

## Supply Chain Inclusivity and Performance of State Corporations in the Energy Sector in Kenya.

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### ABSTRACT

In recent years, there has been a growing recognition of the importance of diversity and inclusivity in supply chain management. This includes a focus on promoting diversity and inclusivity within the workforce, as well as in the supply chain itself. Governments while deploying public funds for the provision of goods, works and services have realized the need to use supply chain function to advance social and economic development by ensuring the inclusion of otherwise excluded. However, there is little research done to establish whether inclusivity practices improve organization performance. This study therefore sought to establish the influence of supply chain inclusivity on the performance of state corporations in the energy sector. Specifically, the study aimed at determining the influence of discriminatory procurement, stakeholder involvement, supply chain diversity and supply chain integration on performance of state corporations in the energy sector in Kenya. The study adopted a descriptive survey design. The target population for this study was nine (9) State Corporations operating in the Energy sector in Kenya. Due to the limited number of target population, a census approach was adopted. Thus, all the 9 state corporations operating in Energy sector were included. The research purposefully targeted employees in the procurement and finance departments. A total of 20 employees were involved per organization arriving at a total of 180 respondents. A questionnaire was used in collecting data. With the study being quantitative in nature, both descriptive statistics and inferential statistics were employed. The study used SPSS version 26 to facilitate the analysis of data. Inferential data analysis was done using Pearson correlation coefficient and multiple regression analysis method. Data was presented using a combination of statistical techniques and graphical techniques. The study established that jointly, discriminatory procurement, stakeholder involvement, supply chain diversity and supply chain integration influence the performance of state corporations in the energy sector. The study recommends that state corporations should institutionalize procurement plans with a total reservation of at least 30% of the procurement budget to the special groups. The study also recommends that state corporations should authenticate tender awards and purchase orders and enter into agreements with relevant financing institutions with an undertaking that the contracted special enterprises be paid through the account opened with the financier. Consequently, the study recommends that local firms be offered more protection to enable them stand chance against the mega global entities. Further, the study recommends for involvement of citizens, local communities and civil society organizations in the process of purchasing goods and services by the state corporations through provision of input on procurement plans, monitoring procurement processes, and providing feedback on the quality of goods and services purchased. Based on the findings of this study, it is recommended to state corporations that for them to effectively embrace supply chain diversity there is need to access and mitigate any barriers and bottlenecks that may hinder fair treatment, equity and justice in supply chain processes. The study also recommends to state corporations to explore and embrace advanced and emerging technologies in exchange of strategic supply chain information for improvement in the relationship and integration between the supply chain partners. The study further recommends for collaborations within the supply chain to allow firms to partner by combining core competencies and expertise as firms derive more benefits from working together than individual firms can gain on their own.

**Key Words:** Discriminatory Procurement, Stakeholder Involvement, Supply Chain Diversity, Supply Chain Integration

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## I.O INTRODUCTION

### 1.1 Background of the Study

Increasingly, corporations rely on Supply Chain Management (SCM) to help them achieve business goals and objectives (such as increasing profitability, enhancing processes and quality, and achieving cost reductions/containment) (Ballenger, 2015). Additionally, the complexity and size of SCM organization have grown. Today's obstacles include sourcing for global business operations, the implementation of new procurement models, technology applications, a skilled workforce, and social responsibility. Supplier diversity is a process that identifies diverse supply partners and integrates inclusive practices systemically (Bernon, et al. 2013). Buyers, particularly in the public sector, as well as leaders at all levels of the organization, are introducing new suppliers with novel approaches to value creation and problem solving. In contrast, they are embracing the notion of supplier inclusion, actively promoting and engaging in Minority and Women-owned Business Enterprise utilization and development in order to fulfil the promise of supplier diversity and maintain supply chain performance (Bernon, et al. 2013).

Supply chain inclusivity refers to the practice of actively seeking out and engaging with diverse suppliers, including those owned by women, minorities, veterans, and individuals with disabilities, in order to create a more equitable and sustainable supply chain (Johnson & Chichirau, 2020). This can include implementing supplier diversity programs, setting goals for diversifying the supplier base, and regularly assessing and reporting on progress towards these goals. By increasing inclusivity in the supply chain, companies can benefit from a wider range of ideas and perspectives, improved access to new markets, and a stronger reputation as a socially responsible business (Abbasi, 2017). Supplier inclusivity programs recognize that sourcing products and services from previously under-used suppliers helps to sustain and progressively transform a company's supply chain, thus quantitatively reflecting the demographics of the community in which it operates by recording transactions with diverse suppliers. Supply chain inclusivity practices can have positive impacts on businesses and communities, but history suggests that program implementation has been difficult and, in some cases, borderline ineffective (Abbasi, 2017). In CVM Solutions' 2018 State of Supplier Diversity Report, only 32 percent of respondents rated their supplier diversity programs as very effective, up 7 percentage points from their 2017 report (Porter, 2019).

In the public sector, supply chain inclusivity is considered a government attempt to use the huge public expenditure to achieve socio economic objectives (Kalkanci et al., 2019). This justifies the need for inclusivity practices. In Kenya for instance, small and medium sized enterprises form the largest percentage of businesses. These SME's have inadequate capacity to enable them to compete favourably in the increasing competitive procurement marketplaces, a situation attributed to increased costs of production due to inadequate production techniques and shortage of expertise (Ambe, 2019). There exists structural and behavioural facets that can be attributed to the status quo including firm size, operational efficiency, product development capability, knowledge of government requirement as well as production methods and technologies. Government thus protect such firms through enabling inclusivity in procurement processes for Public procurement entities such as parastatals. For instance, to ensure these opportunities are accessible to underrepresented groups, Kenya has set out to give 30 percent of public procurement opportunities to women, the youth, or people with disabilities at both the national and local level (Mohammed, 2019).

### 1.2 Statement of the Problem

In recent years, there has been a growing recognition of the importance of diversity and inclusivity in supply chain management. This includes a focus on promoting diversity and inclusivity within the workforce, as well as in the supply chain itself. Governments while deploying public funds for the provision of goods, works and services have realized the need to use supply chain function to advance social and economic development by ensuring the inclusion of otherwise excluded (Ziolo, et al. 2017). The benefits of this approach are wide-ranging and include both financial and social advantages. Some examples of these benefits include improved decision-making, increased



innovation, and enhanced social responsibility. Additionally, it has been shown that companies with diverse and inclusive supply chains tend to perform better financially than those without such practices in place. However, there is still a lot of work to be done in this area and further research is needed to fully understand the impact of diversity and inclusivity on supply chain management.

Inclusion of all, including disadvantaged groups in supply chain is increasing becoming an important function of any government for several reasons (Thai, 2017). First, the sheer magnitude of Disadvantaged Groups in supply chain outlays has a great impact on the economy and needs to be well managed. Indeed, in all countries in the world, estimates of the financial activities of government procurement by the youth are believed to be in the order of 10% – 30 % of GNP (Muthoka & Iravo, 2017). Many governments now practice gender mainstreaming when designing national budgets (also referred to as gender responsive budgeting) to make sure national economic planning pays adequate attention to the unique challenges of women and other disadvantaged group in accessing public procurement (World Bank, 2015).

In Kenya, historically, citizens have felt the impact of corruption in many ways, produced mainly by the loss and waste of public resources in flawed procurement processes (Hope, 2017). According to locals, the political elites have repurposed the machinery of government into a temporary zone for personalized appropriation. Through the Open Government Partnership, the country is seeking to respond to the Sustainable Development Goals (SDGs) Agenda of leaving no one behind and their national values and principles of governance, including human dignity, equity, social justice, inclusiveness, equality, human rights, non-discrimination and the protection of the marginalized (Weber, 2017). To ensure these opportunities are accessible to underrepresented groups, Kenya has set out to give 30 percent of public procurement opportunities to women, the youth, or people with disabilities at both the national and local level (Mohammed, 2019). Through their Open Government Partnership action plan, citizens across the country and in different counties are ensuring the open contracting data standards are implemented effectively and are making sure these opportunities really benefit the targeted group (Mohammed, 2019). Despite the efforts that have been done by governments and especially in Kenya, where inclusivity practices have been implemented at national and county government, little research have been done to establish whether these inclusivity practices leads to performance of state corporations. Kiswili and Ismail (2016) studied the role of sustainable supply chain practices on supply chain performance of manufacturing sector in Kenya. The study included preferences and reservations as one of the variables and established it contributed to organizational performance. However, this is only a small aspect of inclusivity practices and the study did not include state corporations in energy sector. Thairu and Chirchir (2016) studied the implementation of the youth preference and reservations policy in public procurement and found that youth preference and reservations policy in public procurement had not been fully implemented. The study however, did not attempt to determine the performance of the entities that had implemented the policy. On the other hand, Nderitu and Karanja (2016) studied the effect of reserved tendering on supply chain performance in state corporations in Kenya and found that reservation practices had a significant positive impact on procurement performance. From the trend therefore, majority of studies on supply chain inclusivity have focused on preferences and reservations in public procurement and therefore ignored the holistic supply chain inclusivity aspects such as supply chain diversity, supply chain integration and stakeholder involvement. Additionally, extant studies have focused on compliance with preferences and reservation and not their influence on performance. Furthermore, studies have not been conducted on state corporations in the energy sector. This study sought to fill this observable gap by determining the influence of supply chain inclusivity on performance of state corporations in the energy sector in Kenya.

### 1.3 Objectives of the Study

#### 1.3.1 General Objective



The general objective of this study was to determine the influence of supply chain inclusivity on performance of state corporations in the energy sector in Kenya

### **1.3.2 Specific Objectives**

- a) To determine the influence of discriminatory procurement on performance of state corporations in the energy sector in Kenya
- b) To examine the influence of stakeholder involvement on performance of state corporations in the energy sector in Kenya
- c) To determine the influence of supply chain diversity on performance of state corporations in the energy sector in Kenya
- d) To examine the influence of supply chain integration on performance of state corporations in the energy sector in Kenya.

### **1.4 Research Questions**

- a) What is the influence of discriminatory procurement on performance of state corporations in the energy sector in Kenya?
- b) What is the influence of stakeholder involvement on performance of state corporations in the energy sector in Kenya?
- c) What is the influence of supply chain diversity on performance of state corporations in the energy sector in Kenya?
- d) What is the influence of supply chain integration on performance of state corporations in the energy sector in Kenya?

### **1.5 Scope of the Study**

The focus of this study was on the influence of supply chain inclusivity on the performance of energy sector state corporations in Kenya. Nine (9) energy sector corporations in Kenya that were covered in the study include Rural Electrification Authority (REA); Geothermal Development Company (GDC); Kenya Power & Lighting Company Limited (KPLC); Kenya Electricity Generating Company (Kengen); Kenya Electricity Transmission Company (KETRACO); Kenya Nuclear Electricity Board (KNEB); National Oil Corporation (NOCK); Kenya Petroleum Refineries Ltd (KPRL); and Kenya Pipe Line Ltd (KPC). The study involved collecting information from a target population of employees based in the procurement and finance departments. This study only focused on the following components of supply chain inclusivity; discriminatory procurement, stakeholder involvement, supply chain diversity and supply chain integration. The study used primary data, which was collected using questionnaires.

## **LITERATURE REVIEW**

### **2.2 Theoretical Review**

A theoretical framework refers to the manner in which the researcher develops thoughts on what the possible answers could be and these thoughts and theories are then clustered into themes that frame the subject. The present study focuses on influence of supply chain inclusivity on performance of state corporations in energy sector in Kenya. The supporting theories include: Public Value Theory, stakeholder theory, resource based view theory and Network theory.

#### **2.2.1 Public Value Theory**

Moore (1995) proposed the Public Value theory to explain how acquisition of public resources benefits the public. How public organizations produce value for citizens and society is explained by public value theory. Considering the viewpoints and needs of citizens, lawmakers, and other organizations in decision-making and management is stressed. Public value theory emphasizes ongoing evaluation and adaptation to improve public service effectiveness and efficiency.

Public value theory holds that public organizations should prioritize citizen and societal value over bureaucratic aims like efficiency and cost-effectiveness. This means public entities should be proactive in identifying and addressing the needs and concerns of residents and other stakeholders and produce value in meaningful and relevant ways. Another key concept in public value theory is "co-



creation" of value. This means public entities should actively involve citizens and other stakeholders in public service design, delivery, and evaluation. By incorporating citizens and other stakeholders, public organizations can better understand their needs and preferences and modify their services and initiatives to satisfy them.

Public companies must be flexible in response to input and review to create value. This means businesses should constantly assess their performance and service impact and make modifications and improvements. Continuous evaluation and modification are necessary to ensure that public organizations are satisfying people's and society's requirements and enhancing public services. Collaboration between public organizations and stakeholders is also stressed in the public value theory. Citizens, private sector organizations, and other stakeholders should collaborate with public organizations to identify and address shared challenges and opportunities and co-create solutions that benefit all parties. This strategy can help build stronger, more resilient communities and align governmental services with residents' and stakeholders' demands.

The idea helps public sector procurement managers comprehend their constraints and possibilities and the need to produce publically valuable results. The notion sees managers going above legal and institutional rules (Bryson, Crosby & Bloomberg, 2014). It involves looking for ways to boost public living standards. Public value theory gives public procurement sector managers a more proactive and strategic obligation to locate, classify, and develop public value rather than just finding ways to achieve legislated goals, according to Moore (1995). The theory states that government spending serves the public. This means that government spending should include women, youth, people with disabilities, and those with limited government access. Thus, the argument supports discriminatory procurement to include populations that are less fortunate..

### **2.2.2 Stakeholder Theory**

Freeman (1984) established the idea that organizations have stakeholders and described the basic stakeholder concept. The stakeholder method is effective for understanding the firm's environment. Mitchell et al. (1997) suggest that this approach broadens management's tasks and responsibilities beyond profit maximization and stakeholders identified in input output models of the company to encompass non-stockholding group interests and claims. Donaldson and Preston (1995) explained that the stakeholder model states that all legitimate interests in an enterprise participate to get benefits and that there is no prioritization of interests and benefits. Stakeholder theory states that in addition to stockholders, communities, community groups, trade unions, trade associations, environmental groups, governmental bodies, associated corporations, employees, customers, and the public must be considered. Stakeholder theory states that the organization has numerous constituent groups and can gain and sustain their support by evaluating and balancing their interests (Jones & Wicks, 1999).

The primary goal of stakeholder theory was to help managers understand and strategically manage stakeholders (Freeman, 1999). Several studies (Jawahar & McLaughlin, 2001; Mitchell et al., 1997; Rowley & Moldoveanu, 2003) have shown that treating stakeholders fairly is crucial to an organization's long-term success. Clients, project managers, designers, subcontractors, suppliers, funding organizations, users, owners, employees, and local communities are stakeholders (Newcombe, 2003). Thus, a comprehensive construction management literature exists on identifying and managing stakeholder interests and connections. Suppliers, media, environmentalists, training organizations, public regulators, local community organizations, clients/owners, local and regional communities, construction firms, employees, and other government departments are stakeholders in CDF works procurement.

The theory helps explain how all stakeholders can participate in public procurement in this study. Effective stakeholder management begins "with key stakeholder identification," according to Newcombe (2003). Organizations can decide stakeholder management methods by determining stakeholder groups' strategic importance. Thus, the government should identify and include all public procurement players through media advertising of contracts..

### **2.2.3 Resource Based View Theory (RBV)**

The Resource Based View (RBV) viewpoint comes from strategic management. It was launched by Barney in 1991. RBV states that companies with scarce, valuable, non-replaceable, and hard-to-imitate resources and abilities will have an edge over competitors (Wernerfelt, 1984). Scarcity refers to market perception of resource shortage. Value is the degree to which resources fit the external environment to capitalize on opportunities and prevent risks. The extent to which competitors can provide comparable resources is called substitutability. Inimitableness is when competitors cannot access or copy resources or can do so at a significant cost disadvantage (Hoskisson et al., 1999). RBV states that organizations seek resources that will boost their market competitiveness and utilize their value (Sirmon et al., 2007). RBV states that a company's distinctive expertise, which can be transmitted from various tangible and intangible assets, drives organizational performance and Intelligent advantages (Wernerfelt, 1984).

The Resource-Based View (RBV) hypothesis supports supplier diversity by arguing that a firm's resources and capabilities determine its performance. This thesis states that uncommon, inimitable, and non-substitutable corporate resources and competencies are valuable. Diversifying suppliers gives a company more resources and competencies, which can boost its competitiveness and performance. RBV theory also advocates using a company's resources and competencies to get an edge. Diversifying suppliers can provide a company access to new resources and capabilities, helping it stand out from competitors. This allows the organization to enter new markets and develop new products and services.

RBV theory also advocates using a company's resources and skills to gain a sustainable competitive advantage. Diversifying suppliers reduces a company's dependence on one source, reducing supply interruption risk. This helps assure a more constant and reliable supply of goods and services, which can help preserve a competitive advantage. In conclusion, the Resource-Based View hypothesis can justify supplier variety by highlighting its benefits in terms of resources, capabilities, and competitive advantage. Diversifying suppliers can boost a company's performance, lessen its dependence on one supplier, and generate a long-term competitive edge.

#### **2.2.4 Network Theory**

David Ford brought network theory to supply chain management in his 2002 "Managing Supply Chain Risk: A Network Theory Perspective" in "Production and Operations Management". Ford's research was one of the first to apply network theory to supply chains and highlight the need of examining partner connections to understand and manage risk. The network theory is a prominent purchasing and supply management concept from recent decades. In general, network theory defines the relationships between firms, suppliers, customers, and purchasers. The thesis was first proposed in the 1970s and 1980s and moved from focusing on strategic alliances between two corporations to encompassing diverse supply chain counterparts. Harland (1996) defines a network as a relationship between people, things, or events. Chang, Chiang, and Pai (2012) describe the supply chain network as a complicated model whose context depends on network member connections (p. 1114). According to Thorelli (1986), a "network" is two or more organizations with long-term ties. Networks also benefit all organizations through the investments and behaviors of other participants (Hkansson & Ford, 2002).

Network theory and supply chain integration have similar focus on supply chain partner interactions. Network theory explains how these relationships affect supply chain performance, while supply chain integration focuses on coordination and collaboration to optimize performance. Network theory states that a network's value depends on its relationships. Stronger partnerships boost trust, communication, and cooperation, which can improve supply chain performance and minimize risk. By increasing communication and coordination, supply chain integration helps boost partner relationships. Another important idea is the bullwhip effect, which occurs when a lack of supply chain coordination and communication causes tiny retail demand changes to cause big supplier demand fluctuations. Integration can lessen the bullwhip effect by enhancing supply chain communication and coordination.

Network theory also emphasizes supply chain partner interdependence. A disruption or alteration in one supply chain segment can affect the entire network. Supply chain integration improves visibility and communication, allowing partners to respond swiftly to disturbances. Thus, network theory and supply chain integration can be utilized together to understand and enhance supply chains. Network theory explains the structure and dynamics of supply chain partner interactions, whereas supply chain integration improves performance through coordination and collaboration..

### 2.3 Conceptual Framework

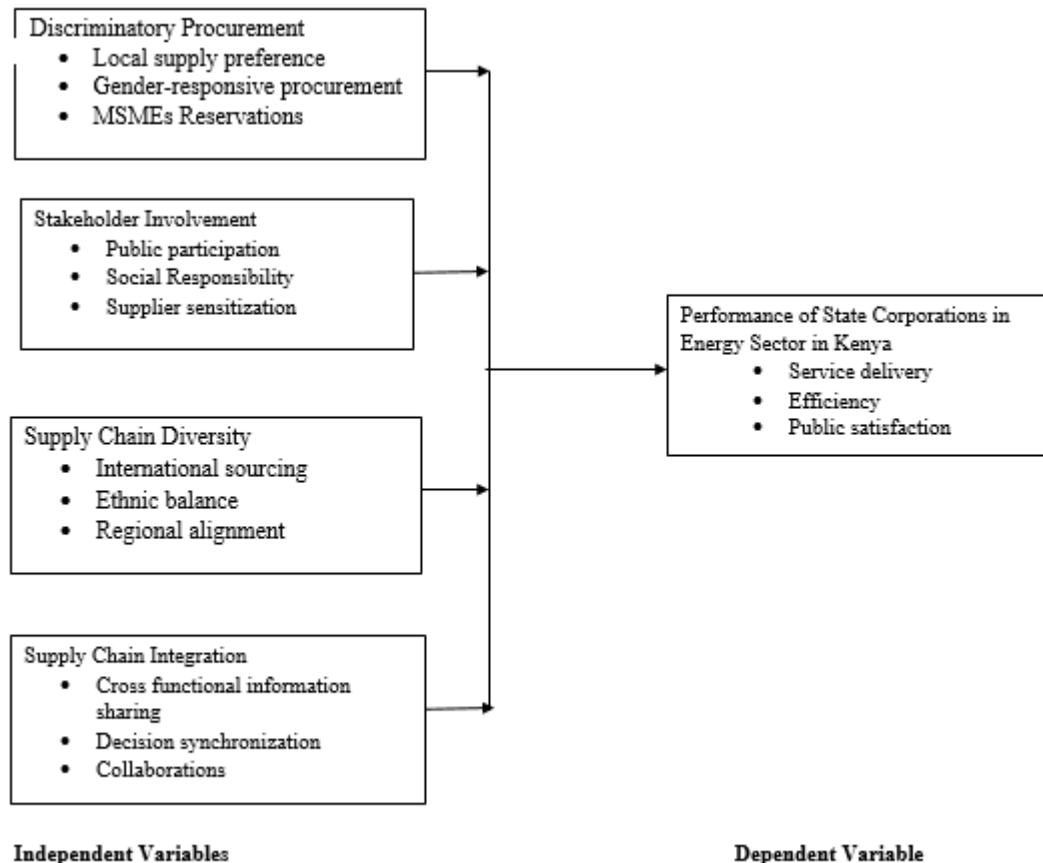


Figure 2. 1: Conceptual Framework

### 2.4 Empirical Review

#### 2.4.1 Discriminatory Procurement

Several authors have examined the influence of Preference and reservations practices on performance of organization. Ngeno, Namusonge and Nteere, (2014) studied the effect of discriminatory public procurement practices including preferences and reservation on organizational performance. This study adopted both qualitative and quantitative research design. The population of interest for this study was State Corporations in Kenya. Data collection was undertaken by surveying all State Corporations in Kenya. The study interviewed 139 procurement managers from the corporations, out of which 100 responded. Both primary and secondary data was used for the study. Data analysis methods employed included quantitative and qualitative procedures. In addition, a multiple linear regression model of effects of discriminatory public procurement practices versus organizational performance was applied to examine the relationship between the variables. The model treated organizational performance as the dependent variable while the independent variables were discriminatory public procurement practices including; reservations, preferences, indirect practices

and supply side practices. The study concluded that supply chain discriminatory practices, positively influenced the performance of State Corporations in Kenya.

Monari, Iravo, and Kibet (2017) analyzed the factors influencing performance discriminatory policy or reservation among persons with disabilities at Moi Teaching and Referral Hospital. The study adopted a survey study design. It revolved around the persons with disabilities preference and reservations policy. Focus Group Discussions and questionnaires formed the studies primary data collection tools. The study focused on the senior management heads in the procurement department, persons with disabilities and the procurement officers. The study adopted purposive sampling on the senior management of procurement department and simple random sampling on the procurement officers and PWDs. Data was tabulated and statistically analyzed using both descriptive and inferential statistics descriptive statistics involved percentages, frequencies while inferential statistics adopted regression model. From the findings, the performance of preference and reservation policy is still low and therefore there is need to adhere to the constitution on the 30% reservation for the youth, women and persons with disabilities.

Kituyia et al., (2017) studied the effect of procurement reservation practices on service delivery in Kenya, an element of discriminatory procurement. The paper reviewed the relevant literature and the considerable argument and conversion of procurement reservations practices on service delivery in Kenya. The results of the review indicated that public procurement preference and reservations policy among the youth, women and people women, youth, persons living with disabilities still not been fully implemented. On average, the government enterprises have not fully prioritized the special groups in their procurement opportunities. To meet the goals there is need to take strategic measures that include among others strict regulations and compliance to ensure optimal service delivery to the entire public.

Kiswili and Ismail (2016) studied the role of sustainable procurement practices on supply chain performance of manufacturing sector in Kenya and considered preferences and reservation, a part of discriminatory supply chain, as one of their variables. The study adopted a case study research design. The target population of interest in this study consisted of staff members at East African Portland Cement Company (EAPCC) headquartered in Machakos County. The research adopted a stratified random sampling technique in selecting the sample. The study used primary data, which was collected through use questionnaires. The study also made use of secondary sources of information. Data was classified, tabulated and summarized using descriptive measures while tables were used for presentation of the findings. Pearson's correlations coefficients was run to examine the relationship between the independent and the dependent study variables that are set out in the objectives of the study. Effects of procurement preferences and reservations was found to be statistically significant with a positive impact on supply chain performance.

#### **2.4.2 Stakeholder Involvement**

Somba (2017) examined the role of procurement practices on the performance of projects funded by Constituency Development Fund in Kenya and considered the role of stakeholders. The target population was all the projects funded by CDF in Machakos County constituencies. The study used stratified random sampling and the sample size was 450 projects. The study used questionnaires for data collection, which were self-administered by research assistants. Qualitative and quantitative data was coded and entered in Statistical Package for Social Sciences (SPSS) for analysis. Descriptive statistics were generated. To test the relationship between independent and dependent variables correlation analysis was undertaken where all the independent variables were positively correlated with the dependent variable. To test the predictability role of the model and test of hypothesis, logistic regression was used where the results showed that contract management had the highest predictability role in the model. For stakeholder management regular communication with stakeholders was ranked as the most effective stakeholder management method followed by mutual trust and respect amongst the stakeholders.

Njagi et al., (2020) conducted a study on achieving public participation through risk management for sustainable procurement management in devolved system of governments in Kenya. The target



population was 1146 while 348 respondents were sampled through a stratified sampling method from Makueni, Machakos, and Kitui Counties. Semi-structured questionnaires were used to collect data, descriptive and inferential statistics were used to analyze collected data while the F-test was used to test the hypothesis of the study. SPSS aided in data analysis. Key findings of the study indicated a positive and linear relationship between public participation (risk management) and sustainable procurement management. A recommendation is therefore made to both national Government and county governments to stipulate and implement policies that would improve public participation to improve sustainable procurement management in devolved systems of government.

Opiyo (2017) studied the role of public participation on performance of devolved governance systems in Kenya. A survey research design was adopted in this study. The study population comprised of all the counties in Kenya. Cluster and purposive sampling techniques were used in this study involving 400 respondents. Questionnaires and interview guides were used in the collection of relevant data. Data was analyzed and presented using the SPSS software and spreadsheets. A response rate of 84% was achieved. The study found out that effective handling of all forms of conflicts and their root causes among stakeholders is critical for enhanced performance of devolved governance systems in Kenya. The study also revealed that establishing effective stakeholder identification processes ensures inclusivity and equity in planning and implementation thus avoiding unnecessary conflicts that stifle performance.

Onchiri and Kwasira (2016) examined the influence of end users involvement in procurement decision making on purchasing performance. The target population for the study included all employees in Kenya Police College, Kiganjo. All the employees were involved in the study making this a census study. The study was guided by consumer involvement theory and principal-agency theory. Data was collected through structured questionnaires that were issued through drop and pick technique. Collected data were coded and analyzed through SPSS and presented through tables accompanied by relevant discussions. The research variables were studied through descriptive statistics (mean and standard deviation) while the influence of end user involvement on purchasing performance was studied through inferential statistics (correlation and regression analysis). F-test was used to test research hypotheses. A multiple regression model was developed to guide the study. The findings revealed a statistically significant influence of stakeholder involvement on performance of purchasing activities.

Dacha and Juma (2018) studied the effect of stakeholder participation on the efficiency of the procurement process in the public sector. The research used descriptive survey research design in collecting data from respondents. The study covered a population of 160 employees in the institution and used probability random sampling technique with a sample size of 48 employees. The instrument of data collection was questionnaires. The data was analyzed using quantitative methods and the data presentation was in form of pie charts and table diagrams. The findings were that there is no user involvement in the procurement process meaning that there is some dissatisfaction with the procurement process, top management does not support stakeholder participation in the procurement process and there is minimal stakeholder interaction as the procurement process is carried out. It was concluded that sensitization of stakeholders on the importance of the procurement process and it was recommended that the stakeholders need to be included to improve the efficiency of the procurement process.

#### **2.4.3 Supply Chain Diversity**

Apopa (2018) sought to determine the influence of supply chain management practices on performance of government ministries in Kenya and used supply chain diversity variable as a concept of systematic inclusivity practices. The study adopted cross sectional study design. The unit of analysis for this study was 20 government ministries with a target population of 1372 staff working in the supply chain management department/units. Stratified random sampling was used; both primary and secondary data were used. The study made use of questionnaires to collect primary data. A pilot test was conducted to test the reliability and validity of the data collection instruments. SPSS software program version 22 was used to facilitate data processing and analysis. Thematic content analysis was

used to analyze qualitative data while descriptive and inferential statistics were used to analyze quantitative data. Organizational culture moderating effect was tested by F- test. The study found that supply chain diversity significantly influence the performance of government ministries in Kenya.

Buuri (2016) studied factors affecting implementation of open tendering process in public institutions, which is part of fostering diversity. The research was aimed at assessing the various factors affecting implementation of open tendering process with aim of improving its use and performance. The research focused on how various public institutions chose other procurement processes over open tendering process. The research was aimed at comparing the independent variables against the independent factor, which is the implementation of the open tender process. The data collection instrument was a questionnaire that was self-administer with the help of research assistants. The collected data was analyzed using descriptive statistics and inferential statistics namely Pearson Product Moment Correlation and T-test and presented by use of tables. The study findings indicated that there was need for strong procurement procedures and adequate training of staff is required for good practices in procurement and creating efficiency in the tendering process in the county.

#### **2.4.4 Supply Chain Integration**

Hwang, Chang, LaClair and Paz (2013) performed a systematic review of current literature with an aim of assessing the association between integrated healthcare delivery systems and changes in costs and quality. The study reviewed 21 peer-reviewed articles from United States between years 2000 and 2001 related to integrated delivery systems, costs and quality in healthcare. Majority of the studies indicated that integrated delivery systems have positive effects on quality of care. However, none of these studies measured cost reduction directly but used reduction in utilization of services instead, indicating decrease in the utilization of service with increases in integration.

Msimangira and Venkatraman (2014) investigated the emerging concept of SCM integration (SCMI) with an aim of identifying SCMI problems and possible solutions. The study applied an exploratory design where data was collected using open discussions and brainstorming among supply chain personnel in New Zealand. The study found that SCMI required a holistic approach; two-way communication; written service level agreements; relationship management; use of new technologies and integrated software systems; strategic alliances and trust; integrated processes; effective partnership; and predictive cost/benefit analysis of SCM. The study recommended investment in SC analytics to facilitate information and knowledge management and enhancement of SC integration.

Wright (2016) also investigated the relationship between supply chain integration and overall firm's performance in Romania. The study used secondary data of 202 manufacturing firms in Romania. The study used logical regression method to determine if vertical integration increased the probability of superior performance. The study found a strong relationship between high operating margins and superior performance of firms in Malaysia. The study proved that it was valuable for companies to develop competences through vertical integration to protect it from turbulent environment. The study therefore supports development of competences as a basis for improving organizational performance. However, it is important to assess if the findings still apply in Kenya as well as in the educational SC.

Cheruiyot (2013) examined the impact of integrated supply chain on the supply chain performance in KTDA. The study used primary data and collected data from 199 employees from purchasing and supplies sections drawn from 65 KTDA managed factories in Kenya. The findings indicated that the supply chain integration (both upstream and downstream) was positively associated with supply chain performance (raw material purchasing cost, transport cost, distribution cost, asset turnover and inventory holding cost). Njagi and Ogutu (2014) studied the impact of supply chain integration on supply chain performance in State Corporations in Kenya. A census study was conducted where fifteen (15) corporations were studied in order to assess the level of upstream and downstream integration and the relationship between integration and performance of state corporations. The study findings revealed a positive and significant correlation between supply chain integration and performance of the state corporations studied in Kenya.

## 2.5 Critique of Empirical Literature

Monari, Iravo, and Kibet (2017) analyzed the factors influencing performance of the preference and reservation policy among persons with disabilities at Moi Teaching and Referral Hospital. From the findings, the performance of preference and reservation policy is still low and therefore there is need to adhere to the constitution on the 30% reservation for the youth, women and persons with disabilities. The study thus focused on extent of adoption of supply chain inclusivity and not whether the implementation led to increased performance.

Wright (2016) also investigated the relationship between supply chain integration and overall firm's performance in Romania. The study proved that it was valuable for companies to develop competences through vertical integration to protect it from turbulent environment. The study therefore supports development of competences as a basis for improving organizational performance. However, it is important to assess if the findings still apply in Kenya.

Ngeno, Namusonge and Nteere (2014) studied the effect of discriminatory public procurement practices including preferences and reservation on organizational performance. The study however was based on performance of state corporations in Kenya in general and not those in energy sector. Kituyia et al., (2017) studied the effect of procurement reservation practices on service delivery in Kenya. The results of the review indicated that public procurement preference and reservations policy among the youth, women and people women, youth, persons living with disabilities still not been fully implemented. The study therefore focused on determining the degree of implementation of preferences and reservation and not how they influence performance.

Kiswili and Ismail (2016) studied the role of sustainable procurement practices on supply chain performance of manufacturing sector in Kenya and considered preferences and reservation as one of their variables. Effects of procurement preferences and reservations was found to be statistically significant with a positive impact on supply chain performance. The study was however based on a manufacturing firm and not parastatals. The study was also on sustainable procurement practices as opposed to inclusivity practices.

Apopa (2018) sought to determine the influence of supply chain management practices on performance of government ministries in Kenya and used supply chain diversity variable as a concept of systematic inclusivity practices. The study found that supply chain diversity significantly influence the performance of government ministries in Kenya. While diversity was used as variable, the study exclusively focused on sustainability practices.

Buuri (2016) studied factors affecting implementation of open tendering process in public institutions, which is part of fostering diversity. The study findings indicated that there was need for strong procurement procedures and adequate training of staff is required for good practices in procurement and creating efficiency in the tendering process in the county. The study did not explain how open tendering encourages diversity and consequently performance of organizations. Onchiri and Kwasira (2016) examined the influence of end users involvement in procurement decision making on purchasing performance. The findings revealed a statistically significant influence of user involvement on performance of purchasing activities. The study however was based on purchasing performance and not the performance of the whole organization.

On the other hand, Nzovila (2019) examined the end user involvement and supply chain performance in Kenyan universities. All the user involvement practices used had significant positive impact in performance. The study was however, conducted on a university setting which might differ from the context of other parastatals like in Energy sector. Muriuki (2015) studied the International procurement and operational efficiency in major logistics multi-national firms in Mombasa, Kenya. The study recommends that logistics firms should shorten the mandatory internal procurement processes in order to hasten internal administrative procedures for approvals and monitoring. The study was however focused on operational efficiency and not performance.

Kitheka (2018) researched on the influence of sourcing ethics on procurement performance of state corporations in Kenya and used supplier diversity to represent regional alignment practices. Findings of the study showed supplier diversity had significant and positive effect on procurement performance



of the Kenyan state corporations. The study was however on procurement ethics and not inclusivity practices.

## 2.6 Research Gap

Different gaps have emerged from the existing studies on the inclusivity practices and performance. For instance, Monari, Iravo and Kibet (2017) in the analysis of factors influencing performance of the preference and reservation policy among persons with disabilities at Moi Teaching and Referral Hospital left a gap on whether implementation of these practices led to performance. Similarly, Ngeno, Namusonge and Nteere (2014) found that reservations, preferences and indirect practices, positively influenced the performance of State Corporations in Kenya but did not research on state corporations in energy sector. Kituyia et al., (2017) studied the effect of procurement reservation practices on service delivery in Kenya and found public procurement preference and reservations policy among the youth, women and people women, youth, persons living with disabilities still not been fully implemented. The study was based on the extent of implementation leaving a gap on the link between inclusivity procurement practices and performance. Kiswili and Ismail (2016) studied the role of sustainable procurement practices on supply chain performance of manufacturing sector in Kenya and considered preferences and reservation as one of their variables. The study however left a gap on the state corporations' aspect as it was based on manufacturing firms. Other gaps found in the empirical literature include focus on procurement performance and not organizational performance (Onchiri & Kwasira, 2016) and focus on operational efficiency and not performance (Muriuki, 2015).

## 3.0 METHODOLOGY OF THE STUDY

The research design for this study involves arranging conditions for data collection and analysis to achieve both research relevance and procedural efficiency. It serves as the blueprint for data collection, measurement, and analysis, dictating the study's execution, sample selection, and analysis procedures. Paradigms known as approaches guide the research framework, encompassing quantitative, qualitative, or mixed methods. The study adopted a descriptive survey design, suitable for describing individuals, organizations, settings, or phenomena. The population of interest is nine State Corporations operating in Kenya's Energy sector. A census approach was utilized due to the limited population size. Purposive sampling was applied to select 180 participants (20 employees per organization) from procurement and finance departments, ensuring representation. Primary data was collected using a questionnaire featuring closed questions. These questions limit respondents to study variables, aiding quantitative analysis. The questionnaire addressed specific study objectives, split into basic information and study variable sections. A pilot study assessed instrument reliability and validity. Reliability was evaluated via Cronbach's alpha, showing internal consistency. Validity was ensured through both construct and content validity. Experts in supply chain management reviewed and improved the questionnaire.

Data analysis involved quantitative methods, using SPSS version 26 for descriptive and inferential statistics. Pearson correlation and multiple regression analyses were conducted. The study combined statistical and graphical techniques for data presentation, facilitating comprehensive insights into the influence of training evaluation on employee performance at the Kenya School of Government

## 4.0 RESULTS AND DISCUSSIONS

### 4.1 Response Rate

In this study, out of the 180 questionnaires that were administered, 159 were filled and returned, recording an 88.33 % response rate as shown in Table 4.1, which was adequate for the analysis in this study. This response rate conforms to Ebert, Huibers, Christensen and Christensen (2018) affirmation as cited by Nyile (2023); Charles, & Omwenga (2018) that a 50% response rate is sufficient for analysis; a rate of 60% is good and that of above 70% is exceptional.

**Table 4. 1: Response Rate**

Category	Frequency	Percent
Response	159	88.33
Non response	21	11.67
<b>Total</b>	<b>180</b>	<b>100</b>



## 4.2 Descriptive Analysis of the Study Variables

### 4.2.1 Discriminatory Procurement

The study sought to determine the influence of discriminatory procurement on performance of state corporations in the energy sector in Kenya. This objective was measured using local supply preference, gender responsive procurement and MSMEs reservations as indicators in the opinion statements given. Respondents were asked to indicate the extent to which discriminatory procurement influence the performance of state corporations in the energy sector in Kenya.

**Table 4.2: Responses on the influence of discriminatory procurement on performance of state corporations in the energy sector.**

Statements on Discriminatory Procurement	1 %	2 %	3 %	4 %	5 %	Mean	Std Dev
We have set a reservation scheme for youths in procurement as per AGPO guidelines	0 (0)	0 (0)	1 (0.63)	59 (37.11)	99 (62.26)	4.62	0.324
We have tenders exclusive for people with disability	0 (0)	0 (0)	0 (0)	5 (3.14)	154 (96.86)	4.97	0.231
We have tenders that are exclusive for women	0 (0)	0 (0)	2 (1.26)	25 (15.72)	132 (83.02)	4.82	0.128
We have reservation for micro, small and medium enterprises	0 (0)	0 (0)	0 (0)	28 (17.61)	131 (82.39)	4.82	0.224
We have a percentage of procurement set only for local suppliers	0 (0)	0 (0)	2 (1.26)	37 (23.27)	120 (75.47)	4.74	0.356

Key: 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree

### 4.2.2 Stakeholder Involvement

The study sought to examine the influence of stakeholder involvement on performance of state corporations in the energy sector in Kenya. This objective was measured using public participation, social responsibility and supplier sensitization as indicators in the opinion statements given. Respondents were asked to indicate the extent to which stakeholder involvement influence the performance of state corporations in the energy sector in Kenya.

**Table 4. 3: Responses on the influence of discriminatory procurement on performance of state corporations in the energy sector.**

Statements on stakeholder Involvement	1 %	2 %	3 %	4 %	5 %	Mean	Std Dev
Stakeholders are consulted and involved in supply chain decision-making processes	0 (0)	0 (0)	5 (3.14)	87(54.72)	67(42.14)	4.39	0.376
Stakeholder have avenues for providing feedback and raising concerns about procurement process	0 (0)	1 (0.63)	6 (3.77)	56 (35.22)	96(60.38)	4.55	0.398
We often communicate with stakeholders about our activities and performance	2 (1.26)	2 (1.26)	10 (6.29)	45 (28.30)	100(62.89)	4.50	0.312
There is transparency on the supply chain processes	0 (0)	0 (0)	9 (5.66)	28 (17.61)	122(76.73)	4.71	0.289
Stakeholder have an active role in ensuring the organization meets its supply chain	0 (0)	0 (0)	2 (1.26)	37 (23.27)	120 (75.47)	4.74	0.356

obligations.							
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Key: 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree.

#### 4.2.3 Supply Chain Diversity

The study sought to determine the influence of supply chain diversity on performance of state corporations in the energy sector in Kenya. This objective was measured using international sourcing, ethnic balance and regional alignment as indicators in the opinion statements given. Respondents were asked to indicate the extent to which supply chain diversity influence the performance of state corporations in the energy sector in Kenya.

**Table 4. 4: Responses on the influence of supply chain diversity on performance of state corporations in the energy sector.**

Statements on Supply Chain Diversity	1 %	2 %	3 %	4 %	5 %	Mean	Std Dev
Our company actively seeks to include a diverse range of suppliers in its procurement processes	0 (0)	0 (0)	0 (0)	90 (56.60)	69(43.40)	4.43	0.274
Suppliers from different regions, backgrounds, and communities are included in procurement processes	0 (0)	1 (0.63)	6 (3.77)	96(60.38)	56 (35.22)	4.30	0.288
The company considers diversity and inclusiveness when selecting suppliers	0 (0)	0 (0)	0 (0)	59 (37.11)	100(62.89)	4.63	0.198
I am satisfied with the level of diversity among the company's suppliers	0 (0)	0 (0)	9 (5.66)	28 (17.61)	122(76.73)	4.71	0.289
Diverse supplier base helps to promote competition and innovation	0 (0)	0 (0)	0 (0)	37 (23.27)	122 (76.73)	4.76	0.346

Key: 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree.

#### 4.2.4: Supply Chain Integration

The study sought to examine the influence of supply chain integration on performance of state corporations in the energy sector in Kenya. This objective was measured using cross functional information sharing, decision synchronization and collaborations as indicators in the opinion statements given. Respondents were asked to indicate the extent to which supply chain integration influence the performance of state corporations in the energy sector in Kenya.

**Table 4.5: Responses on the influence of supply chain integration on performance of state corporations in the energy sector.**

Statements on Supply Chain Integration	1 %	2 %	3 %	4 %	5 %	Mean	Std Dev
Our supply chain processes are integrated and streamlined	0 (0)	1 (0.63)	6 (3.77)	56 (35.22)	96(60.38)	4.55	0.398
We coordinate and collaborate with suppliers and other stakeholders in the chain	2 (1.26)	2 (1.26)	10 (6.29)	45 (28.30)	100(62.89)	4.50	0.312
We have adequate systems and processes to manage flow of good and	0 (0)	1 (0.63)	6 (3.77)	96(60.38)	56 (35.22)	4.30	0.288

information in the supply chain							
We are able to respond to changes and disruptions in the supply chain	0 (0)	0 (0)	5 (3.14)	87 (54.72)	67 (42.14)	4.39	0.376
We have a well-integrated and efficient supply chain in order to meet customer demands and remain competitive	0 (0)	0 (0)	2 (1.26)	37 (23.27)	120 (75.47)	4.74	0.356

Key: 1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, 5- Strongly Agree.

#### 4.2.5: Performance of State Corporations in the Energy Sector

The study sought to determine the extent the state corporations in the energy sector had achieved performance due to supply chain inclusivity efforts. This objective was measured using set objectives, customer satisfaction, complaints reduction, public satisfaction, product reliability and quality as indicators in the opinion statements given.

**Table 4. 6: Responses on performance of State Corporations in the Energy Sector**

Statements on Performance	Mean
We are constantly achieving our set objectives and delivering on our mission	4.23
We are serving customers well and leaving them satisfied	3.87
Complaints keep reducing	3.98
Our products are reliable and of good quality	3.65
There is high public satisfaction with our services	3.56

#### 4.3 Inferential Analysis

Inferential statistics infer from the sample to the population. They determine probability of characteristics of population based on the characteristics of the sample. Inferential statistics help assess strength of the relationship between the independent variables and the dependent variables.

##### 4.3.1 Correlations of the Study Variables

**Table 4.7: Correlation of the Study Variables**

		Correlations				
		Discriminatory Procurement	Stakeholder Involvement	Supply Chain Diversity	Supply Chain Integration	Performance of State Corporations in Energy Sector
Discriminatory Procurement	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	159				
Stakeholder Involvement	Pearson Correlation	.686*	1			
	Sig. (2-tailed)	.001				
	N	159	159			
Supply Chain Diversity	Pearson Correlation	.516	.397*	1		
	Sig. (2-tailed)	.000	.000			

	N	159	159	159		
Supply Chain Integration	Pearson Correlation	.498**	.472**	.332**	1	
	Sig. (2-tailed)	.001	.000	.000		
	N	159	159	159	159	
Performance of State Corporations in Energy Sector	Pearson Correlation	.402	.441	.303**	.504**	1
	Sig. (2-tailed)	.001	.000	.000	.000	
		159	159	159	159	159

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Table 4.7 indicated that stakeholder involvement and discriminatory procurement have a strong significant positive relationship as attributed by the correlation coefficient of 0.686 and p-value of 0.001. The results shows presence of a positive and significant moderate relationship between discriminatory procurement and supply chain diversity as proved by the p-value and the correlation coefficient ( $r=0.516$ ,  $p\text{-value}<0.005$ ). There is a strong, significant relationship between discriminatory procurement and supply chain integration since the p value of 0.001 is less than 0.05 level of significance, and the correlation coefficient is 0.498.

The correlation matrix table shows presence of strong and significant positive relationship between supply chain integration and stakeholder involvement ( $r=0.472$ ,  $p=0.000$ ). There is an evidence of significant weak relationship between supply chain diversity and supply chain integration as attributed by the p value and correlation coefficient ( $r=0.332$ ,  $p<0.05$ ). The results indicate a positive relationship between supply chain diversity and stakeholder involvement as proved by correlation coefficient of 0.397 and  $p\text{-value}<0.05$ .

From the table, all the independent variables are positively related to performance of state corporations in the energy sector as attested by the respective correlation coefficients: discriminatory procurement ( $r=0.402$ ), stakeholder involvement ( $r=0.441$ ), supply chain diversity ( $r=0.303$ ) and supply chain integration ( $r=0.504$ ). All the relationships are rendered significant since their p values are less than 0.05.

#### 4.7.2 Regression Analysis Results

Multiple regression analysis was used for establishing the relations between the independent and dependent variables.

**Table 4.8: Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.878 <sup>a</sup>	.770	.732	.594
Predictors: (Constant), Discriminatory Procurement, Stakeholder Involvement, Supply Chain Diversity and Supply Chain Integration				

Analysis of variance (ANOVA) was done to establish the fitness of the model used. The ANOVA table 4.9 shows that the F-ratio ( $F=15.66$ ,  $p<0.05$ ) was statistically significant. This means that the model used was appropriate and the relationship of the variables shown could not have occurred by chance.



**Table 4.9: ANOVA**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	23.367	4	5.842	15.66	.000 <sup>a</sup>
	Residual	57.460	154	.373		
	Total	80.827	158			
a. Dependent Variable: Performance of State Corporations in the Energy Sector						
b. Predictors: (Constant), Discriminatory Procurement, Stakeholder Involvement, Supply Chain Diversity and Supply Chain Integration						

**Table 4.10: Regression coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	.281	1.234		.228	.048
	Discriminatory Procurement	.383	.530	.238	.723	.001
	Stakeholder Involvement	.390	.421	.386	.927	.000
	Supply Chain Diversity	.468	.389	.329	1.203	.000
	Supply Chain Integration	.392	.660	.332	0.594	.001
a. Dependent Variable: Performance of State Corporations in the Energy Sector						

The above table gives the results for the regression coefficient for the multiple linear equation ( $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$ ) which by supplying the coefficients becomes:

$$Y = 0.281 + 0.383 X_1 + 0.390 X_2 + 0.468 X_3 + 0.392 X_4$$

Where: Y = Performance of state corporations in the Energy sector

$\beta_0$  = Constant

$X_1$  = Discrimination Procurement

$X_2$  = Stakeholder Involvement

$X_3$  = Supply Chain Diversity

$X_4$  = Supply Chain Integration

According to the regression equation established, holding all independent factors a constant (Ceteris paribus) performance of state corporations in the energy sector in Kenya will be 0.281 units. From the regression equation holding all other independent variables a constant, a unit increase in discriminatory procurement will lead to a 0.383 increase performance of state corporations in the energy sector. A unit change in stakeholder involvement will lead to a 0.390 increase in performance of state corporations in the energy sector; a unit increase in supply chain diversity will lead to a 0.468 improvement in performance of state corporations in the energy sector and a unit increase in supply chain integration will lead to a 0.392 increase in performance of state corporations in the energy sector. Further, at 5% level of significance and 95% level of confidence discriminatory procurement, stakeholder involvement, supply chain diversity and supply chain integration have a significance influence (P-value<0.05) on performance of state corporations in the energy sector with p-values of 0.001, 0.000, 0.000 and 0.001 respectively and therefore their coefficients should be retained in the final model. The results further infers that of all the predictors considered in this study supply chain diversity contributes the most to performance of state corporations in the energy sector followed by supply chain integration, stakeholder involvement and then discriminatory procurement as implicated by their coefficient

## CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusion

#### 5.1.1 Discriminatory Procurement

From the findings of this study, it could be concluded that discriminatory procurement had a positive significant linear influence on performance of state corporations in the energy sector. State corporations had set a reservation scheme for youths in procurement as per AGPO guidelines and have tenders exclusive for people with disability, women and have reservations for micro, small and medium enterprises. Moreover, state corporations have a percentage of procurement set only for local suppliers. Thus, discrimination in procurement can take the form of the government giving preference and reservation to disadvantaged groups.

#### 5.1.2 Stakeholder Involvement

Regarding stakeholder involvement, it can be concluded that stakeholder involvement had a positive significant linear influence on performance of state corporations in the energy sector. The results revealed that stakeholders are consulted and involved in supply chain decision-making processes of state corporations in the energy sector. The state corporations provide avenues to stakeholders to provide feedback and raise concerns about procurement process. Further the results revealed that there is transparency on supply chain processes of state corporations and furthermore the stakeholders are bestowed with an active role of ensuring that these state corporations meet their supply chain obligations.

#### 5.1.3 Supply Chain Diversity

Supply chain diversity was found to have a positive and significant linear influence on performance of state corporations in the energy sector. The results revealed that state corporations in the energy sector actively seek to include a diverse range of suppliers in their procurement processes. Furtherance, these state corporations consider suppliers from different regions, backgrounds, and communities in their procurement processes and thus the companies considers diversity and inclusiveness when selecting suppliers. The diverse supplier base helped to promote competition and innovation in the state corporations.

#### 5.1.4 Supply Chain Integration

From the findings of this study, it could be concluded that supply chain integration had a positive and significant linear influence on performance of state corporations in the energy sector. Supply chain processes of state corporations are integrated and streamlined. The state corporations coordinate and collaborate with suppliers and other stakeholders in the supply chain. Moreover, the state corporations have adequate systems and processes to manage flow of good and information in the supply chain and thus the companies are able to respond to changes and disruptions in the supply chain. In addition, the state corporations have a well-integrated and efficient supply chain in order to meet customer demands and remain competitive.

### 5.2 Recommendations of the Study

The study recommendations are in line with the objectives, findings and conclusion of the study.

#### 5.2.1 Discriminatory Procurement

The findings of this study that discriminatory procurement influence the performance of energy sector state corporations calls for state corporations to institutionalize procurement plans with a total reservation of at least 30% of the procurement budget to the special groups. The study also recommends that state corporations should authenticate tender awards and purchase orders and enter into agreements with relevant financing institutions with an undertaking that the contracted special enterprises be paid through the account opened with the financier. Consequently, the study recommends that local firms be offered more protection to enable them stand chance against the mega global entities.

#### 5.2.2 Stakeholder Involvement

In relation to stakeholder involvement, the study recommends for involvement of citizens, local communities and civil society organizations in the process of purchasing goods and services by the state corporations through provision of input on procurement plans, monitoring procurement

processes, and providing feedback on the quality of goods and services purchased. Public participation in procurement can help ensure that the needs of citizens and local communities are taken into account and that public resources are used effectively and efficiently. Further, the study recommends involvement of stakeholders in supply chain processes through collaborations and communication via regular meetings and discussions to share information and align goals, as well as the use of technology to facilitate information flow and data sharing.

### 5.2.3 Supply Chain Diversity

Based on the findings of this study, it is recommended to state corporations that for them to effectively embrace supply chain diversity there is need to access and mitigate any barriers and bottlenecks that may hinder fair treatment, equity and justice in supply chain processes.

### 5.2.4 Supply Chain Integration

Regarding supply chain integration, the study established that information technology is the backbone of supply chain business as it is used to acquire, process, and share information among supply chain partners for effective decision making. The study thus recommends to state corporations to explore and embrace advanced and emerging technologies in exchange of strategic supply chain information for improvement in the relationship and integration between the supply chain partners. The study further recommends for collaborations within the supply chain to allow firms to partner by combining core competencies and expertise as firms derive more benefits from working together than individual firms can gain on their own.

### 5.3 Areas for Further Study

The study recommends that a similar research be undertaken in another industry to see if they validate, support or contradict the findings of this particular study. The study focused on four supply chain inclusivity components and aspects, which included discriminatory procurement, stakeholder involvement, supply chain diversity and supply chain integration. The findings that these factors could not account for up to 23% of the variation in performance of state corporations in the energy sector calls for future research to interrogate other possible supply chain inclusivity tenets. Future studies may consider a moderating variable for the study or undertake a comparative study using a different research methodology, data analysis and model to see whether the results would be any different.

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