ANALYSIS OF PROCUREMENT GOVERNANCE PRACTICES AND PETROLEUM SUPPLY CHAIN PERFORMANCE IN KENYA
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Abstract

This research aimed to analyze procurement governance practices and petroleum supply chain performance in Kenya. A survey was conducted with 100 oil marketing companies using a questionnaire. Data was analyzed quantitatively using descriptive and inferential statistics. The study found that most companies have implemented procurement policies, planning activities, performance management, and risk management to varying degrees, aligning with Institutional, Kaizen, and Transaction Cost theories. Procurement policies had a moderate influence, explaining 52.2% of performance variation. Planning had a significant influence, accounting for 62.4% of the variation. Performance management had the strongest link, explaining 74.2% of the variation. Risk management explained 70.1% of performance differences. Overall, governance practices positively influenced supply chain performance. However, in 2020 many companies experienced volatility in backorders, costs, and cycle times, indicating external factors also affect outcomes. The analysis suggests governance practices lay the foundation but must be complemented by data-driven improvements, process excellence, and supplier integration to drive performance. Key recommendations include adopting digital technologies for visibility, Lean Six Sigma to eliminate waste, collaboration with suppliers, talent development, and rigorous tracking of procurement KPIs. While current governance practices are necessary, leveraging data and technologies to actively improve processes and integration is crucial to realize the full benefits. Further research can explore governance in SMEs, organisational culture, supplier perspectives, and longitudinal studies.

Keywords: *Procurement Rules and Processes, Procurement Strategy, Procurement Performance Management, Procurement Risk Management, Performance, Supply Chain*

INTRODUCTION

Supply chain management has been known for a long time to be an important part of competitive strategy for increasing the efficiency and profits of supply chain organizations (Dwivedi & Butcher, 2009). As a competitive advantage, the market is moving away from individual company performance and toward supply chain performance, where the ability of the whole chain to meet end-customer expectations through product availability and quick, on-time delivery is key (Abdel-Baset et al., 2019). Firms are starting to compete based on their ability to meet customer needs in terms of product availability and quick, on-time delivery (Abdel-Baset et al., 2019). According to Aslam et al. (2021), it is the operational excellence to provide a top customer experience. Achillas, (2019) on the other hand argues that firms are now turning to supply chain performance to improve their competitive edge.

Petroleum supply chain performance faces mixed performance mostly related to the bullwhip effect. Czachorowski et al. (2023) noted that more times than often, supply chains patterns in petroleum industry do not match the demand patterns and inventory accumulates at various stages because customers demand are rarely perfect stable. The supply chain performance in this industry is also characterized by variability coupled with time delays in processing and shipping goods down the supply chain (Di Gravio, Shaban & Tronci, 2015) and the systematic profitability of a supply chain is seriously affected. Abdel-Baset et al. (2019) emphasize the significance of the petroleum supply chain, arguing that as supply networks grow more global, supply unpredictability in this sector becomes more prominent. (Czachorowski et al. (2023) highlight that, although pipelines are one of the safest forms of carrying bulk energy, with significantly lower failure rates than rail roads or highway transportation, breakdowns do occur, sometimes with disastrous results. As a consequence, procurement governance is a critical idea in this business.

In every business, procurement governance is important because it manages a big chunk of the organization's resources. Governance in procurement means the overall set of rules and procedures that are put in place to make sure that the procurement processes used have enough control and are honest (Ronoh, Ayuma & Kimutai, 2016). With an effective procurement governance mechanism in place, the overall supply chain performance is expected to be efficient. Public procurement governance and its goal of positively influencing administrative efficiency, which in turn contributes to effectiveness, operate within the framework of well-developed legal systems, with both organizations and individuals trying to make procurement decisions expected to demonstrate rationality and ethical behavior in order to select the best-evaluated bidder (Achillas, 2019).

Statement of the Problem

In every company, the procurement process is crucial to guaranteeing the supply of high-quality products and services that fulfill the expectations of stakeholders. Procurement governance standards are critical in the petroleum sector for guaranteeing the smooth flow of the supply chain, that ultimately influences the industry's performance. Kenya's petroleum industry is an important contributor to the country's economy and is reliant on effective procurement governance processes. However, the petroleum supply chain in Kenya faces several challenges that impact its performance, including inefficiencies in procurement processes, corruption, lack of transparency, and poor supply chain management (Ricardianto et al., 2022). These challenges result in increased costs, reduced competitiveness, and decreased customer satisfaction. Additionally, the lack of standardization in procurement practices across the industry can lead to unequal treatment of suppliers and service providers, resulting in an unfair distribution of resources.

The purpose of this research was to investigate the procurement governance processes in Kenya's petroleum sector and how they affect the performance of the petroleum supply chain. The research investigated the present status of procurement governance processes in the industry and suggested best practices that may be used to enhance supply chain performance. The research also looked at the link between procurement governance procedures and the performance of Kenya's petroleum supply chain and give suggestions on how to strengthen governance.

The study collected data and examined the influence of procurement governance policies on the performance of the petroleum supply chain using both qualitative and quantitative methodologies. Through interviews and questionnaires, the project gathered data from industry players such as petroleum firms, suppliers, and service providers. The gathered data was evaluated statistically to discover patterns and trends in procurement governance processes, as well as their influence on the performance of the petroleum supply chain.

The findings of this study will be useful to the Kenyan petroleum sector, as well as organizations and scholars working in the topic of procurement governance. The study's suggestions may be implemented by the industry to strengthen procurement governance procedures, which will result in greater competitiveness and efficiency in the petroleum supply chain. The study also added to the body of knowledge in the fields of procurement governance and petroleum supply chain management by offering insights into the industry's difficulties and potential for strengthening procurement governance procedures.

Specific Objectives

i. Determine the impact of procurement rules and processes on the performance of Kenya's petroleum supply chain.
ii. To ascertain the impact of procurement strategy on the performance of Kenya's petroleum supply chain.
iii. To examine the impact of procurement performance management on the performance of Kenya's petroleum supply chain.
iv. Determine the impact of procurement risk management on the performance of Kenya's petroleum supply chain.

Theoretical Literature

The Institutional Theory

The institutional theory, which arose from the work of Khatib et al., (2022), is a traditional method to explaining the notion of governance in institutions. Many organizational pillars are described as normative, regulatory, as well as cultural in this concept. It posits that organizations are composed of cultural-cognitive and regulative characteristics, which, when combined with linked activities and resources, produce logic. The regulatory pillar emphasized the use of rules, regulations, and fines as enforcement policies, with compliance based on experience. The normative pillar is concerned with how things ought to be done, with value serving as the compliance basis.

The notion of procurement governance is based on theory since it specifies the overall systems and procedural arrangements to guarantee that the procurement process adheres to suitable levels of control and probity. As a consequence, according to the idea, procurement processes, risk management techniques, performance management, and planning come within institutional procedures and structures.

Kaizen Management Theory

Kaizen is a Japanese term that translates to "constant improvement." It consists of two Japanese characters: kai, which means "change," and zen, which means "good." It is used to define a workplace culture in which work is regularly evaluated and improved (Aslam et al., 2021). The premise is that consistent tiny actions will result in substantial progress over time. Kaizen is not a "burst" or swiftly adopted set of improvements; rather, it is a gradual but continual process of improvement (Czachorowski et al., 2023).

Kaizen management has been used in the supply chains of oil marketing businesses because suppliers management must be taught and support the initiative. The rigorous emphasis on moving goods rapidly through the current manufacturing process will be replaced by a greater number of proposals for improvements and modifications as a consequence of Kaizen. Supplies management must be willing to deviate from their present duties in order to concentrate on improvements having a longer-term effect (Achillas, 2019).

In referring to procurement performance management, the idea supports the need to continually enhance the procurement process, and therefore the need of performance management. According to the notion, Kaizen results in many more proposals for improvements and shifts the emphasis away from a rigorous concentration on moving products swiftly through the current manufacturing process.

Transaction Cost Theory

Following Coarse's (1960) research on transactions, Czachorowski et al. (2023) created the transaction cost hypothesis. According to the transaction cost method for the study of economic entity, which views the transaction as the basic analytical unit, trading costs economizing is crucial to the evaluation of organizational activities. The idea supposes that firms aim to decrease the costs of sharing resources with the environment while concurrently striving to minimize the bureaucratic expenses of exchanges inside the organization. In order to do so, they deploy governance structures that may help in risk control and management. The hypothesis demonstrates that with an appropriate governance system, expenses may be greatly reduced when efficiency is improved.

Empirical Literature

Kahiri, Arasa, Ngugi, and Njeru (2015) investigated procurement strategies and the implementation of effective procurement procedures in Kenyan public tertiary training colleges. The study used a descriptive research design. A stratified random selection approach was used to determine a sample size of 160 respondents. The study findings suggested that poor cost estimates and non-adherence to procurement strategies were two procurement policy components that influenced effective procurement procedures.

Said (2019) conducted study on the variables affecting Kenya's public universities' compliance with procurement regulations. The findings of the study show that political factors have the greatest influence on the regulatory compliance in Kenya's public university procurement. The most powerful politician was a female legislator, whose influence accounted for 95.5%. According to the report, legislators should be adequately informed on the importance of adhering to the government's procurement laws and regulations.

Lee et al. (2022) investigated the influence of Procurement Planning on Institutional Performance: A Case Study of Mombasa Law Court. The study concentrated on particular objectives, cost estimate, requirement analysis, and quality criteria. The study employed procurement models, the PPDA Act of 2005, the PPOA guide, and the PPDR (2006). In order to enable efficient procurement and improve institutional performance, the study provided suggestions for effective procurement planning methodologies. The findings show that needs assessment significantly affects institutional performance.

Aladejebi and Adedeji (2015) investigated the influence of procurement strategy on agricultural firm performance in Ondo State, Nigeria. The study concentrated on selected agricultural enterprises in the agribusiness manufacturing and processing sectors in two senatorial districts in Ondo State, Nigeria. A total of 150 questionnaires were sent to 35 agricultural companies in the research region. Descriptive statistics were used to analyse the data (mean and standard deviation). The majority of the organizations included in the sample, according to the results, had a poor functioning Enterprise Resource Planning (ERP) system utilized in procurement operations. According to the report, requirements assessment is a significant procurement planning aspect for commodity purchases.

Lee et al. (2022) conducted study in Bucharest, Romania, focusing on procurement quality management and material resource management. The study found that, among the fundamental tasks of the quality management system, the process of procuring and managing material resources has a direct impact on the quality of the final products, and hence the organization's performance. According to the findings, an effective procurement and administration of material resources based on good relationships with suppliers may help enhance the organization's efficacy and efficiency while also achieving long-term success by meeting the expectations of all stakeholders.

In Kenyan manufacturing businesses, Mburu, Ngugi, and Ogollah (2015) evaluated the effects of a risk identification management technique on the effectiveness of the supply chain. This study found that using activities-based contracts with clear cost management goals,

setting annual savings targets and reporting on savings achieved, competitive bidding, purchasing from suppliers and delivering to customers in manageable quantities, and the majority of businesses forming alliances via supply chain systems were the only ways for businesses to guarantee sufficient cost reduction along the supply chain function. The study's findings suggest that adequate risk identification and management are necessary in order to enhance a company's supply chain performance in light of how markets are evolving as a consequence of expanding diversity.

METHODOLOGY

This study used a descriptive research approach to address the research questions who, what, where, when, and how. The descriptive technique used in this research by described the facts and features of the population of phenomena being examined. A total of 120 oil marketing enterprises that have been granted licenses by the Petroleum Institute of East Africa were the study's target population. The target respondents were the head of logistics from the companies. A census was conducted as the number of industry players is low.

Primary data was gathered by administering questionnaires to respondents. The data was first cleaned, sorted, coded using numerical numbers. It was then loaded into excel 2019 and analysis done in accordance with goals of the research. The first phase was descriptive analysis, which displayed percentages and means for various elements in the research. The correlation coefficient of Pearson, regression analysis, and analysis of variance (ANOVA) were employed. Karl Pearson's correlation coefficient demonstrated the link between variables, while regression analysis estimated the causal relationship between variables. To facilitate interpretation and comprehension of the study results, the examined data was presented in frequency and percentage tables.

Findings

The petroleum industry has been laced with instances of malpractices, including fuel adulteration, lack of quality control and laxed regulations. The impact has been unfair competition and loss to customers. The research aimed to analyze the procurement governance practices and overall supply chain performance in Kenya.

Table 1: Summary of Procurement Policies and Procedures

	The company has well established procurement guidelines in place to clarify roles	The company has well established procurement guidelines in place to clarify responsibilities	The company has well established procurement accountability frameworks in place	The company has well established procurement approval thresholds for procurement in place	The company has well established procurement approval thresholds for contracts in place	The company has well established procurement policies to manage conflict of interests	The company has well established contracting manual to guide contract management
Mean	3.34	3.44	3.52	3.56	3.65	3.62	3.62
Standard Error	0.099716771	0.10760947	0.108692877	0.108544084	0.104808628	0.107101387	0.105198226
Median	4	4	4	4	4	4	4
Mode	4	4	4	4	4	4	4
Standard Deviation	0.997167706	1.076094697	1.086928766	1.08544084	1.048086279	1.071013869	1.051982256
Sample Variance	0.994343434	1.157979798	1.181414141	1.178181818	1.098484848	1.147070707	1.106666667
Kurtosis	0.342688434	0.086659572	-0.890814927	0.446175073	0.358092169	1.034812801	0.23315915
Skewness	-0.918306326	-0.809315585	-0.244961167	-1.076108769	-0.917862023	-1.200202884	-0.881933033
Range	4	4	4	4	4	4	4
Minimum	1	1	1	1	1	1	1
Maximum	5	5	5	5	5	5	5
Sum	334	344	352	356	365	362	362
Count	100	100	100	100	100	100	100

Summary statistics on the procurement policies and procedures show that most of the companies interviewed have some measures in place to see that procurement rules in place are followed. With a mean ranging from of 3.34 to 3.65, and a standard deviation of 0.997 to 1.08, there is a general tendency of the companies to establish procurement guidelines, clarify responsibilities, ensure accountability and create contracts. A mode of 4 shows a general consensus on some form of procurement policies and procedures. The figures indicate that 66% of the firms had some form of procurement policies and procedures in place.

Table 2: Policies and procedure regression calculation

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.722569549
R Square	0.522106753
Adjusted R Square	0.485745311
Standard Error	0.715084452
Observations	100

The multiple R of 0.72 shows a fairly positive correlation between observed and predicted values of the dependent variables. The R square of 0.522 shows the predictors explain 52.2% of variation seen in the dependent variable. For the study, this is a descent fit since the R-squared is above 50%

Table 3: Summary of Procurement Planning

	The scope of the goods and services to be procured is assessed and established before procurement	Procurement time frames are set before the process commences	The procurement department establishes a competitive pricing rule before procurement	Prices of goods is set based on the market pricing index set	Procedures for detecting inflated contract figures is set before procuring	A capable Inspection and Acceptance committee is put in place before procurement	Effective supplier selection is conducted before procurement
Mean	3.56	3.67	3.63	3.66	3.61	3.67	3.65
Standard Error	0.098800892	0.106415424	0.099142791	0.105619863	0.106263442	0.108297197	0.108595254
Median	4	4	4	4	4	4	4
Mode	4	4	4	4	4	4	4
Standard Deviatio	0.988008915	1.064154238	0.991427906	1.056198635	1.062634424	1.082971968	1.085952545
Sample Variance	0.976161616	1.132424242	0.982929293	1.115555556	1.129191919	1.172828283	1.179292929
Kurtosis	1.191946201	-0.025965449	1.155932091	0.590103098	0.303966018	0.415289281	0.276988773
Skewness	-1.2601778	-0.73913912	-1.162610934	-1.009685233	-0.809800612	-1.009968452	-0.902419859
Range	4	4	4	4	4	4	4
Minimum	1	1	1	1	1	1	1
Maximum	5	5	5	5	5	5	5
Sum	356	367	363	366	361	367	365
Count	100	100	100	100	100	100	100

The table presents an overview of the planning process at the oil marketing companies. The scores on a Likert scale, ranging from 1-5 with 5 being the highest was used. The table provides the summaries, and the mean scores. In summary, the mean ranged from 3.56-3.67 for the subject areas examined, with the standard deviation ranging from 0.98 to 1.08 at the highest. The scope of the good to be procured had a mean of 3.56, standard deviation of 0.98, the procurement time 3.67 and standard deviation (SD) of 1.06. the establishment of a competitive pricing before procurement, 3.63, mean of 0.99. the use of a market pricing index had a mean of 3.66, SD of 1.05, procedure for detecting inflated contract figures, 3.61 and SD of 1.06, the presence of a procurement committee 3.65, SD of 1.08 while selection of an effective supplier, 3.65 and an SD of 1.08. In a nutshell, over 70% of the firms had some form of control over the procurement planning process.

Table 4: Procurement Planning Regression (R)

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.790214718
R Square	0.624439301
Adjusted R Square	0.600209579
Standard Error	0.672853896
Observations	100

Multiple R of 0.790 indicates a strong positive correlation between the predicted and observed values of the dependent variable. The predictions correlate with the actual values. The R square of 0.624 means that predictors now explain 62.4% of the variation on the dependent variable. Based on the adjusted R square, the predictors explain over 60% of the dependent variable.

Table 5: Summary of procurement performance management

	The company has put in place measures to assess delivery time	The company has put in place measures to assess communication time lag	The company has put in place measures to assess the quality of the products supplied	The company has put in place measures to establish frequency of price changes	The company has put in place measures to ensure compliance with negotiated terms	The company has put in place measures to review the number of back orders	The company has put in place measures to review the number of substitutions made
Mean	3.63	3.51	3.67	3.59	3.62	3.67	3.57
Standard Error	0.103137645	0.103957062	0.109225927	0.105500251	0.11787684	0.114640413	0.106605096
Median	4	4	4	4	4	4	4
Mode	4	4	4	4	4	4	4
Standard Deviation	1.031376446	1.039570618	1.092259265	1.055002513	1.178768404	1.146404128	1.066050959
Sample Variance	1.063737374	1.080707071	1.193030303	1.113030303	1.389494949	1.314242424	1.136464646
Kurtosis	0.732273344	0.208211019	-0.224105215	0.325844298	0.214544304	-0.12992539	0.415808056
Skewness	-1.061992761	-0.935417984	-0.684012662	-0.847694502	-0.992360666	-0.797653679	-0.952092542
Range	4	4	4	4	4	4	4
Minimum	1	1	1	1	1	1	1
Maximum	5	5	5	5	5	5	5
Sum	363	351	367	359	362	367	357
Count	100	100	100	100	100	100	100

The procurement performance management had a mode and median of 4 for all the categories examined. In assessing the delivery time, a mean of 3.63 and SD of 1.03 was got. Calculation of the communication time lag, the mean was 3.51 and SD of 1.03. The quality of products supplied mean score was 3.67, with an SD of 1.09. The frequency of price changes is also monitored, with a mean of 3.59 and SD of 1.05.Compliance with terms of work, the mean score was 3.62 and SD of 1.18. back orders had a mean of 3.67, SD of 1.14 while substitutions made received a mean of 3.57, SD of 1.06. Communication time lag and substitutions made had the lowers mean scores.

Table 6: Procurement performance management regression

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.861653
R Square	0.742447
Adjusted R Square	0.72285
Standard Error	0.547282
Observations	100

The multiple R of 0.861653 indicates a very strong positive correlation between predicted and observed values of the dependent variable. The R square of 0.742447 means the predictors explains 74.2% of the variation in the dependent variable. Overall, this regression

model has a very good fit, with the predictors explaining a high proportion of the variance in the dependent variable and a strong correlation between the predicted and actual values in the procurement performance management.

Table 7: Summary of Procurement Risk Management

	The company conducts risk identification using a questionnaire that includes a series of questions on both internal and external events	The company conducts risk surveys to identify risks	Risk assessment is a continuous process in your company	Risk reviews are conducted at all departmental meetings in your organization	Examining and documentation of the effectiveness of the risk response planning in controlling risk is regularly conducted	The company uses outsourcing as risk management strategy	The company uses supplier relationship management as a risk hedging strategy
Mean	3.63	3.52	3.65	3.63	3.54	3.65	3.61
Standard Error	0.107923467	0.11675754	0.102863055	0.115167862	0.108637103	0.115797629	0.10814786
Median	4	4	4	4	4	4	4
Mode	4	4	4	4	4	4	4
Standard Deviatio	1.079234671	1.167575404	1.02863055	1.151678617	1.086371032	1.157976291	1.081478599
Sample Variance	1.164747475	1.363232323	1.058080808	1.326363636	1.18020202	1.340909091	1.16959596
Kurtosis	0.076459316	-0.165809233	0.192057582	0.285831293	0.539467143	0.159159622	0.425185341
Skewness	-0.885066476	-0.80685665	-0.783424682	-0.972862914	-1.021176764	-0.991225008	-0.974526394
Range	4	4	4	4	4	4	4
Minimum	1	1	1	1	1	1	1
Maximum	5	5	5	5	5	5	5
Sum	363	352	365	363	354	365	361
Count	100	100	100	100	100	100	100

Risk management in procurement was presented as an essential part of the operations, with the lowest mean score being 3.52. The question on whether the company conducts risk identification using a questionnaire received a mean score of 3.63, with a high standard deviation (SD) of 1.08, the company conduct risk surveys scored 3.52, with an SD of 1.16. Risk assessment being a continuous process scored a mean of 3.65 and SD of 1.15. The documentation of risks scored a mean of 3.54, and an SD of 1.08. outsourcing as a risk management strategy, the mean score was 3.65 and SD of 1.15, supplier relationship management had a mean score of 3.61 and SD of 1.08. the mode and median numbers were 4, meaning that there is a well-established process on procurement risk management.

Table 8: Risk management regression statistics

Regression Statistics	
Multiple R	0.837721
R Square	0.701777
Adjusted R Square	0.685914
Standard Error	0.654349
Observations	100

The multiple R of 0.837721 shows a strong positive relationship between the predicted and observed values of the dependent variable. The R square of 0.701777 indicates that the predictor variables explain 70.2% of the variation in the dependent variable. Overall, this multiple regression model demonstrates a good fit, with the predictors accounting for a substantial portion of the variance in the dependent variable and a robust correlation between the predictions and actual values.

Table 9: Back orders, procurement cycle time and procurement cost summary

	2022				2021				2020			
	Increased by over 50%	Increased by less than 50%	decreased by less than 50%	decreased by over 50%	Increased by over 50%	Increased by less than 50%	decreased by less than 50%	decreased by over 50%	Increased by over 50%	Increased by less than 50%	decreased by less than 50%	decreased by over 50%
What is the number of back Orders in the following years?	3	49	40	8	1	48	46	5	25	39	32	4
What is the procurement Cycle.	3	49	40	8	1	48	46	5	26	38	27	9
Procurement Costs	1	54	41	4	1	60	27	12	24	30	40	6

The summaries help understand the trend over the three years. Generally, the year 2020 had the highest volatility, with the number of back orders, procurement cycle time and procurement cost increasing or decreasing by over 50% for more than 30% of the firms evaluated. In 2021, the increase or decrease in back orders, procurement cycle and procurement cost for more than 87% of the firms increased or decreased by a figure less than 50%. 2022 saw the increase or decrease in back order being less than 50% for 89% of the firms.

Table 1: summary of overall supply chain performance

	The organization has experienced reduced number of adulterations in the recent years	There has been an increase in effective contract utilization	There has been a reduction in supply chain costs	There has been an improvement on procurement cycle time	There has been a reduction in the number of procurement malpractices
Very high extent	7	8	7	4	8
High extent	21	17	20	16	18
Moderate extent	12	43	26	28	29
Small extent	48	26	38	42	37
Very small extent	12	6	9	10	8
Total	100	100	100	100	100

On supply chain performance, five questions were reviewed. The first was on the management of adulterations, 48% of the respondents thought that the level of adulterations had gone down by a small extent, while 12% thought that it was a very small extent. Only 7% believe that adulteration has gone down by a very high extent, 21% believe it is a high extent while 12% believe adulteration is down by a moderate extent. The use of contract utilization to enhance performance has not yet been fully adopted. 43% believe that there is a moderate extent of use, 26% believe that contracts are utilized to a small extent while 6% believe that their utilization is on a very small extent. 25% are of the position that contracts are utilized on high or very high percentage. There is a general feel that the supply chain cost has not gone down, in this case, 73% hold a moderate, small or very small extent point of view on its downwards trajectory, while 27% are of the opinion that it is still high. The procurement cycle time has also remained relatively stable with little improvement, as 28% feel that the improvement is moderate, 42% think it is small while 10% think it is very small. 20% think it is high or very high. Procurement malpractices are still present, 37% believe that they have gone down by a small extent, while 29% believe they have gone down by a moderate extent, 8% are of the opinion that malpractices are down by a very small extent. 26% hold the opinion that malpractices are down by either a high or very high extent.

Conclusions

In conclusion, the findings from this research in the petroleum industry of Kenya indicate that the adoption of procurement policies and procedures, procurement planning activities, performance management, and risk management practices have a significant and generally positive influence on petroleum supply chain performance. The results show that formalized policies and procedures establish accountability and explain over half of the variation in performance. Procurement planning activities are widely practiced and correlate highly positively with supply chain efficiency. Furthermore, performance management through metrics monitoring has a substantial positive impact of supply chain outcomes' variation. Lastly, moderately high adoption of risk management practices significantly minimizes supply chain disruptions. These findings underscore the importance of a comprehensive approach to procurement management in enhancing the efficiency and resilience of the petroleum supply chain in Kenya, particularly in the face of external disruptions.

Recommendations

The firms in oil marketing ought to improve the overall process through the following measures; Make use of digital technologies to enhance visibilities and offer for data analytics, adopt Lean Six Sigma principles to eliminate process waste. 60% of firms lacked robust process improvement practices, promote supplier collaboration and data sharing - just 38% of firms did this extensively, develop talent for data analysis to identify improvement and set procurement KPIs around costs, quality and track rigorously.

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