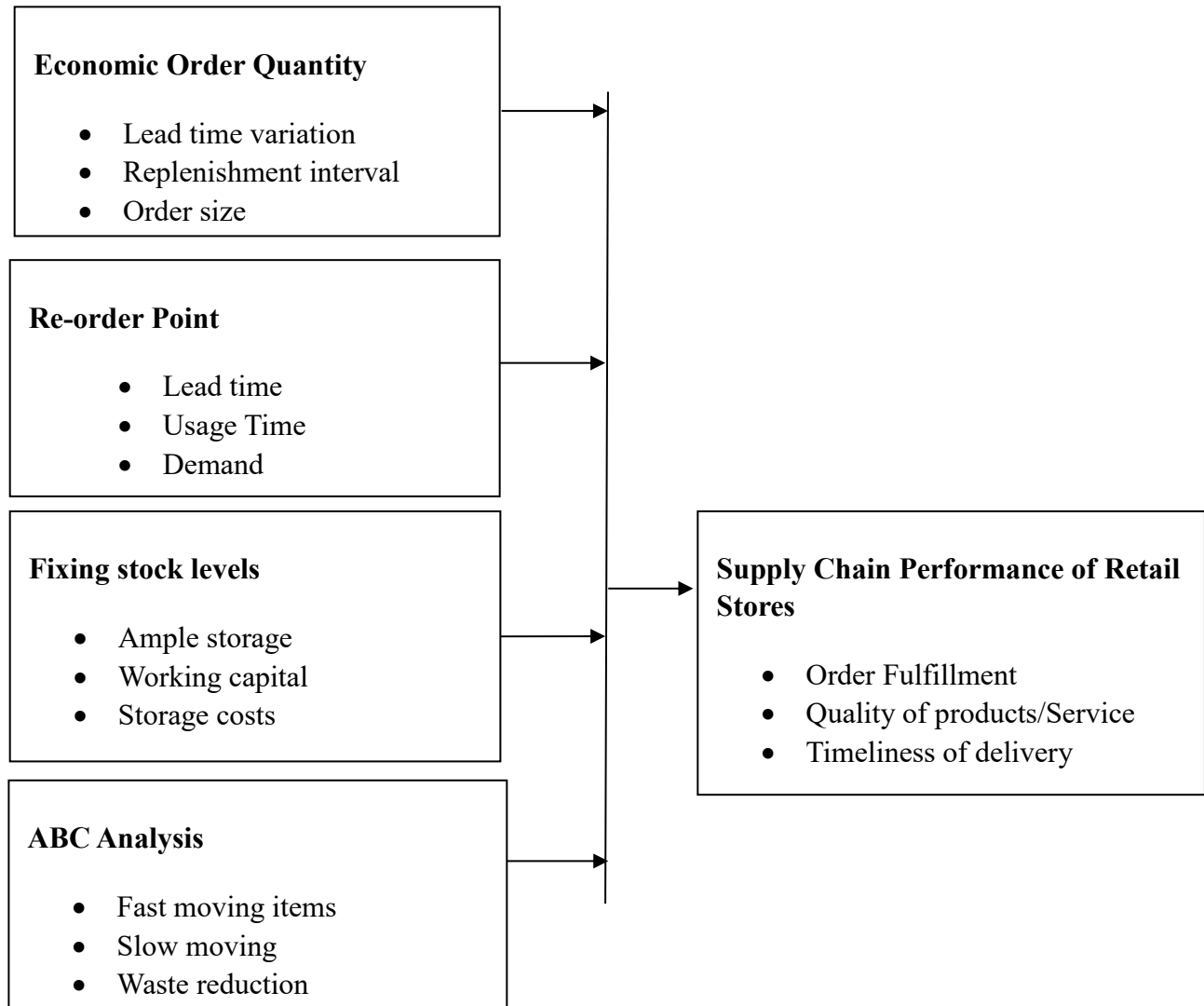


Figure 1: Conceptual Framework

Empirical Review

Mwangangi and Senelwa (2018), studied the influence of inventory control techniques on service delivery at the Kenya Medical Supplies Authority. Their findings revealed a positive and significant correlation between the use of Economic Order Quantity (EOQ) and improved service delivery. EOQ was shown to reduce storage costs, minimize wastage, and prevent obsolescence, thereby enhancing profitability. However, the study focused on a healthcare parastatal, leaving a gap in understanding how EOQ performs in retail environments with more volatile demand patterns, such as those in Kisii Town.

Zipkin (2016), examined the practical application of re-order point systems and found that despite having established re-order levels, many organizations still rely on informal, experience-based ordering. This often results in inconsistent inventory levels, leading to either stockouts or overstocking. The study highlighted the absence of structured policies to guide order quantities, which undermines inventory efficiency. While insightful, the study was largely conceptual and lacked empirical data from retail settings in developing countries, signaling the need for localized, data-driven investigations.

Garba et al. (2024a), explored operational efficiency in retail supply chains and found that poorly managed fixed stock levels contribute to inefficiencies and increased costs. Their study stressed the need for structured inventory policies to avoid under- or overstocking, especially in fast-paced retail environments. Although the research offers relevant insights into inventory balancing, it was conducted from a broader supply chain perspective and did not isolate the impact of fixed stock levels within Kenyan retail stores, pointing to a gap in sector-specific analysis.

Auma, Muturi, and Atambo (2017), assessed the effect of inventory control methods on procurement performance in sugar manufacturing firms in Western Kenya. Their study found that the adoption of ABC analysis contributed positively to procurement efficiency by prioritizing high-value items for tighter control. The researchers recommended broader adoption of modern inventory technologies to complement ABC practices. However, the study was confined to the manufacturing sector, and its findings may not fully translate to retail operations, where inventory turnover and customer demand are more volatile. This underscores the need for sector-specific research in retail contexts like Kisii Town.

METHODOLOGY

The study adopted a survey study design to understand the relationship between the independent and dependent variables. The study targeted four supermarkets in Kisii town. The study employed

purposive sampling technique to identify the sample. Census was also applied. The main instrument for data collection was questionnaire. A pilot test was conducted to ensure that there was validity and reliability of the questionnaires. The research instruments were validated to ensure that the questions measured what they were intended to measure. Through pilot testing, the content validity results assisted to gauge the clarity of questions and make necessary amendments. Data analysis was done using SPSS. Descriptive statistics such as mean, percentage and standard deviation were used to present the various characteristics for the data sets. A multivariate regression model was used to link the independent variables to the dependent variable as follows;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

RESULTS

Response Rate

One hundred and four (104) questionnaires were distributed to respondents, seventy-one (71) were received which represented 68.3% response rate. Mugenda and Mugenda (2003) assert that a response rate of more than 50% is adequate for analysis.

Descriptive Statistics

Economic Order Quantities technique

Economic Order Quantities is one of the crucial inventory control techniques. To measure Economic Order Quantities technique, a set of six statements were formulated.

Table 1: Descriptive Statistics for Economic Order Quantities technique

No	Economic Order Quantities technique	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SDV
1	It helps to minimize the cost of ordering and holding cost and also minimizes the total cost associated with the purchase, delivery and storage of the product.	25 (35.2)	25 (35.2)	12 (16.9)	4 (5.6)	5 (7)	3.85	1.17
2	Wastage of materials and evaporation is reduced through the use of EOQ.	22 (31)	28 (39.4)	13 (18.3)	5 (7)	3 (4.2)	3.85	1.07
3	Through EOQ it has been easy to maintain proper inventory levels.	10 (14.1)	35 (49.3)	10 (14.1)	13 (18.3)	3 (4.2)	3.50	1.08
4	Inventories help prevent stock out and disruption of production and distribution of medicines.	16 (22.5)	34 (47.9)	11 (15.5)	6 (8.5)	4 (5.6)	3.73	1.08
5	Lead time variation greatly improves responsiveness to demand.	17 (23.9)	24 (33.8)	14 (19.7)	12 (16.9)	4 (5.6)	3.53	1.19
6	Replenishment interval has a positive impact on sales volume.	18 (25.4)	30 (42.3)	12 (16.9)	7 (9.9)	4 (5.6)	3.71	1.12
Overall Mean							3.702	1.12

The results in Table 1 revealed a strong support among respondents for the effectiveness of the Economic Order Quantities (EOQ) technique in inventory management. A majority agreed that EOQ minimizes ordering, holding, and total procurement costs, with a high mean score of 3.85 and notable standard deviation, indicating varied perceptions. Respondents also affirmed EOQ's role in reducing material wastage and evaporation, maintaining proper inventory levels, and preventing stockouts in medicine distribution. Additionally, lead time variation and replenishment intervals were seen as positively influencing responsiveness and sales volume, though responses showed moderate variability. The average mean across all six Economic Order Quantities (EOQ) technique statements is 3.70, and the average standard deviation is 1.12. This suggests a generally favorable perception of EOQ practices among respondents, with moderate variability in responses. These findings align with prior studies by Kiswii (2019) and Hitimana (2018), which confirmed

EOQ's significant impact on procurement and supply chain performance in Kenyan healthcare and construction sectors, respectively.

Re-Order Point

The respondents were asked to indicate the extent of agreement with each of the Just in Time statements from strongly disagree to strongly agree. The relevant results are presented in Table 2.

Table 2: Descriptive Results for Re-Order Point

No	Reorder Point	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SDV
1	Ordering a smaller volume of inventory, more frequently is beneficial for the company to manage cash flow and also inventory reduction.	25 (35.2)	20 (28.2)	5 (7)	11 (15.5)	10 (14.1)	3.55	1.46
2	The inventory needs to be reordered to ensure the timely availability of goods for sales.	24 (33.8)	21 (29.6)	16 (22.5)	7 (9.9)	3 (4.2)	3.79	0.85
3	Ordering a smaller volume of inventory, more frequently is beneficial for the company to manage cash flow and also inventory reduction.	22 (31)	23 (32.4)	9 (12.7)	13 (18.3)	4 (5.6)	3.65	0.83
4	By identifying, repurposing or removing obsolete inventory the volume of inventory on hand would decrease.	24 (33.8)	31 (43.7)	4 (5.6)	5 (7)	7 (9.9)	3.85	0.87
5	The inventory systems are interlinked with those of suppliers to ensure goods and services are available when is needed	13 (18.3)	25 (35.2)	19 (26.8)	11 (15.5)	3 (4.2)	3.48	1.09
Overall Mean							3.66	1.02

Table 2 reveals strong support among respondents for re-order point strategies in inventory management, with the highest agreement seen in practices like identifying and removing obsolete

inventory (mean = 3.85, SD = 1.07) and ensuring timely reordering of goods (mean = 3.80, SD = 1.20). Ordering smaller volumes more frequently was also positively received across multiple statements, with mean scores ranging from 3.52 to 3.66. Integration of inventory systems with suppliers showed moderate support (mean = 3.48, SD = 1.09). The overall mean score of 3.66 and standard deviation of 1.02 suggest generally favorable perceptions with moderate variability. These findings align with Shin et al. (2015), who emphasized that well-implemented re-order point systems enhance production quality and reduce waste, and with Kootanaee et al. (2013), who advocated for maintaining minimum inventory levels to reduce holding costs and improve operational efficiency.

ABC Analysis

The respondents were asked to indicate the extent of agreement with each of the ABC statements from strongly disagree to strongly agree. The pertinent results are presented in Table 3.

Table 3: Descriptive Results for ABC

No	ABC	SA (%)	A (%)	U (%)	D (%)	SD (%)	Mean	SDV
1	The organization categorizes inventory based on how much monetary value they hold	35 (49.3)	17 (23.9)	13 (18.3)	4 (5.6)	2 (2.8)	4.11	0.92
2	ABC is used to forecast the demand for products beforehand and manage the stock levels accordingly	13 (18.3)	26 (36.6)	19 (26.8)	7 (9.9)	6 (8.5)	3.46	1.01
3	The organization uses ABC analysis as stock classification system to allocate time and finances in stock practices	28 (39.4)	19 (26.8)	7 (9.9)	11 (15.5)	6 (8.5)	3.73	0.74
4	The organization uses ABC analysis practices to determine the specific attention required by each group of stocks	13 (18.3)	29 (40.8)	12 (16.9)	14 (19.7)	3 (4.2)	3.49	1.21
5	The organization can easily regulate the expenditures of the inventory through the adoption of the ABC practice	25 (35.2)	28 (39.4)	9 (12.7)	7 (9.9)	2 (2.8)	3.94	1.07
6	ABC helps in determining availability of stocks before depletion of each category and the management of inventory on the levels of stock availability	21 (29.6)	23 (32.4)	13 (18.3)	8 (11.3)	5 (7)	3.73	1.32
Overall Mean							3.74	1.05

Table 3 presents descriptive results on the use of ABC inventory control techniques, showing generally favorable perceptions among respondents. The highest-rated statement was the categorization of inventory by monetary value, with 49.3% agreeing and 23.9% strongly agreeing, yielding a mean of 4.11 and a standard deviation of 0.92. ABC's role in forecasting demand and

managing stock levels was also supported (mean = 3.83, SD = 0.95), as was its use in stock classification to allocate time and finances (mean = 3.73, SD = 0.74). Respondents affirmed ABC's usefulness in evaluating inventory expenditures (mean = 3.91, SD = 1.07) and managing stock availability before depletion (mean = 3.73, SD = 1.32), though the latter showed greater variability. Overall, the mean score across all six statements was 3.74 with a standard deviation of 1.05, indicating consistent support with moderate dispersion. These findings align with Kumar et al. (2017), who found ABC models effective in reducing obsolescence and optimizing inventory levels, and with Kobia (2018), who noted moderate implementation of such practices in Kenyan public hospitals.

Fixed Stock Levels

The fourth objective was to assess the influence of fixing stock levels on supply chain performance of retail stores in Kisii town. The results are presented in table 4 below.

Table 4: Descriptive Results for Fixed Stock Levels

		SD	D	N	A	SA	Mean	Std Dev
The staff ensure that the inventory needs are reordered to ensure the timely availability of goods for sales.	%	18.8	38.3	17.2	10.9	14.8	2.65	1.31
Staff ensure that the store has the minimum product quantity in storage to prevent operational disruptions from a stock out.	%	0	35.2	19.5	0	45.3	3.55	1.37
The staff prevent holding stock beyond the safety point to avoid incurring unnecessary storage costs.	%	8.6	27.3	8.6	0	55.5	3.66	1.55
The staff avoid overstocking because it will increase your inventory holding costs and diminish overall profits.	%	0	10.9	35.9	20.3	32.8	3.75	1.03
The store makes finished products like a cake out of raw materials	%	10.2	14.1	30.5	0	45.3	3.56	1.43
Overall Means							3.29	0.96

The overall mean score was 3.29 (SD = 0.96), indicating a moderate level of agreement among respondents regarding the schools' overall effectiveness and competitiveness. Notably, 18.8% of respondents strongly disagreed and 38.3% disagreed that their schools consistently provide high quality education and student support services,

resulting in a relatively low mean score of 2.65 (SD = 1.31). This finding suggests that some stores may be facing challenges in maintaining consistent and adequate stock levels and this may, in turn, affect supply chain performance.

Supply Chain Performance of Retail Stores

Performance of Retail Stores in Kisii Town in this study was used as dependent variable. It was measured using Economic order Quantity, Re-order Point, Fixed Stock levels and ABC analysis. The pertinent results are presented in Table 5.

Table 5: Descriptive Results for Supply Chain Performance

	SD (%)	D (%)	N (%)	A (%)	SA (%)	Me an	Std Dev
Performance procurement function of							
1 Inventory control technique has resulted to reduction in wastes	12 (16.9)	20 (28.2)	24 (33.8)	7 (9.9)	8 (11.3)	3.3	1.2
2 The quality of products and services procured has improved as a result of proper inventory control technique	20 (28.2)	27 (38)	11 (15.5)	10 (14.1)	3 (4.2)	3.72	1.15
3 Inventory control technique has led to timely delivery of products and services	21 (29.6)	34 (47.9)	10 (14.1)	2(2.8)	4(5.6)	3.93	1.03
4 inventory control technique has ensured services and products are acquired at right price	17 (23.9)	11 (15.5)	33 (46.5)	7(9.9)	3(4.2)	3.45	1.09
5 Due to inventory control technique, right quantity of products and services are procured.	16 (22.5)	28 (39.4)	15 (21.1)	8(11.3)	4(5.6)	3.62	1.13
6 Inventory control technique has ensured reduction in procurement process cost	8 (11.3)	30 (42.3)	21 (29.6)	6(8.5)	6(8.5)	3.39	1.08
7 Inventory control technique has resulted to order fulfillment thereby enhancing end user satisfaction	29 (40.8)	10 (14.1)	6(8.5)	23 (32.4)	3(4.2)	3.55	1.04
Overall Mean						3.57	1.15

Table 5 presents descriptive results on the perceived impact of inventory control techniques on supply chain performance. Respondents largely agreed that these techniques enhance key procurement functions, with 47.9% agreeing and 29.6% strongly agreeing that inventory control improves timely delivery of products and services (mean = 3.93, SD = 1.03). Similarly, 38.0% agreed and 28.2% strongly agreed that inventory control improves the quality of procured goods (mean = 3.72, SD = 1.15). The technique was also credited with ensuring the right quantity of products is procured, supported by 39.4% agreement and 22.5% strong agreement (mean = 3.62, SD = 1.13). While 40.8% strongly agreed that inventory control enhances order fulfillment and end-user satisfaction (mean = 3.55, SD = 1.04), fewer respondents affirmed its role in reducing waste (mean = 3.30, SD = 1.20) or procurement costs (mean = 3.39, SD = 1.08). Overall, the mean

score across all statements was 3.57 with a standard deviation of 1.15, indicating generally favorable perceptions with moderate variability.

Regression Analysis

Multiple Linear Regression analysis for inventory control technique on performance of procurement function was done so as to find out the effect of inventory control technique jointly on the supply chain performance of retail stores. This aided in coming up with the coefficients of the study model as well as R square of the study. The results are as shown in Table 6.

Table 6: Regression Analysis of Independent Variables and Performance

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.754 ^a	.568	.549	.90536	.568	29.353	3	67	.000
a. Predictors: (Constant), Re-order Point, ABC, Economic Order Quantity, Fixed stock levels									
ANOVA ^a									
Model	Sum of Squares		df	Mean Square	F	Sig.			
	Regression		72.180	3	24.060	29.353	.000 ^b		
1	Residual		54.918	67	.820				
	Total		127.099	70					
a. Dependent Variable: Supply Chain Performance									
b. Predictors: (Constant), ABC, Economic Order Quantity, Re-order point, Fixed Stock Levels									
Coefficients ^a									
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.			
	B	Std. Error	Beta						
	(Constant)	-.808	.519		-1.557	.124			
	Economic Order Quantity	.423	.120	.332	3.531	.001			
1	Re-order Point	.540	.150	.374	3.607	.001			
	Fixed Stock	.245	.133	.246	3.144	.004			
	ABC	.375	.114	.298	3.295	.002			
a. Dependent Variable: Supply Chain Performance									

Table 6 presents regression results confirming a strong and positive linear relationship between supply chain performance and the four inventory control techniques studied—Economic Order Quantity, re-order point, fixed stock levels, and ABC analysis. The coefficient of correlation was $r = 0.754$, indicating a substantial association, while the coefficient of determination ($r^2 = 0.568$) shows that 56.8% of the variation in retail store performance can be explained by these predictors.

The ANOVA test yielded $F(3, 67) = 29.353$ with $p < 0.01$, confirming the model's statistical significance and its good fit in explaining performance outcomes.

Each inventory control technique demonstrated statistically significant predictive power ($p < 0.05$). Economic Order Quantity had a beta coefficient of 0.423, suggesting that a 1% increase in its application leads to a 42.3% improvement in performance. Re-order point emerged as the strongest predictor with a beta of 0.540, indicating a 54.0% performance increase per unit change. ABC analysis also showed a meaningful effect, with a beta of 0.375, translating to a 37.5% improvement. Notably, if inventory control techniques were absent, performance would decline to -0.808, though this effect was statistically insignificant ($p > 0.05$). These results affirm the critical role of modern inventory control techniques in enhancing supply chain performance among retail stores in Kisii Town.

A regression of the four predictor variables against performance of retail stores established the multiple linear regression model as below as indicated in Table 6:

$$\text{Performance of retail stores} = -0.808 + 0.423X_1 + 0.540X_2 + 0.375X_3 + 0.441X_4$$

From multiple linear regression and simple linear regression, several deductions can be made, first the coefficient of determination herein referred to as R square shows that multiple linear regression accounted for more variation 56.8% as compared to individual variable in the model 22.9% (ABC), 44.1% (Re-order Point), and 28.5% (Economic Order Quantities technique). This implies that combination of these variables would have greater impact than individual rating in isolation.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

Multiple linear regression analysis confirmed that all four inventory control techniques—Economic Order Quantity, re-order point, fixed stock levels, and ABC analysis—had a statistically significant and positive influence on the performance of retail stores. Economic Order Quantity showed strong predictive power, with a unit increase leading to a significant rise in performance, prompting rejection of the null hypothesis. Re-order point emerged as a robust predictor as well, with its increase yielding notable performance gains. Fixed stock levels also demonstrated a significant effect ($\beta = 0.216$, $p = 0.004$), indicating that stores managing inventory responsively tend to perform better. Lastly, ABC analysis was found to significantly enhance performance, reinforcing its role in strategic inventory prioritization. These findings validate the model's strength and underscore the importance of modern inventory control techniques in driving retail efficiency.

Conclusions

The study concluded that Economic Order Quantity technique significantly influenced performance of retail stores. Secondly, the study concluded that there exists a positive and significant relationship between re-order point and performance of retail stores. The study concluded that having fixed stock levels is beneficial. Lastly, the study concluded that there exists a positive and significant relationship between ABC inventory control and performance of retail stores in Kisii town.

Recommendations

Based on the findings, the study recommended that management of retail stores should use re-order point inventory control technique to only store what is being required in the production process. The study recommended that the Hospital management should adopt Economic Order Quantity in order to know the quantity of stock to order at any given time. The study also recommended that through adept fixed stock control, firms can streamline production scheduling, manage safety stock levels effectively and keep holding costs to a minimum. Further, the study also recommended that the retail stores should use ABC analysis technique to forecast the demand for products beforehand and manage the stock levels accordingly.

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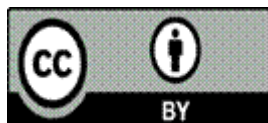
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