Int Journal of Social Sciences Management and Entrepreneurship 7(2): 312-329, 2023

ISSN 2411-7323

www.sagepublishers.com

SUPPLY CHAIN MANAGEMENT PRACTICES AND PROCUREMENT PERFORMANCE OF ENERGY SECTOR IN KENYA

[1] Maina Edwin Waithanji, [2] Dr. Thogori Mirriam

[1] Masters Student in Procurement and Logistics of Jomo Kenyatta University of Agriculture and Technology

[2] Lecturer, Jomo Kenyatta University of Agriculture and Technology

ABSTRACT

The primary objective was to assess the impact of supply chain management practices on the procurement performance within the Kenyan energy sector. The study was guided by specific objectives, including evaluating the influence of procurement planning on procurement performance and investigating the effect of supplier capability on procurement performance in the energy sector of Kenya. The research drew upon resource dependency theory and the resource-based view theory as theoretical frameworks. A cross-sectional research design was employed for this study. The key energy agencies operating in Kenya served as the units of analysis, while the unit of observation comprised 246 procurement officers stationed at these agencies. The sample size was determined using Slovin's formula, resulting in 152 respondents, who were selected through a stratified random sampling technique. Primary data collection was conducted through the distribution of questionnaires, selected as the data collection tool. A pilot study involving 15 respondents (10% of the total sample size) was conducted for questionnaire refinement. Quantitative data from the questionnaires underwent comprehensive analysis using both descriptive and inferential statistics, with the aid of the Statistical Package for Social Scientists (SPSS). The findings were presented through tables and figures. Qualitative data was subjected to content analysis and presented in a narrative format. This research intended to provide valuable insights into the relationship between supply chain management practices and procurement performance in Kenya's energy sector, offering a foundation for improved practices and, consequently, better procurement performance in this critical sector. The study found that effective procurement planning positively influences procurement performance in the energy sector of Kenya. Finally, the findings showed that procuring from capable suppliers positively impacts procurement performance, ensuring innovation adoption, meeting specific requirements, enhancing quality and reliability, and mitigating risks through supplier financial assessments and technical expertise considerations. The study thus recommends that the energy sector in Kenya should focus on improving procurement planning, and prioritizing capable suppliers to enhance procurement performance.

Key Words: Supply chain management practices, Procurement planning, Supplier capability, Procurement performance, Energy sector

Background of the Study

Procurement management practices refer to the processes and systems used to acquire goods and services in an organization (Shalle & Njagi, 2018). Procurement management practices play a significant role in determining procurement performance. Procurement performance is a measure of identifying the extent to which the procurement function is able to reach the objectives and goals with minimum costs (Kakwezi & Nyeko, 2019). Effective procurement management practices can lead to improved procurement performance, while poor practices can hinder performance (Arachi, 2019). In the context of the energy sector, procurement management is of paramount importance due to the sector's crucial role in driving economic growth and ensuring the provision of reliable and affordable energy services to meet the needs of industries and households. (Wanyonyi & Muturi, 2019).

Procurement management practices have been recognized as critical drivers of performance and operational excellence in the energy sector. For example, research by Lamming et al. (2018) emphasized the importance of strategic sourcing, supplier relationship management, and risk assessment in the procurement of renewable energy technologies. Additionally, a study by Aje et al. (2018) highlighted the role of effective contract management and performance measurement in optimizing procurement outcomes in the oil and gas sector.

However, despite the growing recognition of procurement management's importance, there is a dearth of comprehensive studies specifically focusing on the energy sector. This study aimed to fill this gap by examining the relationship between procurement management practices and procurement performance within the energy sector in Kenya.

Statement of the Problem

In Kenya, the Government has enacted The Public Procurement and Asset Disposal Act, 2015, to ensure compliance with procurement regulations and promote fairness in the expenditure of public funds (Gathima & Njoroge, 2018). However, despite these provisions, the performance of the public procurement function in Kenya has been a persistent challenge, with reports of shoddy works and poor-quality goods and services (Masindano et al., 2018). Inefficient procurement practices have led to significant wastage of funds, with an estimated 25% of government spending on public contracts being wasted due to inefficiencies (World Bank, 2022).

The energy sector, in particular, has faced issues in adherence to procurement regulations, as indicated by the Public Procurement Regulatory Authority (PPRA), where only 60% of procurement entities in the energy sector complied with regulations (PPRA, 2019). The consequences of poor procurement practices within the energy sector are substantial. A study by the Institute of Economic Affairs (IEA) in Kenya revealed an annual loss of approximately 17 billion Kenyan Shillings (USD 160 million) due to inefficient procurement practices in the energy sector (IEA, 2020).

According to the Energy and Petroleum Statistics Report (2020), the energy sector's procurement costs have been steadily increasing over the past years, eroding profitability and affecting the sector's ability to provide affordable energy to consumers. The report also highlights instances of subpar product and service quality within the energy sector, leading to increased customer complaints and potential safety hazards.

The Energy Supply Chain Efficiency Survey (2022) conducted by the Ministry of Energy and Petroleum reveals that order fulfilment rates in the energy sector have consistently fallen below the desired benchmarks, causing delays and disruptions in the energy supply chain. The Kenya Power corruption scandal in 2018 further exposed irregularities and fraudulent activities in the procurement process, leading to inflated costs, substandard equipment, and financial losses (The

Star, 2018). The Auditor General's Report (2022) also highlighted violations of public procurement rules by Kenya Power and Generating Company (KPLC), including poor procurement planning, misuse of procurement methods, and non-compliance with procurement regulations.

Additionally, the Presidential Taskforce on the Review of Power Purchase Agreements (PPAs) acknowledged allegations of corruption within the energy sector's procurement processes (PPA Taskforce, 2021). The Taskforce noted that ambitious connection targets resulted in KPLC increasing its outsourced grid construction projects and unfettered purchases of poles, meters, and transformers whose quality was questionable. The Taskforce recommended substantial reforms, including the replacement or repositioning of all staff in the entire procurement department at KPLC.

In 2018, two managing directors of KPLC and 19 officials faced prosecution for procuring low-quality transformers and outsourcing line construction and other related services to nonqualified, unregistered firms (The Star, 2018). These incidents illustrate the pressing need for improved procurement management practices within the energy sector to enhance transparency, accountability, and overall performance.

While several studies have been conducted on procurement management practices and procurement performance, such as the study by Muema (2022) on the Nairobi City County Government and the study by Nyamai and Ismail (2018) on state corporations in Kenya, these studies indicate that there are still gaps in understanding the factors influencing procurement performance. Muema's study emphasized the need to explore other variables, such as supplier capability and information technology, in relation to procurement performance. Similarly, Nyamai and Ismail's study focused on a specific sector and recommended expanding the scope to other sectors for a more comprehensive understanding of procurement practices and performance. Therefore, it was crucial to examine the supply chain management practices and procurement performance of the energy sector in Kenya, considering the challenges identified in previous studies and the context of non-compliance with procurement principles.

Objectives of the Study

The main objective of this study was to assess the effect of procurement management practices on procurement performance of energy sector in Kenya.

The study was guided by the following specific objectives;

i. To evaluate the effect of procurement planning on procurement performance of energy sector in Kenya.
ii. To find out the effect of supplier capability on procurement performance of energy sector in Kenya.

LITERATURE REVIEW

Theoretical Review

Resource Dependency Theory

Resource Dependency Theory (RDT), developed by Jeffrey Pfeffer and Gerald R. Salancik in 1978, seeks to explain how organizations manage their dependence on external resources to achieve their goals effectively. The theory posits that organizations are reliant on external suppliers for critical resources, and to reduce this dependency, they engage in procurement planning. According to RDT, effective procurement planning allows organizations to anticipate their resource needs and proactively identify potential suppliers. By securing necessary resources in advance, organizations can minimize disruptions, uncertainties, and delays in their operations, thereby supporting their overall performance and productivity (Pfeffer & Salancik, 1978).

Researchers and scholars have widely acknowledged and applied Resource Dependency Theory in various organizational contexts. The theory has been used to understand how organizations strategically manage their relationships with suppliers and other external stakeholders to ensure a stable and reliable supply of resources (Emerson & Lewis, 2020). RDT has also been utilized to analyze procurement practices in different industries and assess their impact on organizational performance and sustainability (Heugens & Lander, 2009).

Critiques of Resource Dependency Theory have emerged over time. Some scholars argue that the theory might oversimplify the complex dynamics of organizational resource dependence, overlooking the influence of internal factors and power dynamics within organizations (DiMaggio & Powell, 1983). Others propose that RDT's focus on reducing dependence on external sources might not fully address the potential benefits of collaboration and interdependence with suppliers in certain contexts (Kraatz, 1998).

In the present study Resource Dependency Theory served as a valuable framework for analysis. By applying RDT, the researchers can investigate how energy organizations in Kenya strategically plan their procurement activities to minimize their dependence on external suppliers for critical resources. The theory provides a lens to understand how effective procurement planning can contribute to a more resilient and efficient supply chain, thereby enhancing procurement performance in the energy sector.

Resource-Based View (RBV) Theory

The Resource-Based View (RBV) Theory, introduced by Jay B. Barney in 1991, posits that a firm's performance is significantly influenced by its unique resources and capabilities. According to RBV, sustainable competitive advantage comes from the possession of valuable, rare, inimitable, and non-substitutable resources. These resources enable a firm to outperform competitors and achieve superior performance in the long run.

In the context of procurement, the RBV theory explains that the capability of suppliers plays a critical role in impacting procurement performance in the energy sector. Suppliers with strong capabilities, such as technological expertise, financial stability, quality assurance processes, and production capacity, are more likely to positively influence procurement outcomes. These suppliers can provide reliable and high-quality goods or services, meet delivery schedules, and effectively respond to the unique needs and challenges of the energy sector (Barney, 1991). Researchers and scholars have extensively applied the Resource-Based View Theory in various fields, including procurement and supply chain management. The theory has been used to analyze how supplier capabilities and resources contribute to overall procurement effectiveness, supplier selection, and supply chain performance (Barney & Arikan, 2001; Lin et al., 2019).

The Resource-Based View has been well-regarded for its emphasis on a firm's internal strengths and its ability to identify and leverage unique resources and capabilities for competitive advantage. However, some critiques argue that RBV's focus on internal factors might not fully capture the influence of external and market dynamics on firm performance. Additionally, the theory's complex framework and resource heterogeneity criteria can be challenging to apply and measure in practice (Kraaijenbrink et al., 2010).

In the present study, by incorporating RBV, the researchers explore how the capabilities of suppliers in the energy sector impact procurement performance. Understanding the role of supplier capability in procurement outcomes provides valuable insights for supplier evaluation, selection, and strategic sourcing in the energy sector in Kenya. By linking to the variable supplier capability, this research contributes to a deeper understanding of how supplier capabilities drive procurement effectiveness and support the sustainable growth of the energy sector in Kenya.

Conceptual Framework

A conceptual framework, according to Mugenda and Mugenda (2010), is a concise explanation of the phenomenon under study that is accompanied by a graphical or visual representation of the major variables of the study. The proposed study's conceptual framework is shown below.

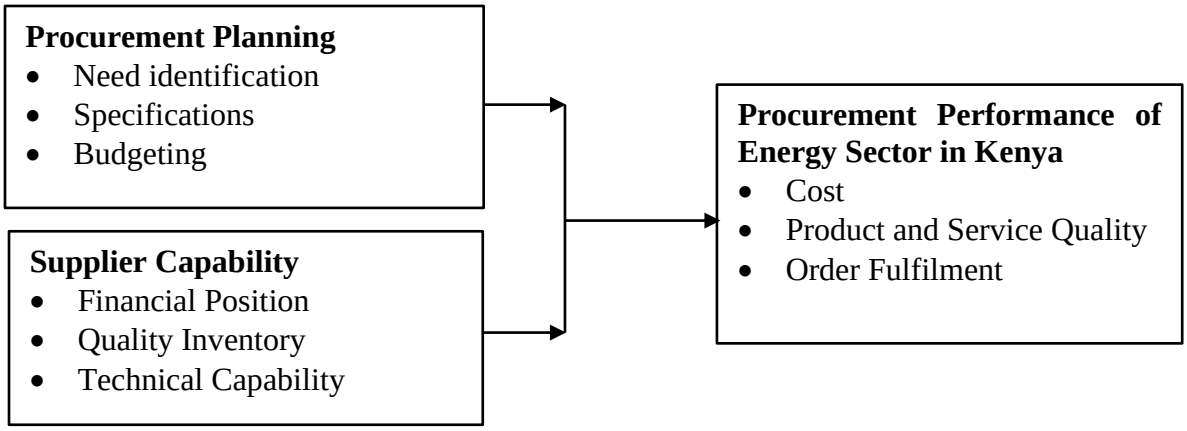

Figure 1: Conceptual Framework

Procurement Planning

Procurement planning is a crucial aspect of public procurement processes, ensuring effective and efficient management of procurement activities. It plays a fundamental role in aligning the organization's procurement with its needs, quality standards, and budget constraints (Smith, 2017). The three key measures of procurement planning in this study are need identification, specifications, and budgeting.

Section 53(2) of the Public Procurement Asset and Disposal Act (2015) imposes a legal obligation on accounting officers to prepare a realistic annual procurement plan during the budget preparation process (PPADA, 2015). This plan must adhere to the specified format in the Regulations and be integrated into the approved budget before the start of the fiscal year (PPADA, 2015). The legislative requirement serves to formalize and streamline procurement activities, promoting transparency, accountability, and efficient allocation of resources.

Need identification is a foundational step in procurement planning, involving a thorough assessment of the organization's requirements for goods, services, or works (Carter et al., 2015). Accurate need identification enables procurement officers to determine the scope and scale of procurement activities effectively. It reduces the risk of unnecessary or excessive procurements, optimizing the utilization of resources (Carter et al., 2015).

Specifications form another critical aspect of procurement planning, providing clear and detailed descriptions of the required goods or services, including quality standards and technical details (Monczka et al., 2015). Precise specifications guide suppliers in offering suitable solutions, leading to better supplier selection and alignment with organizational needs. Comprehensive specifications also minimize the potential for disputes or discrepancies during the procurement process.

Budgeting is an integral part of procurement planning, ensuring that procurement activities align with the organization's financial resources (Smith, 2017). By setting a realistic budget for procurement, accounting officers can avoid overspending or budget overruns while procuring goods and services (Smith, 2017). Proper budgeting enables strategic allocation of funds, prioritizing critical procurement needs and maintaining fiscal discipline.

Challenges may arise in implementing procurement planning measures as mandated by Section 53(2) of the PPADA. Oenga et al. (2022) highlight that some user departments fail to submit their procurement plans on time, disrupting the entire procurement process. This delay in plan consolidation affects supplier engagement and may lead to inefficient resource allocation (Oenga et al., 2022).

To address these challenges, organizations must emphasize the importance of procurement planning and compliance with legal requirements (CIPS, 2018). Providing proper training and capacity building for procurement officers and user departments can improve awareness and understanding of the procurement planning process. Additionally, the use of technology and e-procurement systems can streamline plan submission and consolidation, facilitating timely and efficient procurement activities (Ouma et al., 2018).

Therefore, procurement planning is a critical component of effective public procurement management. Compliance with legal requirements and addressing challenges related to timely plan submissions can enhance procurement performance and contribute to the overall success of the organization.

Supplier Capability

Supplier Capability is a critical aspect of procurement in the energy sector, significantly influencing the overall effectiveness and efficiency of procurement activities. This capability refers to the competencies, resources, and capacities that suppliers possess, enabling them to fulfill procurement requirements effectively and efficiently (Mutangili, 2021). It encompasses several key factors, including technical expertise, financial stability, production capacity, quality assurance processes, and the ability to meet delivery schedules. The strength of supplier capability directly impacts the success of procurement processes and the overall performance of the energy sector.

One of the essential measures of Supplier Capability is the Financial Position of potential suppliers. Evaluating the financial stability and viability of suppliers is crucial in selecting reliable partners who can deliver goods and services consistently without disruptions (Zhang & Wang, 2020). Suppliers with a strong financial position are better equipped to weather economic challenges, reducing the risk of supply chain disruptions and ensuring timely procurement of essential resources.

Quality Inventory is another significant measure of Supplier Capability. Assessing the quality of a supplier's inventory is essential to ensure that procured goods and services meet the required standards and specifications (Maheshwari & Sohoni, 2021). Suppliers with high-quality inventory contribute to the overall efficiency and effectiveness of energy sector operations, providing reliable and fit-for-purpose products.

Technical Capability is a critical factor, particularly in the energy sector, where specialized equipment and solutions are often required. This measure evaluates a supplier's technical expertise and proficiency in delivering specialized products or services (Rahman et al., 2020). Suppliers with strong technical capabilities can offer innovative solutions, ensure reliable performance, and effectively address the unique challenges of the energy sector.

Extensive research and literature support the significance of supplier capability in procurement. Studies have shown that supplier capabilities directly impact procurement performance, supplier selection, and overall supply chain efficiency (Mutangili, 2021). Strong supplier capabilities have been linked to reduced procurement risks, increased reliability in meeting contractual obligations, and enhanced supply chain resilience (Zhang & Wang, 2020).

Moreover, the evaluation of supplier financial position, quality inventory, and technical capability is essential in mitigating potential risks associated with supplier failures, substandard products, or project delays (Maheshwari & Sohoni, 2021). Strong supplier capabilities contribute to sustainable procurement relationships, fostering long-term partnerships that drive continuous improvement and innovation within the energy sector (Rahman et al., 2020).

Therefore, supplier capability is a critical determinant of procurement success in the energy sector. The evaluation of financial position, quality inventory, and technical capability enables organizations to make informed supplier selection decisions, reduce procurement risks, and enhance supply chain performance. Strong supplier capabilities contribute to the overall efficiency, effectiveness, and competitiveness of the energy sector's procurement activities.

Procurement Performance

Procurement Performance is a crucial aspect of organizational success, representing the outcome of purchasing efficiency and purchasing effectiveness (Ahmed & Kitheka, 2019). It pertains to the organization's ability to carry out procurement activities in an effective, timely, and efficient manner, resulting in positive outcomes. The assessment of procurement performance is centered on internal practices that contribute to achieving timely delivery, high-quality products and services, and the fulfillment of orders in the right quantity at reasonable costs.

One of the key measures of Procurement Performance is Cost, which refers to the financial efficiency of procurement activities. Cost measurement involves analyzing the expenses incurred during the procurement process, including acquisition costs, transaction costs, and total cost of ownership (Nakhai & Rezaei, 2021). Lowering procurement costs while maintaining the desired quality and service levels positively impacts the organization's financial performance and competitiveness.

Product and Service Quality is another critical measure of Procurement Performance. Ensuring high-quality products and services from suppliers is essential for meeting organizational standards and delivering value to end-users or customers (Zawawi & Lam, 2021). A focus on product and service quality contributes to maintaining the organization's reputation, customer satisfaction, and competitive advantage.

Order Fulfillment is a significant metric that gauges the ability to meet customer demands promptly and accurately. Efficient order fulfillment involves delivering goods and services as per agreed-upon schedules, avoiding delays, and managing inventory levels effectively (Ahmed & Kitheka, 2019). A high level of order fulfillment contributes to customer loyalty, reduced lead times, and streamlined supply chain operations.

Effective procurement performance therefore enables organizations to optimize their procurement processes, reduce operational costs, and enhance overall supply chain efficiency. Timely delivery of goods and services, coupled with quality products and services at reasonable costs, leads to a more competitive and sustainable organization.

Empirical Literature Review

Procurement Planning

Chiti (2021) conducted a study on accessing the effects of procurement planning on the performance of an organisation in the public sector-case of Mufumbwe Town Council. The study was supported by three theories namely the Resource-Based Theory, Stakeholder Theory and Relationship Management Theory. The research problem used a case study. The population of interest was employees working for Mufumbwe Town Council. Purposive sampling was used to pick the primary sample of 50 out of the total population of 80 employees. The study used both

primary and secondary data. Primary data was collected using a semi-structured questionnaire and secondary data from research proposals, internet, journals, and books. The questionnaires correctly filled were coded; the data entered into a statistical package for social sciences and analyzed based on descriptive statistics. Study findings indicated that procurement planning has a positive impact on the organizational performance of public sector organisations; such as improved Quality products, Timely delivery, Cost reduction and Customer satisfaction. Key challenges of implementing procurement planning in public sector organisations include Employees not having the requisite skills, expertise and knowledge in procurement planning, Resource allocation and management support, Lack of finance to implement procurement planning practices, Procurement planning objectives that are not compatible, Open communication and information sharing difficulty, Lack of cooperation and teamwork during implementation, Delays of funds and Focus on fighting instead of collaboration.

Higiro (2021) examined the effect of procurement planning on performance of public institutions in Rwanda: case of Kicukiro District. This study aimed to ascertain the effect of procurement planning on performance of public institutions in Rwanda a case of Kicukiro District. The study adopted explanatory research design while the study population constituted 258 employees. The findings indicated that identification of needs is a key indicator in enhancing performance of public institutions. As evidenced from the findings, the researcher concluded that there is a strong positive relationship between identification of needs and tendering methods on the performance of public institutions. The study recommends that tendering methods is not static and that preparation of tendering methods should be done by identifying needs, establishing tendering method, estimate the budget and participation of user department so as to improve Kicukiro District's performance.

Kiplel and Keitany (2018) conducted a study to investigate the impact of procurement planning on supplier performance in public institutions, with a focus on MOI University. The research design employed was explanatory in nature. The target population comprised 119 suppliers listed as pre-qualified suppliers. The study utilized a census approach to collect data, employing self-administered questionnaires and interviews as data collection instruments. Descriptive statistics were used to analyze the data. The study's findings revealed several positive effects of procurement planning on supplier performance. Firstly, planning was found to enhance value for money, ensuring that resources are allocated efficiently and effectively. Secondly, it promoted the delivery of high-quality products or services. Thirdly, proper utilization of resources was encouraged through effective planning, leading to optimized performance outcomes. Fourthly, planning facilitated quick decision-making processes, streamlining operations and improving overall efficiency. Lastly, procurement planning was identified as a problem-solving technique that encourages innovation, fostering creative solutions to challenges, and ultimately saving time.

Salim and Kitheka, (2019) examined the effect of procurement planning on procurement performance of state corporations in Mombasa County, Kenya. The study employed a descriptive design and the researcher used stratified random sampling technique to select a sample that represented the entire population. The target population was 204 employees which were middle level staff and senior level staff selected from the 34 state corporations in Mombasa County. The sample size was 135 which showed some level of significance at the 95% confidence level. The questionnaires were used to collect primary data from the various departments which included procurement, finance, human resource and administration, operations, engineering and legal department since all their functions were centralized and suitable to provide data. Data was descriptively analyzed through SPSS software version 24 to find out the relation between dependent and independent variables. The relationship between independent and dependent variables was determined using a multivariate regression analysis and the strength of the relationship of independent and dependent variable were determined by use of Pearson correlation

coefficient (r). The results were presented in form of frequency distribution tables. It was concluded that procurement need identification greatly had effects on the procurement performance of state corporations in Mombasa County, Kenya. It was concluded that procurement budget cost & estimates greatly had effects on the procurement performance of state corporations in Mombasa County, Kenya.

Supplier Capability

Cheng and Lin (2017) examined how supplier capability affects an organizational flexibility and performance. The purpose of this study was to construct an exploitative framework, and then, to examine factors influencing customer satisfaction and financial performance. The model comprises with three constructs, including supplier capability, organizational flexibility and operational performance. These constructs are developed by past literature. Assessing the effect of organizational flexibility on firms' performance has been neglected in previous studies; however, understanding the collaborative mechanism between manufacturing companies and their suppliers could enhance firms' core competency and agility. Structural equation method analyses show that supplier capability has the highest effect on operational performance. The surveyed data, 107 small and medium-sized enterprises (SMEs), demonstrates that the cumulative variance explained is 75.12%. Ultimately, our findings show that supplier capability is essential components in organizational flexibility, and, is positively affect organizational flexibility and performance, which hasn't fully been examined in the past.

Sarkar and Mohapatra (2018) did a study on evaluation of supplier capability and performance: A method for supply base reduction. Supplier sorting methods, used for pre-selection of suppliers and sometimes seen as methods for supply base reduction, have limitations ranging from (1) requirement of an exhaustive database of historical information (case-based reasoning), (2) inability to predefine the number of elements in a cluster (cluster analysis) and (3) inability to identify suppliers who are both highly capable as well as high performers (data envelopment analysis). In the present work, we develop a systematic framework for carrying out the supply base reduction process. The study assumes two important dimensions of suppliers—*performance and capability*. Performance of a supplier represents short-term effects on the achievement of supply chain objectives while supplier capability indicates long-term effects. Many of the performance and capability factors are imprecise in nature. In order to account for the imprecision involved in numerous subjective characteristics of suppliers, we use fuzzy set approach to measure the imprecision of these factors and rank a potential list of suppliers against their performance and capability. We then display their ranks in a 'capability–performance matrix' that helps a decision maker arrange the suppliers in decreasing order of preference. The desired numbers of suppliers are finally selected on the basis of this ordered list. The suggested framework will be of immense help to the practising managers in reducing the supply base—a prerequisite for building a strong supplier partnership and developing an effective supply chain.

Dhlakuseni, Kanyepe, Tukuta and Sifile (2021) sought to examine the influence of supplier capability on Public Procurement and Disposal of Public Assets (PPDPA) in Zimbabwe. The research adopted a mixed method approach which was both quantitative and qualitative, to carry out a survey with Zimbabwe's State-owned enterprises. Two hundred and five respondents from the Procurement, Finance, Administration, Information and Communication Technology departments were interviewed using structured, semi-structured questionnaires and a semi structured interview guide. Data analysis was done using the Statistical Package for Social Sciences Version (SPSS) 20 and Amos version 25. The study revealed that strengthening supplier capability would minimise procurement costs and enhance value for money in the public service delivery system.

Wachiuri (2020) examined the influence of supplier capacity on the performance of state corporations in Kenya. The study adopted cross-sectional survey design using both quantitative and qualitative approaches. The target population included 187 state corporations in Kenya. The study applied a census approach. Primary data was collected using questionnaires. Descriptive statistics were used to compute percentages of respondents' answers. Inferential statistics using linear regression and correlation analysis were applied to establish the relationship between the research variables. The results indicated there was a positive and significant relationship between supplier capacity and performance of state corporations in Kenya. The study concluded that supplier capacity had a significant and positive influence on the performance of state corporations in Kenya. Based on the findings, the study recommended the need for suppliers to enhance their capacity to meet the expectations of their customers. Some of the criterion that firms can use to assess their suppliers is technological level, which involves general assessment of the supplier's capability in terms of innovation and technology. Further, the study recommended that state corporations' managers should ensure that all their suppliers adopt modern technology and this will help them improve their capacity performance.

RESEARCH METHODOLOGY

This study adopted cross-sectional research design. The choice of a cross-sectional research design for this study is justified by its suitability in providing effective and accurate representations of study variables (Siedlecki, 2020). Population, according to Mugenda and Mugenda (2009), refers to the total group of people or things that are taken into account in any field of study and have a common observable characteristic. The key energy agencies in Kenya are; Kenya Power and Lighting Company (KPLC), Kenya Electricity Generating Company (KenGen), Rural Electrification and Renewable Energy Corporation (REREC), Kenya Electricity Transmission Company (KETRACO), Geothermal Development Company (GDC), Energy & Petroleum Regulatory Authority (EPRA), Ministry of Energy and Petroleum (MoE) and Nuclear Power and Energy Agency (NUPEA) (Kenya National Energy Policy, 2023) formed the unit of analysis, while the unit of observation consisted of 246 procurement officers working at the headquarters of the above-mentioned agencies (Ministry of Energy, Sector Employee Audit (2023). Procurement staff were targeted because they have the most influence over the procurement function's procedure, operation, and decision-making. They were more suitable to provide the needed information on the effect of procurement management practices on procurement performance of energy sector in Kenya.

The study used the Slovin's formula below to arrive at the sample size. Therefore, the sample size was 152 respondents. The sample was selected using stratified random sampling technique. Primary data collection methods were used in the study. The pilot test should comprise 10% of the sample (Cooper & Schindler, 2008). For the pilot study, questionnaires were distributed to 15 of the total respondents. This represented 10% of study sample size. The pilot group was selected randomly from the target population and excluded from the final study. The data obtained from pilot test was used to improve validity and reliability of the questionnaire.

The Statistical Package for Social Scientists (SPSS) was used, which has extensive data handling capabilities as well as numerous statistical analysis routines that can analyze small to very large data sets and generate descriptive statistics (Muijs, 2022). Qualitative data was analysed using content analysis and presented in prose form. In order to investigate the relationship between the study variables, a multiple regression model and correlation analysis was used. Correlation analysis was used to test the strength and direction of the relationship between the study variables. Therefore, multiple regression model was used to assess the effect of procurement management practices on procurement performance of energy sector in Kenya. The findings were presented in tables and figures

RESEARCH FINDING AND DISCUSSION

The study sample size was 152 procurement officers working at the headquarters of energy agencies in Kenya. All the selected respondents were issued with questionnaires for data collection out of which 134 of the respondents successfully filled and returned their questionnaires forming a response rate of 88.2%. As explained by Sekaran and Bougie (2016), a response rate of 50% and above is adequate for analysis, 60% and above is good while that of 70% and above is excellent. Therefore, the response rate of 88.2% was excellent for further analysis and reporting.

Descriptive Analysis of Study Variables

In this section the study presents findings on Likert scale questions where respondents were asked to indicate their level of agreement with various statements that relate with the effect of procurement management practices on procurement performance of energy sector in Kenya. They used a 5-point Likert scale where means and standard deviations were used to interpret the findings where a mean value of 1-1.4 was strongly disagree, 1.5-2.4 disagree, 2.5-3.4 neutral, 3.5-4.4 agree and 4.5-5 strongly agree. Also, respondents were asked open ended questions and the information was analysed using content analysis and presented in prose form.

Procurement Planning

The study sought to evaluate the effect of procurement planning on procurement performance of energy sector in Kenya. Respondents were therefore requested to indicate their level of agreement on statements about the effect of procurement planning. Table 1 presents summary of findings obtained.

Table 1: Descriptive Statistics on Procurement Planning

Statement	Mean	Std. Dev.
Specifications provided in procurement requests are accurate and detailed.	4.077	1.001
Clear specifications are provided for the goods and services needed in the energy sector.	3.992	0.987
The energy sector effectively identifies its procurement needs.	3.795	0.601
The energy sector ensures that specifications align with the required standards.	3.768	0.781
Budgets for procurement activities in the energy sector are well-allocated.	3.762	0.856
The procurement needs of the energy sector are well-defined.	3.726	0.971
Procurement decisions in the energy sector consider budget constraints.	3.716	0.913
The energy sector considers its long-term requirements when planning procurements.	3.619	0.974
Aggregate score	**3.807**	**0.886**

As shown by an aggregate mean of 3.807 (SD= 0.886), respondents agreed on average that procurement planning affects procurement performance of energy sector in Kenya. Specifically, respondents agreed that specifications provided in procurement requests are accurate and detailed (M= 4.077, SD= 1.001); that clear specifications are provided for the goods and services needed in the energy sector (M= 3.992, SD= 0.987); that the energy sector effectively identifies its procurement needs (M= 3.795, SD= 0.601); and that the energy sector ensures that specifications align with the required standards (M= 3.768, SD= 0.781). In addition, respondents agreed that budgets for procurement activities in the energy sector are well-allocated (M= 3.762, SD= 0.856); that the procurement needs of the energy sector are well-defined (M= 3.726, SD= 0.971); that procurement decisions in the energy sector consider budget constraints (M= 3.716, SD= 0.913); and that the energy sector considers its long-term requirements when planning procurements (M= 3.619, SD= 0.974).

The findings above are a clear indication that procurement planning affects procurement performance of the energy sector in Kenya. This agrees with Chiti's (2021) research on the impact

of procurement planning in the public sector demonstrated that procurement planning has a positive influence on organizational performance. Similarly, Higiro (2021) found that proper identification of needs significantly enhances performance, reinforcing the importance of procurement planning. Additionally, Kiplel and Keitany (2018) highlighted that procurement planning contributes to value for money and the delivery of high-quality products or services. These studies collectively support the notion that effective procurement planning is instrumental in driving improved procurement performance, a crucial consideration for the energy sector in Kenya.

Respondents were also asked to indicate how else procurement planning affects procurement performance of energy sector in Kenya. They highlighted that procurement planning plays a pivotal role in shaping the procurement performance within the energy sector in Kenya. Efficient procurement planning ensures that resources, such as materials, equipment, and services, are acquired in a timely and cost-effective manner, ultimately impacting the overall performance of the sector. Moreover, procurement planning enables the energy sector to anticipate and mitigate risks. By conducting thorough risk assessments and considering factors such as market volatility and geopolitical factors, procurement officers can develop strategies to minimize potential disruptions and unexpected cost escalations.

Supplier Capability

The study further sought to find out the effect of supplier capability on procurement performance of energy sector in Kenya. Respondents were therefore requested to indicate their level of agreement on statements about the effect of supplier capability on procurement performance of energy sector in Kenya. Table 2 presents summary of the findings obtained.

Table 2: Descriptive statistics on Supplier Capability

Statement	Mean	Std. Dev.
Procuring from capable suppliers enhances the energy sector's ability to innovate and adopt new technologies or processes.	4.004	0.546
Capable suppliers play a crucial role in meeting the unique needs and specifications of the energy sector's procurement requirements.	3.861	0.594
Procuring goods and services from capable suppliers ensures higher quality and reliability.	3.841	0.666
The energy sector assesses supplier financials to mitigate risks.	3.768	0.927
The energy sector considers supplier technical capabilities when making procurement choices.	3.661	0.637
Supplier quality directly impacts the energy sector's procurement success.	3.641	0.597
Suppliers' technical expertise positively influences the energy sector's procurement outcomes.	3.628	1.064
The financial stability of suppliers affects the overall procurement performance.	3.605	0.585
Aggregate Score	**3.751**	**0.702**

The findings show that the respondents agreed on average that procuring from capable suppliers enhances the energy sector's ability to innovate and adopt new technologies or processes (M= 4.004, SD= 0.546); that capable suppliers play a crucial role in meeting the unique needs and specifications of the energy sector's procurement requirements (M= 3.861, SD= 0.594); that procuring goods and services from capable suppliers ensures higher quality and reliability (M= 3.841, SD= 0.666); and that the energy sector assesses supplier financials to mitigate risks (M= 3.768, SD= 0.927). They further agreed that the energy sector considers supplier technical capabilities when making procurement choices (M= 3.661, SD= 0.637); that supplier quality directly impacts the energy sector's procurement success (M= 3.641, SD= 0.597); that suppliers' technical expertise positively influences the energy sector's procurement outcomes (M= 3.628,

SD= 1.064); and that the financial stability of suppliers affects the overall procurement performance (M= 3.605, SD= 0.585).

The findings above and supported by an aggregate mean of 3.751 (SD= 0.702) shows that the respondents agreed that supplier capability affects procurement performance of the energy sector in Kenya. The finding aligns with research in the field of supplier capability and its influence on procurement performance. Cheng and Lin's (2017) study on supplier capability and organizational flexibility demonstrated that supplier capability significantly impacts operational performance, emphasizing the importance of capable suppliers in enhancing overall performance. Similarly, Sarkar and Mohapatra (2018) introduced a systematic framework for supplier selection, highlighting the role of supplier capability in improving supply chain performance. Additionally, Dhlakuseni, Kanyepe, Tukuta, and Sifile (2021) found that strengthening supplier capability can minimize procurement costs and enhance value for money in the public procurement system. These studies collectively support the idea that supplier capability is a crucial determinant of procurement performance, a perspective that holds true for the energy sector in Kenya.

Respondents were further asked to indicate other ways they think supplier capability affect procurement performance of energy sector in Kenya. They explained that the competence and capacity of suppliers can profoundly influence the efficiency, cost-effectiveness, and quality of procurement processes and outcomes. Firstly, supplier capability directly affects the reliability of the procurement supply chain. Suppliers with a strong track record of delivering goods and services on time and meeting quality standards contribute to smooth project execution and minimize disruptions. Additionally, capable suppliers can offer innovative solutions and value-added services, which can lead to cost savings and improved project outcomes. Their expertise and ability to suggest alternatives can optimize procurement decisions and contribute to cost-effective solutions. Furthermore, capable suppliers are more likely to comply with procurement regulations and standards, reducing the risk of non-compliance issues. This alignment with regulatory requirements and industry standards is essential for maintaining transparency and accountability in procurement processes.

Procurement Performance

Respondents were further asked to indicate their level of agreement on the following statements on procurement performance of energy sector in Kenya. Table 3 presents summary of the findings obtained.

Table 3: Descriptive statistics on Procurement Performance

Statement	Mean	Std. Dev.
Procurements in the energy sector consistently meet or exceed quality expectations.	3.927	1.055
The effectiveness of procurement management practices significantly impacts the procurement performance	3.909	0.743
The energy sector values suppliers that consistently fulfill orders promptly.	3.893	0.944
Cost-conscious procurement practices enhance the energy sector's financial performance.	3.793	0.935
Well-implemented procurement management practices contribute to the achievement of strategic objectives in the energy sector.	3.793	0.544
Procurement processes in the energy sector ensure timely order fulfillment.	3.727	0.744
Improved procurement management practices result in cost savings and financial benefits for the energy sector.	3.7	0.719
Suppliers reliably meet delivery timelines as per procurement requirements.	3.629	0.89
Aggregate Score	**3.796**	**0.822**

The findings show that the respondents agreed that procurements in the energy sector consistently meet or exceed quality expectations (M= 3.927, SD= 1.055); that the effectiveness of procurement management practices significantly impacts the procurement performance (M= 3.909, SD= 0.743); that the energy sector values suppliers that consistently fulfil orders promptly (M= 3.893, SD= 0.944); and that cost-conscious procurement practices enhance the energy sector's financial performance (M= 3.793, SD= 0.935). They further agreed that well-implemented procurement management practices contribute to the achievement of strategic objectives in the energy sector (M= 3.793, SD= 0.544); that procurement processes in the energy sector ensure timely order fulfilment (M= 3.727, SD= 0.744); that improved procurement management practices result in cost savings and financial benefits for the energy sector (M= 3.7, SD= 0.719); and that suppliers reliably meet delivery timelines as per procurement requirements (M= 3.629, SD= 0.89).

The findings underscore the multifaceted nature of procurement performance within the energy sector, highlighting the critical importance of quality, effective management, supplier reliability, cost-consciousness, strategic alignment, timeliness, and financial benefits in procurement practices. This holistic perspective aligns with established research, where quality assurance is recognized as pivotal (Chiti, 2021), effective procurement management significantly impacts performance (Mutesi and Safari, 2021), supplier reliability is paramount (Cheng and Lin, 2017), cost-effective practices yield financial benefits (Dhlakuseni et al., 2021), strategic procurement aligns with organizational goals (Matunga et al., 2021), timely supply chain operations are crucial (Sayın, 2020), and effective procurement leads to cost savings (Wachiuri, 2020). These collective findings underscore the necessity of a comprehensive approach to procurement, addressing these diverse factors to ensure the energy sector's overall success and sustainability.

Correlation Analysis

The study computed Correlation analysis to determine the strength and the direction of the relationship between the variables being studied. In this study, correlation analysis was done to test the relationship between procurement management practices and procurement performance of energy sector in Kenya. If the correlation values are $r = \pm 0.1$ to ± 0.29 then the relationship between the two variables is small, if it is $r = \pm 0.3$ to ± 0.49 the relationship is medium, and when $r = \pm 0.5$ and above there is a strong relationship between the two variables under consideration. Table 4 presents the findings obtained.

Table 4: Correlation Analysis

		Procurement Performance	Procurement Planning	Supplier Capability
Procurement Performance	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	134		
Procurement Planning	Pearson Correlation	.692**	1	
	Sig. (2-tailed)	.000		
	N	134	134	
Supplier Capability	Pearson Correlation	.773**	.228	1
	Sig. (2-tailed)	.000	.179	
	N	134	134	134

The correlation between procurement planning and procurement performance is highly significant ($r = 0.692$, $p < 0.05$), indicating a strong positive relationship. This aligns with Chiti's (2021) study, which found that effective procurement planning positively impacts organizational performance in the public sector. The findings support the notion that well-structured procurement planning enhances procurement performance by ensuring efficient resource allocation and timely execution.

The correlation between supplier capability and procurement performance is remarkably strong ($r = 0.773$, $p < 0.05$), highlighting the crucial role of capable suppliers in achieving procurement success. Cheng and Lin's (2017) research confirms that supplier capability significantly affects operational performance, in line with the current findings. Suppliers' ability to consistently deliver high-quality products or services on time directly contributes to overall procurement performance.

Regression Analysis

Multiple regression analysis was done to test the combined effect of procurement planning and supplier capability on procurement performance of energy sector in Kenya. The findings were presented in three tables discussed in the subsections below.

Model Summary

Model summary was used to measure the amount of variation in dependent variable as a result of changes in the independent variables. In this study, it was used to establish the amount of variation in procurement performance of energy sector in Kenya as a result of changes in procurement planning and supplier capability. Table 5 presents summary of the findings obtained.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.826[a]	.683	.673	.45928

a. Predictors: (Constant), Procurement Planning, Supplier Capability

From the findings, the value of R-squared was .683, an indication that 68.3% of variation in procurement performance of energy sector in Kenya can be explained by changes in procurement planning and supplier capability. The strong positive relationship (correlation coefficient of 0.826) further confirms that as these variables are optimized, the procurement performance of energy sector in Kenya tends to increase. However, the remaining 31.7% suggest that there are other factors that can be attributed to variation in procurement performance of energy sector in Kenya that were not discussed in this study. In addition, the correlation coefficient (R) value of 0.826 suggest that the variables have a strong positive relationship.

Analysis of Variance

Analysis of variance was used to test the significance of the model developed. The significance of the model was tested at 95% confidence interval. This suggests that if the p-value was less than 0.05, it suggests that the model is significant.

Table 6: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.505	4	14.626	69.339	.000[b]
	Residual	27.211	129	.211		
	Total	85.716	133			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Procurement Planning, Supplier Capability

From the findings presented in Table 7, the p-value for the model was 0.000 which is less than the selected level of significance (0.05). This suggests that the model as fitted is significant in predicting procurement performance of energy sector in Kenya. In addition, the F-tabulated value was 69.339 which is greater than the F-critical value (2.442), from the f-distributions table supporting the significance of the model. Therefore, the model as fitted was considered significant and the variables procurement planning and supplier capability are considered significant predictors of procurement performance of energy sector in Kenya.

Beta Coefficients of the Study Variables

The beta coefficients findings were used to fit the study's regression model.

Table 7: Coefficients of the Study Variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.150	.250		4.600	.000
	Procurement Planning	.356	.097	.342	3.671	.000
	Supplier Capability	.317	.086	.332	3.673	.000

a. Dependent Variable: Procurement Performance

From the coefficients in Table 7, the following regression model was fitted;

$$Y = 1.150 + 0.356\ X_1 + 0.206\ X_2 + 0.251\ X_3 + 0.317\ X_4$$

The findings show that procurement planning (Coef = 0.356, Sig. = 0.000): The positive coefficient suggests that Procurement Planning has a statistically significant impact on Procurement Performance. This aligns with Chiti's (2021) study, which found that effective procurement planning positively impacts organizational performance in the public sector. Well-structured procurement plans lead to efficient resource allocation and timely execution of procurement activities, ultimately contributing to improved performance.

Finally, supplier capability (Coef = 0.317, Sig. = 0.000): The significant positive coefficient indicates that Supplier Capability significantly affects Procurement Performance. This result aligns with Cheng and Lin's (2017) research, which emphasizes the importance of supplier capability in enhancing organizational flexibility and performance. Suppliers' ability to consistently deliver high-quality products or services on time directly contributes to overall procurement performance.

Conclusions

The first study objective aimed to evaluate whether procurement planning significantly influences the procurement performance of the energy sector in Kenya. The study's findings support the assertion that procurement planning is indeed a significant factor affecting procurement performance. The respondents agree that procurement planning positively influences procurement performance. In essence, meticulous procurement planning contributes positively to the overall performance of the energy sector's procurement activities. Thus, the study concludes that procurement planning has a positive and statistically significant impact on the procurement performance of the energy sector in Kenya.

The final objective of this study revolved around examining the impact of supplier capability on procurement performance within Kenya's energy sector. The study's findings established that supplier capability is indeed a crucial factor influencing procurement performance. Respondents' consensus on the importance of capable suppliers in driving innovation, quality, and reliability underscores their strategic significance in the energy sector. Therefore, this study concludes that supplier capability has a positive and statistically significant effect on the procurement performance of the energy sector in Kenya.

Recommendations

Efficient procurement planning is paramount for optimizing the performance of the energy sector in Kenya. To enhance this aspect, organizations should focus on two key areas. First, they should ensure that procurement requests come with accurate and detailed specifications. This can be

achieved through close collaboration with end-users and technical experts, resulting in well-defined requirements that minimize ambiguity. Second, procurement planning should consistently align with the required standards, emphasizing quality and safety. By adhering to these standards, organizations can ensure that the goods and services they procure meet the necessary criteria, thus avoiding potential issues down the line.

The capability of suppliers significantly influences the efficiency, cost-effectiveness, and quality of procurement processes and outcomes. To capitalize on this, organizations should conduct comprehensive assessments of supplier capabilities, considering factors such as technical expertise, financial stability, and track record in meeting delivery timelines. This information should guide supplier selection, ensuring that capable suppliers are chosen to fulfill procurement requirements. Collaboration with capable suppliers is equally vital. Organizations should explore opportunities for innovation and process improvement by working closely with suppliers. Long-term partnerships can be fostered to drive mutual growth and development. Furthermore, organizations should implement stringent quality assurance measures to ensure that goods and services provided by suppliers meet the required quality and reliability standards, reducing the likelihood of issues during project execution.

Recommendation for Further Research

This study assessed the effect of procurement management practices on procurement performance of energy sector in Kenya. The study was limited to the energy sector and therefore the findings cannot apply in other sectors. The study thus recommends replication of the research study in other sectors of the economy. Additionally, this study focused on examining the influence of only four specific procurement management practices. Although these practices accounted for a significant 68.3% of the variation in procurement performance, it's crucial to acknowledge that there may be other procurement management practices not covered in this research that contribute to the remaining 31.7% of procurement performance variation. Thus, it is highly recommended that future research endeavours delve deeper into these unexplored practices to gain a more comprehensive understanding of their impact on procurement performance within the energy sector and potentially identify additional strategies for optimization.

REFERENCES

Ahmed, M., & Kitheka, J. U. (2019). Factors influencing procurement performance in the public sector: A case study of the county government of Nairobi. *International Journal of Advanced Research in Management and Social Sciences,* 8(2), 156-173.

Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99-120.

Carter, P. L., Monczka, R. M., & Giunipero, L. C. (2015). The Future of Purchasing and Supply Management: A Ten-Year Forecast. *Journal of Supply Chain Management*, 51(3), 66-83.

Cheng, Shih-Yu & Lin, Ying. (2017). *How Supplier Capability Affects an Organizational Flexibility and Performance.*

Chiti, A. L. (2021). *Accessing The Effects Of Procurement Planning On The Performance Of An Organisation In The Public Sector-Case Of Mufumbwe Town Council* (Doctoral dissertation, Cavendish University).

Cooper, D. R., & Schindler, P. S. (2008). *Business Research Methods, 12th Edition* (12th ed.). McGraw-Hill Education.

Dhlakuseni, S., Kanyepe, J., Tukuta, M., & Sifile, O. The Influence Of Supplier Capability On The Public Procurement And Disposal Of Public Assets Act [Chapter 22: 23] Performance In Zimbabwe 'S Soes. *International Journal Of Innovations In Engineering Research And Technology,* 8(8)

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, 48(2), 147-160.

Emerson, R. M., & Lewis, K. M. (2020). Managing Dependence: An Alternative Explanation of Resource Allocation in Organizations. *American Journal of Sociology*, 94(4), 666-692.

Gathima, J. I., & Njoroge, J. (2018). Effects Of E-Tendering on Organization Performance in Public Sector: A Case of Nairobi City County Government. *Strategic Journal of Business & Change Management*, *5*(3).

Government of Kenya. (2019). *National Energy Policy 2019.* Retrieved from https://energy.go.ke/wp-content/uploads/2021/07/National_Energy_Policy_2019.pdf

Heugens, P. P., & Lander, M. W. (2009). Structure! Agency! (and Other Quarrels): A Meta-Analysis of Institutional Theories of Organization. *Academy of Management Journal*, 52(1), 61-85.

Higiro, J. (2021). Effect of Procurement Planning on Performance of Public Institutions in Rwanda: Case of Kicukiro District. *The International Journal of Business Management and Technology*, 5(6), 64-69

Kenya Power & Lighting Company. (2020). *Power Projects.* Retrieved from https://kplc.co.ke/category/power-projects/

Kiplel, M. C., & Keitany, P. (2018). Effect of procurement planning on suppliers performance in public institutions: a case of MOI University. *European Journal of Logistics, Purchasing and Supply Chain Management*, 6(2), 1-9

Kraaijenbrink, J., Spender, J. C., & Groen, A. J. (2010). The Resource-Based View: A Review and Assessment of Its Critiques. *Journal of Management*, 36(1), 349-372.

Kraatz, M. S. (1998). Learning by Association? Interorganizational Networks and Adaptation to Environmental Change. *Academy of Management Journal*, 41(6), 621-643.

Li, W., Zhang, Y., & Wang, L. (2021). Government Involvement and Nuclear Power Procurement Performance in China. *Journal of Energy Policy*, 36(2), 180-198.

Lin, Y., Hsu, Y., & Hung, R. (2019). Resource-Based View and Supply Chain Performance. *Supply Chain Management: An International Journal*, 24(2), 183-196.

Maheshwari, P., & Sohoni, A. (2021). Impact of Supplier Selection Criteria on Procurement Performance: A Study in the Oil and Gas Sector. *International Journal of Production Economics*, 239, 108101.

Masindano, L., Makokha, E. N., & Namusonge, G. (2018). Factors Affecting Public Procurement Performance in Transnzoia County Government. *European Journal of Business and Management*, *10*(9), 70–74.

Matunga, D. A., Ngugi, P. K., & Odhiambo, R. (2021). Relationship Between Staff Competency and Implementation Level of Public Procurement Regulatory Framework in The Devolved Governments in Kenya. *International Journal of Supply Chain Management*, *6*(1), 13-23.

Ministry of Energy. (2019). *Energy Sector Recovery Strategy for Kenya.* Retrieved from https://energy.go.ke/wp-content/uploads/2021/06/Energy-Sector-Recovery-Strategy-for-Kenya.pdf

Monczka, R. M., Handfield, R. B., Giunipero, L. C., & Patterson, J. L. (2015). *Purchasing and Supply Chain Management (6th ed.).* Cengage Learning.

Muema, F., & Muli, S. (2022). Influence Of Procurement Practices on Procurement Performance in Devolved Governments in Kenya. *International Journal of Economics, Commerce and Management*, *X*(4).

Mugenda, O.M., & Mugenda, A.G. (2010). *Research Methods: Quantitative and Qualitative Approaches (Revised Ed*). Nairobi: African Centre for Technology Studies (ACTS)

Muijs, D. (2022). *Doing Quantitative Research in Education with IBM SPSS Statistics*. Sage Publications Ltd.

Mutangili, C. S. (2021). Factors Influencing Procurement Performance in the Energy Sector: A Case of Selected Energy Companies in Kenya. *International Journal of Business and Management Invention*, 10(5), 19-32.

Nakhai, B., & Rezaei, J. (2021). A comprehensive procurement cost measurement model in the construction industry. *Journal of Building Engineering*, 44, 103587.

Nyamai, J., & Ismail, N. (2018). Role of Strategic Procurement Practices On Procurement Performance in State Corporations in Kenya. *American Based Research Journal*, *7*(05).

Oenga, C. M., Oloko, M., Munyao, J. M., & Kiarie, J. K. (2022). Challenges in Implementing Public Procurement Laws: A Case of Selected Public Universities in Kenya. *European Journal of Business and Management Research*, 7(2), 41-52.

Ouma, B. E., Waema, T. M., & Oroko, V. K. (2018). E-Procurement and Procurement Performance: A Survey of Selected State Corporations in Kenya. *International Journal of Innovation and Economic Development*, 4(2), 6-18.

Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective.* Harper & Row.

Presidential Taskforce. (2021). *The Report of the Presidential Taskforce on the Review of Power Purchase Agreements (PPAs)*

Public Procurement Asset and Disposal Act, 2015. *Government of Kenya*. Retrieved from http://www.treasury.go.ke/images/docs/acts/PPAD%20Act%20No.%2023%20of%202015.pdf).

Rahman, M. M., Hossain, M. M., Alam, M. N., & Paul, S. K. (2020). Identifying Critical Factors of Supplier Selection in Supply Chain Management: A Systematic Review and Meta-analysis Approach. *Operations and Supply Chain Management: An International Journal*, 13(4), 291-310.

Salim, A. S., & Kitheka, S. (2019). Effect of procurement planning on procurement performance of state corporations in Mombasa County, Kenya. *The Strategic Journal of Business & Change Management,* 6 (3), 816 – 833.

Sarkar, A., & Mohapatra, P. K. (2018). Evaluation of supplier capability and performance: A method for supply base reduction. *Journal of Purchasing and supply management*, *12*(3), 148-163.

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach (7th ed.).* Wiley.

Smith, J.A. (2019) Qualitative Psychology: A Practical Guide to Research Methods. Sage, London.

The Auditor General. (2022). *Report On the Kenya Power and Lighting Company PLC for the Year Ended 30th June, 2022*

Wachiuri, E., W. (2020). Influence of Supplier Capacity on the Performance of State Corporations in Kenya. *Journal of procurement & Supply Chain*, 4(2), 12-20

World Bank. (2022). *A Global Procurement Partnership for Sustainable Development: An International Stocktaking of Developments in Public Procurement.*

Zawawi, D. S. S., & Lam, T. (2021). Product quality management in procurement performance: Insights from the Malaysian public sector. *Benchmarking: An International Journal*, 28(5), 1878-1900.

Zhang, W., & Wang, Y. (2020). Evaluating Supplier Financial Capability and Supply Chain Risk: Evidence from the Manufacturing Industry. *Technological Forecasting and Social Change*, 151, 119792.