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Moderating Effect of Inventory Audits on the Relationship between Procurement Management Practices and Financial Performance of Listed Manufacturing Firms in Kenya

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Abstract
The field of supply chain management has over the years experienced tremendous and steady growth not only internally within the firms but also across the globe. This has led to the introduction of procurement function which has become a game changer. As a result, this has made organization to remain strategic in how they operate and at the same time becoming competitive in the ever-dynamic business environment. In line with the paradigm shift and emergence of the growing economy, firms particularly in manufacturing have continued to play a very vital role. In order to achieve the big four agenda by the Kenya government there has been a high level of engagement between the policy makers and the manufactures to streamline procurement activities to reduce loss in the present and future. The specific objective of the study was to establish the moderating effect of inventory audits on the relationship between procurement management practices and financial performance of listed manufacturing firms in Kenya, This study was guided on the transactional cost theory. This study utilized descriptive research due to its ability to explore both single and multiple variable at the same time. The unit of analysis of this study were all listed manufacturing firms in Kenya. The unit of observation of the study were employees drawn from the 25 listed manufacturing firms in Nairobi Securities Exchange (NSE). Respondents in the specific firms were selected using proportionate selection method based on stratified random sampling technique. Data was collected with self-administered questionnaire and a total response rate of 384(95%) respondents were returned for analysis. Multiple regression model and analysis of variance were used for data analysis with the help of the statistical package for social science (SPSS) version 25. Data was analyzed using descriptive and inferential techniques and presented in tables, figures and models. The finding of the study revealed a positive relationship among the variables that is the independent variable (procurement management Practices), intervening variable (information Communication Technology), moderating variable (inventory Audit on the dependent variable (Financial Performance). The diagnostic test conducted further reveled the normality in distribution of the values of the variables with the heteroscedasticity and multicollinearity indicating a strong correlation among the variables. The study recommended that manufacturers needed to embrace successful implementation of procurement practices into their operation and constantly performing inventory audit to increase their financial performance. The study also reveal other areas in which academicians and future researchers need to explore in the manufacturing industry and the procurement management practices.
Keywords: Inventory audits, procurement management practices, financial performance, listed manufacturing firms.
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Introduction

According to Saro, (2021) inventory audit is considered a concept of inventory management and accounting practitioners which helps institutions to ensure efficiency and adequacy in inventory analysis to avoid loss and increase accuracy of inventory. Bilha, (2021) Points out in order to consider audit of inventory factors such as cost and inventory control systems should been included to allow for conformity in the overall procurement practices. On the other hand, Mokdad, (2022) view is that in order to effect the audit of inventory control into the organizations there is need to put in place procedures and policies that match the industrial standards which must be communicated to involved parties. Inventory audits plainly denotes the use of cross checking to officially compare and assists in completion of records of financial nature with physical inventory as a way of ascertaining the true picture of inventory balances within the organization. The process of inventory audits verifies the actual and accurate position of the firm when it comes to the types of risks associated with inventory. The usage and movement of either finished stocks or work in progress may be evaluated and monitored through proper inventory auditing activities (Gupta, 2020). This can be implemented successfully by the involvement of information technologies such as; Just In Time (JIT), Enterprise Resource Planning (ERP) and systems that are involved in the control of inventory. When an organization successfully implements and enhances inventory audits there is success in the procurement performance. Proper inventory audit practices point out to manager areas that need improvement and monitoring of records to ensure up-to date data for all the items in the store or warehouse of the organization. Nsikan, (2015) observes that for enhancement of capital utilization and service level increase inventory audits practices play a vital role in enhancing the performance of an organization more effectively and efficiently.

In view of Land, (2014) inventory audit has been a method used for a longer time to analyze content sets in different perspectives both quantitatively (inventory) and qualitatively (audits), which is normally done in by as content analysis on larger process improvements. The scope and patterns in various contents are redefined and normally reveal the bigger picture including the types and quality associated with the inventory. Inventory and audits are normally considered as means to an end based on various principles as a way of improving what cannot be quantified. When performing inventory audits, it is equally important to follow the generally acceptable auditing procedures that allows an auditor to perform various issues and functions independently. The essence is to check whether the financial records and inventory opinion perfectly represents the inventory held in the organization. Industrialized and retail-based trader exclusively carry inventory audits as a way of gathering evidence of larger balances of assets represented by companies' stocks. The quality and inventory value may be verified through inventory audits that are critical when assessing the financial position statement of the organization. According to (Saro, 2021) internal audit remains to be a powerful tool that can be implemented in the supply chain effectively to assist in operational cost reduction and competitiveness in the global marketplace. Management should therefore set goals that are geared towards effectiveness and efficiency in operations. Mokdad, (2022) points out that in order for organizations to increase their client confidence and financial statements there is need to involve external persons to conduct external audits. In support of smooth external audit management should disclose relevant information and material respects in support of accuracy of the audit opinion and reports.

Theoretical foundation

In 1937 Ronald Coase came up with the theory of transactional cost which had an impact in corporate governance and design and affected the understanding of how organization viewed transactional costs (Mahoney, 2017). Transaction Cost theory provides an integrative view of the economic and contractual relation of the organization commercial activities both vertically and laterally across the board. According to Prakash *et al* (2020) the Transactional Cost Theory (TCT) provides determinant of transaction which provides structured relationship that is more cost-efficient, collaborative and integrative. Transactional cost has various characteristics including; assets specifics, uncertainty and infrequency which increases as transactions are increased. In addition, Jambulingam, (2020) points out that TCT views transaction costs as performance task costs either within the firms (i.e., vertical integration) or outside the firm. This theory is more applicable and efficient during resource management where firms are geared towards ensuring better market governance which drives market competition.

Transactional Cost Theory according to Ermanno, (2024) is considered the foundation contemporary governance studies and an efficiency paradigm in business ethics. The TCT focuses on internal efficiency which describes the organization governance and the property rights allocated to shareholders. TCT rationally tends to be relevant and associated with the in efficient use of resources and retention of information and opportunism. In view of Kiganane, (2021) there is a positive correction the firm's operation in relation to the supply chain key players and economic factors in the market place. The theory explain how firms can internally spend while conducting business as with different stakeholders. Alia, (2021) settles on the view that transaction cost as an economics situation when it comes to negative externalities affecting capital distribution, transactional cost reduction and productivity increase. Inventory audits process take transactional nature as evidence when calculating the nature of working capital and firms' procedures.

This theory therefore takes into account different transactions measures during the firms' processes. This theory is relevant when dealing with various transactional risk management considered by a firm during decision making in purchasing of inventories and the interactions with various suppliers who are believed to be the force behind many successful organizations. Normally the record management aspect experienced during supplier relationship management gives a transactional history of what happens in the organization in terms of what comes into and out of the organization. The summarized transactional outcome creates a measurable link that allows the firm to be able to do vendor rating for existing suppliers or vendor assessment when looking for potential supplier for purposes of supporting their present and future business. This theory is critical particularly to companies that focus more on daily transactions due to the nature in which they put their money. Inventory auditing is transactional in nature and involves the interaction different stakeholders (investors and lenders).

Conceptual framework

The envisaged relationship between the moderating variable, independent and dependent variable are depicted on Figure 1.

Conceptual framework

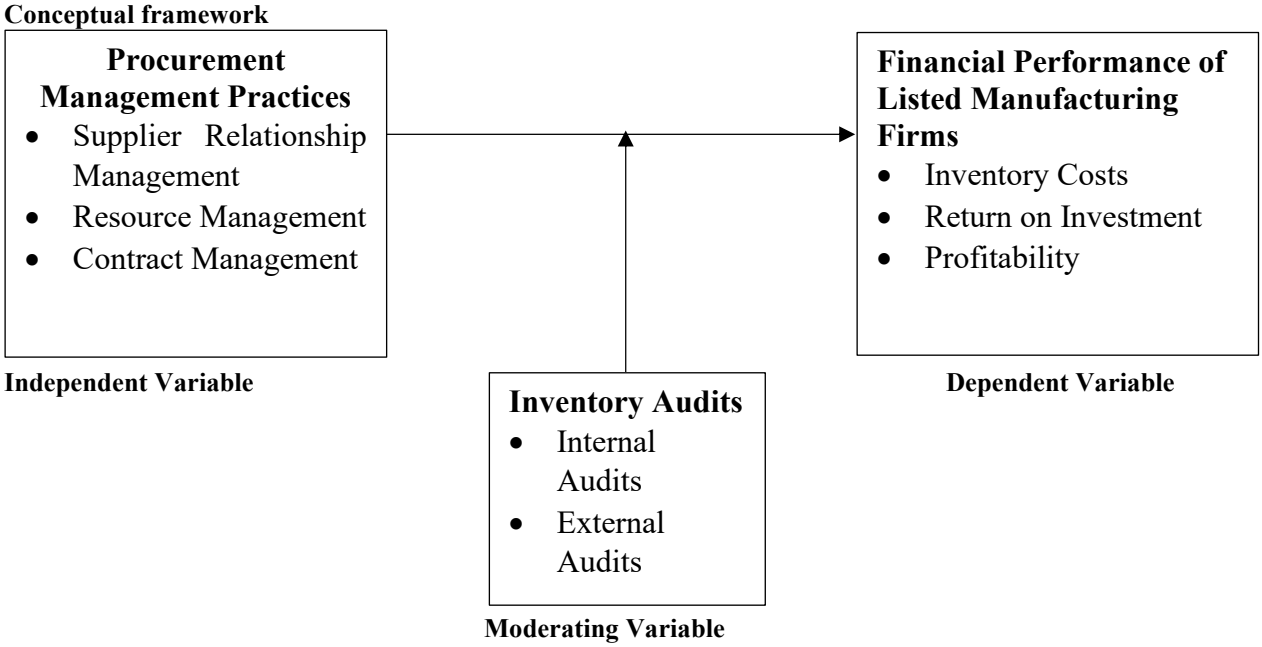

Figure 1: Conceptual Framework

Methodology

Research philosophy is important when conducting research because it explains the approaches that have been adopted by the research Thakur, (2015). A review on the UK Essays, (2022) expounds that research philosophy is derived from the development of knowledge and is looked at as the first layer of research onion proposed by the researcher. Research philosophies are the thoughts and ideas of the researcher which help to generate reliable information and knowledge based on the research topic Žukauskas, (2018). Positivism also view knowledge development as objective and is influenced by the researchers and participants. However, for the development to be real and accurate there has to be a separation between the participants and the researchers.

This research concentrated on positivism philosophy, a research philosophy derived from social science that views social entities objectively, proves or disapproves hypothesis and bases its findings on quantitative observations and the analysis of statistics. Research design acts as a blueprint within which data is collected, measured and analyzed. Kumar (2018) views research design as the conception of the research project, and the development of the tools and methods used to conduct it. Descriptive research is carried out by collecting data that characterizes a specific occurrence based on the current circumstances, and then arranging, tabularizing, presenting, and explaining the data. Flick, (2015) argues that in a descriptive study, a researcher can gather both qualitative and quantitative data i.e. mixed method that can be evaluated by inferential and descriptive statistics.

This study considered the essence of descriptive research or studies by looking at individual events and conditions and study them in their naturist state. In totality the number of listed firms in the Nairobi Security Exchange is sixty nine drawn from different sectors of the economy. However this study was focusing on the listed manufacturing firms in the Nairobi Securities Exchange Kenya which are twenty five in number. Listed

manufacturing firms in Kenya was the unit of analysis. Determination of sample size is normally done before questionnaires are prepared and distributed to the field to collect raw data. For analysis this is because the decision and conclusions made from an uncalculated sample size may not be sufficient enough to decide on the hypothesis under examination. This might lead to cancellation of the research work by the project manager overseeing the project. According to Kumar, (2018) the purpose of calculating sample sizes correctly is to ensure that the conclusions gained after analysis can be applied to the full population under investigation.

The degree to which a research instrument grades some results over repeated trials is known as reliability (Saunders, 2009). Random sampling is essential in obtaining a reliable sample. The technique uses computer-generated figures before the trials are initiated. As a result, systematic bias in either of the groups is eliminated. The results are comparable participants in terms of their characteristics such as gender, age, background, and other social factors. The participants clustered into sets have as many similarities as possible. Taber (2017) points out that such samples allow the researchers to make valid conclusions. According to Cooper and Schindler (2010) the sizes of samples selected to participate in the study influence the ability to make statistical differences between a study group and the other.

Multiple regression model for the moderating effect of inventory audit on the relationship between procurement management practices and financial performance of listed manufacturing firms in Kenya.

$$\boldsymbol{P = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon}$$

Where; - P= Financial Performance of Listed Manufacturing Firms
X_1 = Procurement Management Practices (Independent Variable)
X_2 = Inventory Audit (Moderating Variable)
β_0- Y intercept (Constant)
B1 and β2 = Beta coefficients for corresponding variables
ε=Error term

Once understanding the purpose of and agreeing to participate in the research, the researcher then has the responsibility to protect the participants and their data. Guidelines have been established through legislation and best practices procedures that outline the methods that researchers should use when conducting research. Once the research is conducted and the report written, the remnants of observations, interviews, and discussions was properly discarded. Ethical considerations include all practices that involve the treatment of human subjects. Ethics in research carries the weight of treating each individual with respect and decency through discretion, honesty, integrity and ethical conduct.

Findings and discussions

Descriptive Statistics on Procurement Management Practices

The study sought to analyses the relationship between Procurement management practices and the financial performance in listed manufacturing firms in Nairobi securities. Different indicators of procurement management practices were put into consideration to include; supplier relationship management, resource management and contract management. This indicators were used to establish the level of impact they had on the financial performance of listed. Manufacturing firms in Kenya. The questionnaires were designed with a 5 point Likert scale to measure the level of agreement with five-point Likert scale of 1-5; where 1-strongly disagree, 2-Disagree, 3-undecided, 4-Agree, 5-Strongly Agree. The findings on Table 1 indicate that statement relating to indicator 1.0 which is Supplier Relationship management which required the respondents view on influence of supplier relationship management on financial performance. In line with statement 1.1, 182(47.2%) of the respondents who strongly agreed were able to identify with the various models of supplier relationship management, 148(38.5%) of the respondents agreed with the various models of SRM, 39(10.2%) of the respondents were neutrals, however (8)2.1% and 7(1.8%) of the respondents disagreed and strongly disagreed with the identification of models associated with supplier relationship management. The standard deviation of 0.865 and a mean of 4.28 showed a significant relationship between procurement management practices and financial performance of listed manufacturing firms. The respondents were also to give their views on their level of agreement with statement 1.2 on the maintenance in supplier relationship in their respective organization and the result showed that majority of the respondents strongly agreed 178(46.4%), 165(43%) agreed with the fact that there were good relationship with the suppliers, however 24(6.3%) of the respondents were neutral with 8(2.1%) and 9(2.3%) of the respondents disagreeing and strongly disagreed respectively. On the good supplier relationship maintain by their respective firms which had an overall influence on procurement management practices on the financial performance in listed manufacturing firms (MEAN 4.29 and standard deviation 0.859). on statement 1.3, the respondents were to explain the level measures of risk mitigation in their respective firms where majority strongly agreed 152(39.6%), 140(36.5%)of the respondents agreed, 79(20.6%) of the respondent were neutral on the issue of risk mitigation measures set by the organizations, on the contrary 11(2.9%) and 2(.5%) of the respondents disagreed and strongly disagreed on the fact that risk mitigation measures were set in their respective firm and its impact on financial performance of listed manufacturing firms in Kenya with a mean of 4.12 and a standard deviation of 0.867. On

statement 1.4, respondent had to respond on the awareness of supplier relationship management systems set by their organization. Respondent who were the majority 176(45.8%) agree that there firms have set good supplier relationship systems, 119(31%) of the respondent strongly agree with the statement on SRM systems, however 65(16.9%) of the respondents are neutral with both 6(1.6%) and 18(4.7%) of the respondents strongly disagreed and disagreed respectively on the statement of their awareness of the systems that enhanced supplier relationship management. In totality there was a positive relationship between the SRM systems and financial performance of manufacturing firms with a mean of 4.00 and a standard deviation of 0.900.

The respondents gave their views on the way their firms were on the forefront to mobilize resources and the impact of resource management in their daily operations based on indicator 2.0. On the statement 2.1 on Resource Management simplifies processes majority of the respondents strongly agreed 156(40.6%), 132(34.4%) agreed with the fact that resource management played a critical role in simplifying processes with their organizations , however 67(17.4%) of the respondents were neutral with 15(3.9%) and 14(3.6%) of the respondents strongly disagreed and disagreed respectively on the resource management simplification of processes by different firms having an influence of a mean of 4.04 and a standard deviation of 1.039. on statement 2.2 on Resource Management having enhanced customer satisfaction majority of the respondents agreed 183(47.7%), 136(35.4%) of the respondents strongly agreed, 47(12.2%) of the respondent were neutral on the issue Resource Management having enhanced customer satisfaction by the organizations, on the contrary 14(3.6%) and 4(1%) of the respondents disagreed and strongly disagreed on the fact that Resource Management having enhanced customer satisfaction in their respective firm and its impact on financial performance of listed manufacturing firms in Kenya with a mean of 4.13 and a standard deviation of 0.838. the respondent had to respond on statement 2.3 on their organizations preparedness on the measures that they have put in place to mobilize resources within their organizations majority of the Respondent 164(42.7%) agreed, 141(36.7%) of the respondent strongly agree with the statement on measures that they have put in place to mobilize resources within their organizations, however 60(15.6%) of the respondents are neutral with both 6(1.6%) and 13(3.4 %) of the respondents strongly disagreed and disagreed respectively on the statement of their awareness of the measures that they have put in place to mobilize resources within their organizations,.

The respondent had to respond on statement 2.4 on their organizations use of an enterprise resource planning preparedness on the measures that they have put in place to mobilize resources within their organizations majority of the Respondent 164(42.7%) agreed, 141(36.7%) of the respondent strongly agree with the statement on measures that they have put in place to mobilize resources within their organizations, however 60(15.6%) of the respondents are neutral with both 6(1.6%) and 13(3.4 %) of the respondents strongly disagreed and disagreed respectively on the statement of their awareness of the measures that they have put in place to mobilize resources within their organizations,. the respondent also had to give their response on the use of enterprise resource planning systems in their organizations 169(44%) of the respondent agreed, 139(36.2%) of the respondents strongly agreed, however 57(14.8%) of the respondents were neutral, 10(2.6%) of the respondents disagreed, with the remaining 9(2.3%) of the respondents strongly disagreed with the statement of enterprise resource planning system use within their organization. In totality there was a positive relationship between the resource management indicators and financial performance of listed manufacturing firms with a mean of 4.00 and a standard deviation of 0.900.

Contract management represented by 3.0 was another indicator that assisted in explaining the procurement management practices in the listed manufacturing firms in Kenya. Respondent were required to give their level of understanding with different statements regarding contract management. Respondent were to give views on statement 3.1 on the standard operating procedure set up by the organization on contract management, majority of the respondent 198(51.6%) strongly agreed, 123(32%) of the respondents agreed and 49(12.8%) of the respondents were neutral, on the contrary 7(1.8%) of the respondents both disagreed and strongly disagreed with the organization setting up standard operating procedures on contract management however the mean(4.30) and the standard deviation (0.905) showed a positive impact on the financial performance on listed manufacturing firms in Kenya. the other issue statement 3.2 was on the adherence to appropriate legislation in contract management, majority of the respondents 152(39.6%) agreed with this statements, with 134(34.9%) strongly agreed,88(22.9%) of the respondents were neutral, 6(1.6%) of the respondents disagreed, 4(1%) of the respondents strongly disagreed with the statement of adherence with appropriate legislation in contract management. The mean (4.06) and the standard deviation (0.856) which showed a positive impact to the financial performance in listed manufacturing firms. on statement 3.3 on employee adherence to ethical behavior in transactions majority of the respondents 188(49%) strongly agreed, 111(28.9%) of the respondents agreed with the statement, 67(7.4%) of the respondents were neutral and 9.3(2.3%) of the respondent both strongly disagreed and agreed with the statement of their organization adherence to ethical behavior in transaction with a mean (4.20) and a standard deviation(0.965). on statement 3.4 on whether there organization evaluates and reviewed contracts, 155(40.4%) of the respondents strongly agreed, 134(34.9%) of the respondents agreed, 68(17.7%) were neutral, 16(4.2%) of the respondents disagreed and 11(2.9%) of the respondents strongly disagreed with the statement on evaluation and review of

contracts with their respective organization. the mean(4.06) and standard deviation(1.002) indicated the effect of contact management on the listed manufacturing firms in Kenya.

Table 1 Procurement management Practices

	Procurement Management Practices	1	2	3	4	5	MN	SD
1.0 Supplier Relationship Management								
1.1	My organization is able to identify various models of supplier relationships	7 (1.8%)	8 (2.1%)	39 (10.2%)	148 (38.5%)	182 (47.2%)	4.28	.865
1.2	My organization maintains a good relationship with suppliers	9 (2.3%)	8 (2.1%)	24 (6.3%)	165 (43%)	178 (46.4%)	4.29	.859
1.3	My organization has put in place risk mitigation measures	2 (.5%)	11 (2.9%)	79 (20.6%)	140 (36.5%)	152 (39.6%)	4.12	.867
1.4	My organization has a Supplier relationship management system	6 (1.6%)	18 (4.7%)	65 (16.9%)	176 (45.8%)	119 (31%)	4.00	.900
2.0 Resource Management								
2.1	In my organization Resource Management simplifies processes	15 (3.9%)	14 (3.6%)	67 (17.4%)	132 (34.4%)	156 (40.6%)	4.04	1.039
2.2	In my organization Resource Management enhances customer satisfaction	4 (1%)	14 (3.6%)	47 (12.2%)	183 (47.7%)	136 (35.4%)	4.13	.838
2.3	In my organization measures have been put in place to mobilize resources	6 (1.6%)	13 (3.4%)	60 (15.6%)	164 (42.7%)	141 (36.7%)	4.10	.890
2.4	my organization has an Enterprise Resource Planning(ERP) system	9 (2.3%)	10 (2.6%)	57 (14.8%)	169 (44%)	139 (36.2%)	4.09	.905
3.0 Contract Management								
3.1	My organization has set up standard operating procedures in contract management	7 (1.8%)	7 (1.8%)	49 (12.8%)	123 (32%)	198 (51.6%)	4.30	.891
3.2	My organization adheres to the appropriate legislation in contract management	4 (1%)	6 (1.6%)	88 (22.9%)	152 (39.6%)	134 (34.9%)	4.06	.856
3.3	Employees in my organization adhere to ethical behavior in transactions	9 (2.3%)	9 (2.3%)	67 (17.4%)	111 (28.9%)	188 (49%)	4.20	.965
3.4	My organization evaluates and reviews contracts	11 (2.9%)	16 (4.2%)	68 (17.7%)	134 (34.9%)	155 (40.4%)	4.06	1.002

Source: Researcher, 2025

Descriptive Statistics on Inventory Audits

The third variable was inventory audit with indicators such as the internal audit represented by 4.0 and external audit represented by 4.0. the respondent had to give their response based on their level of agreement indicated on the Likert scale which represented by a scale of 1- 5 where; 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly disagree. On the issue of internal audit statement 4.1 on whether their respective organization internal cycle counts audit are undertaken. 175(45.6%) of the respondents strongly agreed, 149(38.8%) of the respondents agreed,45(11.7%) of the respondents were neutral with 6(1.6%) of the respondents strongly disagreed and 9(2.3%) of the respondents disagreed with the organization internal cycle counts audit undertaken. the mean(4.24) and the standard deviation(0.866) showed a positive impact on the effect of inventory audits on the performance of listed firms in Kenya. in view of statement 4.2 on organization periodic internal audit being conducted, majority of the respondents 168(43.8%) agreed, 142(37%) of the respondents strongly agreed, 57(14.8%) of the respondents were neutral and 11(2.9%) of the respondents disagreed and 6(1.6%) strongly disagreed with the organization periodic internal audit conducted in the organizations. in addition the mean(4.12)

and standard deviation(0.873) strongly gave an indication of the organization periodic internal audit are conducted on the impact to financial performance in manufacturing firms in Kenya. on statement 4.3 the Annual internal audits are conducted in my organization, 164(42.7%) of the respondents strongly agreed,120(31.3%) of the respondents agreed, 76(19.8%) of the respondents were neutral, 16(4.2%) of the respondents disagreed and 8(2.1%) of the respondents strongly disagreed with a mean (4.08) and standard deviation (0.987) supported the statement on their respective organization having Annual internal audits are conducted in organization the financial performance of listed manufacturing firms in Kenya.

The second indicator on inventory audit was external audit represented by 5.0. The respondents were required to answer based on their level of agreement on different statement on external audit. On statement 5.1 on the issue of external inventory audits have enabled data correctness, majority of the respondents172(44.8%) strongly agreed, 136(35.4%) of the respondents agreed, 56(14.6%) of the respondent were neutral, 8(2.1%) of the respondents strongly disagreed with 12(3.1%) of the respondents disagreed with the statement of external inventory audits have enabled data correctness, having a mean (4.08) and standard deviation(0.899). on statement 5.2 the issue of external inventory audits have improved records security 169(44%) of the respondents agreed, 134(34.9%) of the respondents strongly agreed, 56(14.6%) of the respondents were neutral, 13(3.4%) of the respondents strongly disagreed and 12(3.1%) of the respondents disagreed, with a mean (4.04) and standard deviation(0.962) on statement 5.3 on the external inventory audits have improved records security. on the third statement on whether External inventory audits are conducted in organization to ascertain the weakness in the internal controls, 133(34.6%) of the respondents strongly agreed, 131(34.1%) of the respondents agreed, 95(24.7%) of the respondents were neutral, 13(3.4%) of the respondents strongly disagreed with 12(3.1%) of the respondent disagreed on the External inventory audits are conducted in organization to ascertain the weakness in the internal controls. the mean(3.93) and standard deviation(1.008) clearly indicated the support of External inventory audits conducted in organization to ascertain the weakness in the internal controls influence on financial performance of listed manufacturing firms in Kenya.

Table 2: Descriptive data on Inventory Audits

	Inventory Audits	**1**	**2**	**3**	**4**	**5**	**MN**	**SD**
4.0	**Internal Audits**							
4.1	In my organization internal cycle counts audit are undertaken	6 (1.6%)	9 (2.3%)	45 (11.7%)	149 (38.8%)	175 (45.6%)	4.24	.866
4.2	In my organization periodic internal audit are conducted	6 (1.6%)	11 (2.9%)	57 (14.8%)	168 (43.8%)	142 (37%)	4.12	.873
4.3	Annual internal audits are conducted in my organization	8 (2.1%)	16 (4.2%)	76 (19.8%)	120 (31.3%)	164 (42.7%)	4.08	.987
5.0	**External Audits**							
5.1	In my organization external inventory audits have enabled data correctness	8 (2.1%)	12 (3.1%)	56 (14.6%)	172 (44.8%)	136 (35.4%)	4.08	.899
5.2	In my organization external inventory audits have improved records security	13 (3.4%)	12 (3.1%)	56 (14.6%)	169 (44%)	134 (34.9%)	4.04	.962
5.3	External inventory audits are conducted in my organization to ascertain the weakness in the internal controls	13 (3.4%)	12 (3.1%)	95 (24.7%)	133 (34.6%)	131 (34.1%)	3.93	1.008

Source: Researcher, 2025

Descriptive Statistics on Financial Performance

The dependent variable was financial performance with indicators such as the inventory costs represented by 6.0, return on investment represented by 7.0 and profitability represented in 8.0. The respondents had to give their response based on their level of agreement indicated on the Likert scale which represented by a scale of 1- 5 where; 1 = Very Poor 2 = Poor 3 = Fair 4 = Good 5 = Very Good. on the issue of inventory cost there was statement 6.1 on the comparison of whether different organizations had lowered their inventory costs, majority 176(45.8%) of the respondents very good, 132(34.4%) of the respondents indicated good, 49(12.8%) of the respondents indicated fair with 6(1.6%) of the respondents indicated very poor and 21(5.5%) of the respondents indicated poor with the

statement that their respective organization had lowered the inventory costs. the mean (4.17) and standard deviation(0.958) gave a clear indication of lowered inventory costs by the specific organization.

The second indicator on financial performance was return on investments represented by 7.0. On the statement 7.1 in view of organization having a higher return on investment, majority of the respondents 160(41.7%) had a good view, 129(33.6%) of the respondents had a very good view, 73(19%) of the respondents were fair in their view and 16(4.2%) of the respondents had poor view and 6(1.6%) of the respondents had a very poor view with the organization financial performance in the organizations. in addition the mean(4.12) and standard deviation(0.873) strongly gave an indication of the organization of different variable to the impact to financial performance in manufacturing firms in Kenya. On statement 8.1 on whether the organization experienced profitability in different financial years, and on whether profitability analysis was compare by their organizations was, 170(44.3.%) of the respondents suggested it was very good,125(32.6%) of the respondents suggested it was good, 65(16.9%) of the respondents were neutral, 18(4.7%) of the respondents poor and 6(1.6%) of the respondents said very poor with a mean (4.13) and standard deviation (0.962) supported the statement on their respective organization having Annual internal audits are conducted in organization the financial performance of listed manufacturing firms in Kenya.

Table3: Financial Performance

	Financial Performance	**1**	**2**	**3**	**4**	**5**	**MN**	**SD**
6.0 Inventory Costs								
6.1	Compared to other organizations, my organization has lowered inventory costs.	6 (1.6%)	21 (5.5%)	49 (12.8%)	132 (34.4%)	176 (45.8%)	4.17	.958
7.0 Returns on Investment								
7.1	Compared to other organizations, my organization has a higher return on investment.	6 (1.6%)	16 (4.2%)	73 (19%)	160 (41.7%)	129 (33.6%)	4.02	.914
8.0 Profitability								
8.1	Compared to other organizations, my organization has enjoyed profitability in the last financial year	6 (1.6%)	18 (4.7%)	65 (16.9%)	125 (32.6%)	170 (44.3%)	4.13	.962

Source; Researcher, 2025

Diagnostic Test

The diagnostic tests were undertaken in this study to ascertain the validity of tests. According to Schober *et al*, (2021) Diagnostic research are normally done to assess the validity of the index test by comparing them with the reference tests. The diagnostic tests conducted with the intention of combining variables that will enable the researcher to make reasonable degree of certainty. Simply put the diagnosis process takes a multivariate approach to ascertain the validity of research undertakings. Different diagnostic test were done in this study including; Normality test, kolmogorov-smirnov and Shapiro wilk test, heteroscedasticity test and multi-collinearity tests

Normality test

Statistical normality tests are normally conducted with the help of numerical data depending on the statistical protocol laid down during the research process. According to Khatun, (2021) the normality test are normally conducted in order to conduct the normality of data the correct identification tests to be performed. Sürücü, Şeşen and Maslakçı, (2023) argues that normality tests are usually used to assumptions of normality in that the test significantly indicates that data do not differ from normal distribution.

Normality test was conducted using kolmogorov-smirnov and shapiro-wilk, normality test with histogram, Q-Q plots for normality test a 95 % confidence level was applied when testing the normality. The mean and the p-value was also compared to assist in ascertaining the rejection of null hypothesis that indicated data was normally distributed. The findings indicates that variables; procurement management practices, inventory audit, information communication technology and financial performance were normally distributed. The variables had a kolmogorov-smirnov p-value 0.000 and Shapiro wilk p-value 0.000 as show in the Table 4.

Kolmogorov-smirnov and Shapiro wilk

Normality test is normally carried out to ensure a normal distribution of data is spread throughout the event on data that has been collected. Normality test normally gives assurances on the appropriateness of data by checking additional statistical analysis are not exaggerated when giving the results or the standard errors being underestimated. The normality was tested using kolmogorov-smirnov and Shapiro wilk for all the variables under

consideration because of their ability to check the different samples having the ability to similarly standard deviations or the means.

Tests of Normality

Table 4: Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
Financial performance	.182	384	.000	.894	384	.000
Procurement Management Practices	.116	384	.000	.922	384	.000
Inventory audit	.177	384	.000	.871	384	.000

a. Lilliefors Significance Correction

Source; Researcher, 2025

Table 4 showed the findings using kolmogorov-smirnov having p-values of 0.00 for all the variables i.e. procurement management practices, inventory audit, information communication technology and financial performance of listed manufacturing firms. Similarly the shapiro-wilk test also showed that all the variables were normally distributed. Table 4 shows the details of the findings which are in line with the support by Yang and Berdine, (2021) argument that the shapiro-wilk tests outcome of data, the random sample conducted from the entire population should come from a population that is normally distributed. This therefore means that the shapiro-wilk test evaluates the likelihood of the values in the sample are observed. In support of this Habibzadeh, (2024) a significant *P* value ($P < 0.05$) implies that we should reject the null hypothesis and that the data distribution does not follow a normal distribution; with a non-significant *P* value ($P \geq 0.05$), the null hypothesis can be retained, and the data distribution can be assumed normal. The one-sample K-S test can technically only be used when the parameters of the distribution of interest (mean and the SD of the normal distribution) are known; otherwise, the results would be extremely conservative, and the test rejects the normality.

Inventory Audits, procurement management practices and financial performance of listed manufacturing firms in Kenya

The hypothesis was to test the multi-linear relationship between procurement management practices, inventory audit and the financial performance of listed manufacturing firms in Kenya. The multi-linear regression analysis results are shown in Table 5, procurement management practices and inventory audit had a coefficient of (beta= 0.298 and 0.395, t=2.625 and 5.712, p=0.000). The significant value obtained was less than 0.05 set by the study, similar to the t-value which was more than 1.96 at 5% level of significant. The result therefore implied a positive significant relationship between procurement management practices, inventory audit and financial performance in the listed manufacturing firms in Kenya. The study findings therefore rejected the null hypothesis by confirming the positive significant relationship between the procurement management practices, inventory audit and the financial performance of listed manufacturing firms in Kenya.

The correlation output indicates that there was a positive association (r=0.554 and 0.631, t=7.571) between procurement management practices, inventory audit and financial performance in manufacturing firms. The results further indicated that procurement management practices and inventory audit are statistically significant (p=.00<0.05) against the indicators of financial performance in listed manufacturing firms; implying that there is a positive significant relationship of both the variables leading to rejection of the null hypothesis and acceptance of the alternative hypothesis, and hence the research findings conclude that there is a positive significant relationship between procurement management practices, inventory audit and financial performance of listed manufacturing firms.

Table 5: Hypothesis

Hypothesis	**Beta**	**T Value**	**P Values**	**Conclusion**
H1. Inventory Audits do not have a moderating influence on the relationship between procurement management practices and financial performance of manufacturing firms in Kenya.	0.298	2.625	0.000	Reject H1
	0.395	5.712		

Regression analysis for Procurement Management Practices, Inventory Audit and Financial Performance of listed manufacturing firms

The objective of the study was to establish the moderating effect of inventory audits on the relationship between procurement management practices and financial performance of listed manufacturing firms in Kenya. To achieve this objective, the respondents from the listed manufacturing firms were asked to respond to various questions that were formulated as statements on Internal Audit, External Audit, Supplier Relationship Management, Resource Management and Contract Management. Financial Performance of listed manufacturing firms was conceptualized in terms of inventory costs, return on investments and profitability. A five Likert type of scale for procurement management practices corresponding to a range of 5(strongly agree), 4 (Agree), 3(neutral), 2(Disagree) and 1(Strongly disagree) was used. On the side of financial performance of listed manufacturing firms the range of 5(very Good), 4(good), 3(fair), 2(poor) and 1(very poor) was utilized.

The statements that were passed to the respondents were depicted on a questionnaires with parts for procurement management practices, inventory audit, and financial performance. Based on the objective of the study hypothesis H01 Inventory Audits do not have a moderating influence on the relationship between procurement management practices and financial performance of manufacturing firms in Kenya was tested. The model that was used for the multi linear regression was;$P = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$, Where; - P= Financial Performance of Listed Manufacturing Firms, X1 = Procurement Management Practices (Independent Variable), X2 = Inventory Audit (Moderating variable), β0- Y intercept (Constant), β1 and β2 = Beta coefficients for corresponding variables, ε=Error term. The study was to analyses the moderating effect of inventory audit on the relationship between procurement management practices and the financial performance of listed manufacturing firms in Kenya. The null hypothesis states that there was no significant relationship between procurement management practices, inventory audit(moderating variable) and financial performance of listed manufacturing firms in Kenya against the alternative that there was a positive significant relationship between procurement management practices, inventory audit (moderating variable) and financial performance of listed manufacturing firms in Kenya.

Table 6: Model summary for Procurement management practices and Inventory audit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	df1
1	.554[a]	.307	.305	.621	.307	169.469	1
2	.631[b]	.398	.395	.580	.091	57.326	1

Model Summary

Model	Change Statistics	
	df2	Sig. F Change
1	382[a]	.000
2	381[b]	.000

a. Predictors: (Constant), procurement management practices
b. Predictors: (Constant), procurement management Practices, inventory audit

Analysis of Variance

Model		**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
1	Regression	65.352	1	65.352	169.469	.000[b]
	Residual	147.310	382	.386		
	Total	212.662	383			
2	Regression	84.618	2	42.309	125.891	.000[c]
	Residual	128.044	381	.336		
	Total	**212.662**	**383**			

a. Dependent Variable: Financial performance
b. Predictors: (Constant), procurement management Practices
c. Predictors: (Constant), procurement management Practices, inventory audit

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.945	.245		3.856	.000
	Procurement mgntprc	.764	.059	.554	13.018	.000
2	(Constant)	.611	.233		2.625	.009
	Procurement mgnt prc	.411	.072	.298	5.712	.000
	Inventory audit	.440	.058	.395	7.571	.000

Coefficients					
Model		95.0% Confidence Interval for B		Collinearity Statistics	
		Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	.463	1.427		
	Proc mgnt prc	.649	.880	1.000	1.000
2	(Constant)	.153	1.069		
	Proc mgnt prc	.270	.553	.580	1.724
	inventoryaudit	.325	.554	.580	1.724

a. Dependent Variable: Financial performance

Excluded Variables							
Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics	
						Tolerance	VIF
1	Inventory audit	.395[b]	7.571	.000	.362	.580	1.724

Excluded Variables			
Model		Collinearity Statistics	
		Minimum Tolerance	
1	Inventory audit	.580[b]	

a. Dependent Variable: Financial performance

b. Predictors in the Model: (Constant), procurement Management Practices

Collinearity Diagnostics						
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	Procurementmgnt prc	Inventory audit
1	1	1.992	1.000	.00	.00	
	2	.008	15.398	1.00	1.00	
2	1	2.980	1.000	.00	.00	.00
	2	.013	15.041	.64	.00	.55
	3	.006	21.478	.36	1.00	.45

a. Dependent Variable: Financial performance

Source; Researchers, 2025

Table 6 shows the regression analysis findings between procurement management practices, inventory audit and the financial performance. From the Table 6, the value of R- square value were 0.307 and 0.398 implying that 30.7% and 39.8% of financial performance ware explained by procurement management practices and inventory audit. Besides that, the fitness of the model was also indicated by F-Statistics value of 169.469 for procurement management practices and F statistical value of 125.891 for inventory audit. These findings, implied that there was a significant relationship between procurement management practices, inventory audit and the financial performance of listed manufacturing firms in Kenya. This means that Procurement management practices and inventory audit significantly affects the financial performance in listed manufacturing firms in Kenya. Similarly based on the same regression Table 6., t- test was also used to test the relationship between the predictor variable procurement management practices and the moderator variable inventory audit on the financial performance of listed manufacturing, and there was significant relationship between the three variables with p-value= 0.000000 < 0.05 for the model. The regression equations between financial performance in manufacturing firms, the procurement managements and inventory audit for the model can be expressed as; Y= 0.463+ 0.649X1+ 0.325X2 with moderator variable introduced in the equation. The models indicated that for every unit of procurement management practices and inventory audit added, the value of financial performance in manufacturing firms in Kenya changes by 0.463 in the present of a moderator (inventory audit).

This implied that one change in the inventory audit in the listed manufacturing firms will have a 46.3% change on the performance. From the findings the null hypothesis was rejected and therefore the alternative hypothesis accepted. The finding were in line with empirical literature, for instance; Mahyadin, (2015) did a study on the impact of inventory management practices on the performance of public hospitals in Malaysia. The study revealed that poor organization within the value chain had a negative impact on the inventory management practices leading to public hospital in Malaysia to be in jeopardy when responding to inventory management practices. The study was however limited to public hospital and inventory management practice was the main independent variable.

On the other hand an empirical evaluation was done in the USA by RaFay, (2021) on inventory audit frequencies on the retail stores focused in the state of Alabama. The study observed the inventory audits frequencies on the performance of retail stores in the USA. The study also setup the improvement of mistake credited to store stock utilizing the data from items. Stock shows distinctive mistakes that lead to errors that can

only be distinguished utilizing stock administration reviews. Similarly in Kenya, Mathias, (2019) established role of inventory audit on procurement performance on Kenyan public university. The main focus of the study was on inventory management and performances on public universities in Kenya. The study revealed positive relationship amongst inventory management audit and the performance in public university. In addition, Kimaiyo, (2014) investigated the inventory management role on manufacturing performance in Kenya. This study viewed the manufacturing sector precisely with processing of raw material adding value of final products leading to customer satisfaction.

These findings are in line with the transactional cost theory developed by Ronald Coase (1937) and supported by Mahoney, (2017) to look at how corporate governance and design is viewed impactful based on different transactional costs. In addition he views transactional cost theory as an integrative view of economic and contractual relation of the organization's commercial activities both vertically and laterally across the board. Listed manufacturing firms ought to be critical when looking at inventory audits due to the transactional nature in establishing how inventory is managed and controlled for the purpose of operational efficiency.

This study opines that, as supported by the study regarding inventory audits, is a critical element that should be in practices by the manufacturing firms, therefore this has to be alive in support with the transactional cost theory. This should be incorporate in an organizations' policy in order to address the financial performance by looking at both the internal audit process and he external audit processes and link it to the transactional cost theory focusing on every activity as an avenue of reducing cost and maximizing firms performance. Hence the empirical finding showed a positive and significant influences of inventory audit as a moderating variable on the financial performance of listed manufacturing firms in Kenya.

Manufacturing firms have to be intentional when focusing on implementing measures that attribute to inventory audit as a key support to the procurement management practices and as postulated in the transactional cost theory and supported with empirical literature. In this respect with this therefore inventory audits supports procurement management practices and the financial performance of the manufacturing firms. Organizations are able to enhance credibility and relevance in the operation through the eternal audit finding by Amadi, (2021)

Conclusion

The objective of the study was to establish the moderating effect of inventory audit on the relationship between procurement management practices and financial performance of listed manufacturing firms in Kenya. Inventory audit was measured by two indicators that is; internal audit and external audit. The finding established that most listed manufacturing firms were aware of inventory audits and the impact it had on the financial performance. In order to streamline monitoring and evaluation of procurement practices the study concluded that inventory audit framework was to be incorporated as a way of enhancing the profitability and return on investment and at the same time reducing the inventory cost within the specific organization. The second indicator on inventory audit was external audit which is normally a statutory requirement to every firm in operation. The study concluded that most firm had to comply with the statutory requirement of external audit as a way on enhancing their financial performance and make it visible to the general public at large.

Implication of the study

The inventory audits play a very pivotal role in ensuring the success of procurement management practices as moderating variables. The study concluded that clear measures of inventory audit had to be incorporated to maximize and catalyze the financial performance. A closer attention should be paid in matters of internal audit by creating systems that support better approaches to actualize this. The other important aspect is on the external audits. The study concluded that incorporation of other key players to support in the external audit leads to better and more focused strategies that lead to improved record security and data correctness. The study finally concluded that inventory audit had a moderating effect on the relationship between procurement management practices and financial performance of listed manufacturing firms in Kenya.

Future Research

The study sought to determine the moderating effect of inventory audit on the relationship between procurement management practices and financial performance of financial performance of listed manufacturing firms in Kenya. The study recommends that further studies to be carried out in in manufacturing firms that are not listed in the Nairobi security exchange and other institutions that indirectly support the manufacturing firms in their daily operations. This study specifically examined the moderating effect of inventory audit on procurement management practices which had indicators including supplier relationship management, resource management and contract management as the indicators which formed the independent variable and financial performance. A study can therefore be done using other different indicators like procurement planning, inventory level management and warehousing management. The study also looked at inventory audit as a moderating variable with indicators like

internal audit and external audit other studies could look at a different moderator variable like financial audits, process audit and systems audit as their basis for studying.

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