Procurement Methods in Public Procurement and their effect on Sustainable Performance of State Corporations in Kenya

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1.0 Background of the Study
According to Munyao and Moronge (2019), procurement is a critical component in the functioning of any state as it is used for acquiring of assets and services in such a way to meet a specific need. Public Procurement has certainly become gradually more significant factor in economic and business circles worldwide as it has a key responsibility in triumphant management of public resources and most countries have made an attempt to incorporate it into a more strategic view of government hard work (Grandia & Meehan, 2019). Public procurement of supplies, works and services, is valued to account for 20-25% of GDP in developing countries, and up to 60% or more of aggregate state expenditure and it is therefore an area that needs attention in the face of increasing noncompliance (Hussein & Makori, 2018). Procurement managers and stakeholders in the Public Service serve institutions created and governed by a complex array of statutes, regulations, policies, and directives. They operate in an environment of increasingly intense scrutiny and accelerated changes driven by environmental regulations, technology, program reviews, and public and political expectations for service improvements (Mbatt & Osoro, 2020).

Rono and Moronge (2019), observe that millions of dollars get wasted due to inefficient and ineffective procurement structures, policies and procedures as well as failure to impose sanctions for violation of procurement rules thus resulting in poor service delivery. The level of compliance to procurement regulations can therefore determine whether a government meets its goals and objectives or not as well as affect many internal and external stakeholders. According to Agaba, and Shipman (2018), the last decade of the twentieth century has witnessed the start of the global evolution in the public procurement. Marendi and Awino (2016), assert that challenges in public procurement go beyond procurement regulations to include procurement process, methods, organizational structure and work force. Public Procurement often constitutes the largest domestic market in developing countries. Depending on
how it is managed, public procurement can thus contribute to the economic development of these countries (Muange & Chirchir, 2018).

Indeed, public procurement is the principal means through which governments meet developmental needs such as the provision of physical infrastructure and the supply of essential medicines (Corsten, 2020). Again, many governments use Public Procurement to support the development of domestic industries, overcome regional economic imbalances, and support minority or disadvantaged communities (Ivar, Paula & Erik, 2020). After decades of chaotic Public Procurement systems, a greater part of developing countries, Kenya included, are now reforming the authorized, organizational and institutional frameworks for public procurement (Chalton, 2018). According to Ondigi and Muturi (2019), law involves obligatory system of conduct predestined to enforce justice and lay down duty and resulting mostly from formal enactment by a ruler. The PP law evidently covers the complete scope of PP, all steps of the acquiring process, procurement methods and ethical behavior (Hunja, 2020).

Kumar, Patel and Singh (2020), stated that an excellent PP law is based on the values of openness, fairness, accountability, transparency, professionalism and integrity. To ensure increased achievement of sustainable performance procurement procedures are aimed to enhance competition between bidders for contracts. Chekol and Tehulu (2020), indicated proof from a number of sources that noncompetitive procurement processes can surge costs by 30% and above, and affirms that competitive procurement processes are the best to achieve value for money. According to Okong’o and Muturi (2017), study indicated that there were only 50% of states corporations that submitted mandatory reports on compliance with public procurement regulation guidelines in relation to use of appropriate procurement methods and procedures when acquiring goods and services in 2015/2016 financial. The Compliance Rating scale that was applied indicated that below 50% to be non-compliant, 51-80% average compliant, 81-99% above average compliant and 100% fully compliant. And only 45% of states corporations that submitted mandatory reports had complied with public procurement regulation guidelines (Mutangili, 2019).

1.2 Statement of the Problem

In recent years there has been growing global pressure on all public entities to improve sustainable performance (Mugo & Odari, 2018). Bilala and Odari (2021), indicated that there has been little reporting on sustainable performance by public procuring entities compared to those in private entities. This raises concerns as to the degree to which public entities are following appropriate procurement methods to achieve sustainable performance. According to King’oo and Muli (2019), the state corporations in Kenya have been reporting poor performance in relation to social, environmental and economic measures of performance with losses of about Ksh. 121 billion which is equal to 17% of the state budget annually. Jepchirchir and Noor (2019), in their study noted that most public procuring entities are not environmental conscious when implementing procurement methods guidelines which as a result has led to increased resources usage, inefficient utilization of resources and increased waste production in their operations activities.

According to Mutangili (2019), in 2019 32% of states corporations in Kenya experienced material shortages and 46% of these entities were still not fully adhering to guidelines in relation to procurement methods and procedures stipulated in the public procurement and assets disposal regulation resulting to high costs of procurements, lack of competitiveness, transparency and accountability in procurement process (Ondigi & Muturi, 2019). In spite of underpinning and backing from national governments and procurement institutions to formulate procurement guidelines and policies, several studies indicate diverse success in the attainment of sustainable performance in states corporations in Kenya (Kariuki & Aduda 2019). While previous studies elsewhere have linked public procurement with sustainable performance, there remains limited evidence on a local perspective. This study therefore, sought to assess the effect of procurement methods on sustainable the performance of state corporations in Kenya.

1.3 Objective of the Study

To assess the effect of procurement methods on sustainable performance of state corporations in Kenya

1.4 Research Hypothesis

H_o: There is no significant effect of procurement methods on sustainable performance of state corporations in Kenya.

2.0 Literature Review

The supporting theory in this study include Tendering Theory. According to Runeson and Skitmore (1999), this theory explains that when selecting a method of obtaining goods, services, works and consultancy services there is needs for a proper development of a specification (Buuri, 2020). The focus in this theory is that desired bidders are awarded the contract based on procuring entity achievement of competitiveness, transparency and value for money (Simeon, 2018). Chelimo and Makori (2018), stated that when using a certain method of procurement in the tendering process, the goal should be to maximize revenue that is expected from a single tender where each tenderer submits one closed tender simultaneously. Tendering theory argues that that there should be minimization of transaction costs which is the price that market participants are required to pay (Njoki & Kimiti, 2019). This is to help meet an agreement, come up with policies to establish the agreement, and ensure proper delivery system as part of this agreement in the procurement process (Kalatya, 2019).
Tendering theory clarifies reasons why different organizations are required to select the most appropriate method of procurement in order to improve effectiveness and efficiency which lead to the organization performance (Njoki & Kimiti, 2019). Procurement process costs in states organizations are related to organization and administration of public, competitions, payment of independent experts, legal expertise of contracts, public tender reestablishing, costs coming up due the delay in the execution of public contracts, and complaint (Duraku, 2020). Consequently, procurement staffs are required to control these costs well when choosing the best method of procurement and awarding tender to the most competent supplier so as to ensure improving the overall organizational performance (Muli, Bwisa & Kihoro, 2016). The theory indicates that choosing the most appropriate method of procurement can help an organization achieve value for money, reduce procurement cost, acquire quality goods and services and also ensure fairness in the procurement process. This theory prompts the research hypothesis:

\[ H_0: \text{There is no significant effect of procurement methods on sustainable performance of state corporations in Kenya}. \]

### 2.1 Conceptual Framework

Conceptual framework is a brief description of the occurrence in a study that is graphical representation of the significant variables of the research (Sekaran, 2020). Independent variables influence the dependent variables, while a dependent variable is a standard that can be forecasted. Independent variable in this research was Procurement methods. Sustainable performance of state corporations was the dependent variable. A range of aspects in every variable was examined on a likert scale. The level to which procurement methods affect sustainable performance of state corporations was documented.

![Conceptual Framework](image)

### 2.2 Review of Empirical Literature

According to Gatobu (2020), procurement methods are the procedures that public procuring entities use to procure acquire products, consultancies and works. These methods can be competitive or non-competitive. There is preference of using competitive procurement methods in supplier selection and evaluation because that they tend to promote transparency, economy and efficiency (Wachiuri, Waiganjo, Noor & Odhiambo, 2018). Procurement encompasses the whole process of acquiring goods, works or services. It begins when an agency has identified a need and decides on its procurement requirement (Mogikoyo, Magutu & Dolo, 2019). There are different procurement methods that can be used in public procurement each with different condition for use.

Open tendering as per PPAD; Regulation 2020 involves invitation of prospective suppliers to compete for an advertised contract where the lowest tenderer in terms of price was accepted. However, the lowest bidder should be deemed competent to carry out the contract (Chelimo & Makori, 2018). Restricted tendering is mostly used when the value and the conditions are not justifiable to the open tendering where by bids are obtained directly without floating the tender to the public (Buuri, 2020). Here the procuring entity uses its database of pre-qualified providers who are directly invited to tender. Direct procurement is used where circumstances do not allow for competitive bidding. It is used for small quantities in case where time may not allow for competitive bidding (Gatobu, 2020). Njoki and Kimiti (2019), states that Direct Procurement method is only applicable on ground of urgency or emergency when life and property are threatened and other methods are not practical.

### 3.0 Research Methodology

The research design applied in this research was descriptive research design. Descriptive study design helped realize the objectives of the study given that it explains the distinctiveness of a particular individual, or of a group and at the same time makes adequate provision for protection against bias and maximizes reliability (Kothari, 2019). The study used a census which comprised of each head of finance and the head of procurement function in all 187 states corporations in Kenya which formed 374 respondents. The study used a census to obtain the units of analysis and Purposive Sampling to identify the units of observation. This study used a questionnaire as the main research tool to collect primary data. The questionnaire used in this study involved both structured and semi structured questions to help the respondents express their own opinion on the area of study. Secondary data was obtained from, published journals of the organization, library and studies done by other researchers.

Quantitative data collected in this research was analyzed using descriptive and inferential statistics. Descriptive statistics using the mean, median and standard deviation and, inferential statistics that involved correlation and regression analysis were applied to
analyze quantitative data. This was made possible through the use of Statistical Package for Social Sciences (SPSS) version 26 since it has capability to analyze data with ease and accuracy (Kothari, 2019). The analyzed data was then presented using tables, percentages, pie charts, histograms and graphs. The results of the study were tested at significance level of 5% (Ngechu, 2019). Pearson product moment Coefficient correlation was used to show the strength of the connection between the variables used in the research. Correlation analysis was used to check the association between independent variables and dependent variable. A correlation matrix was established to give summary of the correlation analysis results (Orodho, 2018).

The hypothesis was tested in order to ascertain the effect of procurement methods on the sustainable performance of state corporations. The correlation coefficients (R) and the coefficient of determination (R²) were used. ANOVA test showing the F-calculated against the F-Critical of 1.96 and the p-value against the standard p-value of 0.05 was also used. Moreover, the regression coefficients for the variables as well as the p-values and the scatter plot diagram were utilized to reveal the relationship between the variables. The criteria to reject or fail to reject the null hypotheses was that, if the P-value is greater than 0.05, the study fails to reject the null but if P-value is less than 0.05, the null hypothesis is rejected (Kothari, 2019).

4.0 Research Findings and Discussions

The study used census which comprised of each head of finance and the head of procurement function in all 187 states corporations in Kenya which formed 374 respondents. 10% of the target population was used to carry out the pilot test which resulted to 37 respondents picked from 19 state corporations. The 19 corporations used for pilot study were excluded from the main study. The main study focused on 337 respondents after deducting 37 respondents who had participated in the pilot study. The study respondents were surveyed using a structured and semi-structured questionnaire. A response rate of 90.2% (304 respondents) was achieved and the data used for analysis. The non- response rate was 9.8%. This therefore makes the study appropriate to make conclusions and recommendations since according to Cohen et al., (2018) a response rate of 30-60% in a study is adequate for making conclusions and recommendations. The response rate is as shown in table 1.

Table 1: Response Rate

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampled Population</td>
<td>337</td>
<td>100%</td>
</tr>
<tr>
<td>Responses</td>
<td>304</td>
<td>90.2%</td>
</tr>
<tr>
<td>Non-Responses</td>
<td>33</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

4.1 Descriptive Statistics on Procurement Methods

The descriptive results in Table 2 was to assess the relationship between procurement methods and sustainable performance of state corporations in Kenya. The findings the respondents were asked to indicate their level of agreement on specific statements drawn from the three key sub-constructs of procurement methods. A five-points Likert’s scale was used where 1 was strongly disagree, 2 was disagree, 3 was neutral, 4 was agree and 5 was strongly agree. Table 2 summarizes the findings

Table 2: Descriptive Statistics on Procurement Methods

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>All open tender procurments are advertised in the dedicated Government tenders’ portals / our website</td>
<td>304</td>
<td>8(2.6)</td>
<td>21(6.9)</td>
<td>18(5.9)</td>
<td>143(47.0)</td>
<td>114(37.5)</td>
<td>4.09</td>
<td>0.96</td>
</tr>
<tr>
<td>All open tenders have clear technical specifications that follow objective qualifications criteria</td>
<td>304</td>
<td>3(1.0)</td>
<td>9(3)</td>
<td>23(7.6)</td>
<td>166(54.6)</td>
<td>103(33.9)</td>
<td>4.17</td>
<td>0.77</td>
</tr>
<tr>
<td>Our organization strictly follow all laid down procedures in Provision of open tender documents.</td>
<td>304</td>
<td>8(2.6)</td>
<td>2(7.9)</td>
<td>61(20.1)</td>
<td>138(45.4)</td>
<td>73(24.0)</td>
<td>3.80</td>
<td>0.97</td>
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<tr>
<td>Restricted tender is frequently used in cases where the works are specialized in nature</td>
<td>304</td>
<td>15(4.9)</td>
<td>21(6.9)</td>
<td>37(12.2)</td>
<td>139(45.7)</td>
<td>92(30.3)</td>
<td>3.89</td>
<td>1.06</td>
</tr>
<tr>
<td>There is a database of pre-qualified providers who are invited to tender in restricted tendering process</td>
<td>304</td>
<td>82(26.9)</td>
<td>88(28.8)</td>
<td>33(10.9)</td>
<td>40(13.1)</td>
<td>32(10.4)</td>
<td>3.51</td>
<td>1.20</td>
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<tr>
<td>The tender committee frequently meet to agree on the use of restricted tendering</td>
<td>304</td>
<td>99(32.6)</td>
<td>71(23.3)</td>
<td>8(2.6)</td>
<td>49(16.1)</td>
<td>77(25.4)</td>
<td>4.28</td>
<td>0.87</td>
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</table>
The study sought to know the extent to which the respondents agreed on the given statement relating to open tendering a construct of methods of procurement on sustainable performance of state corporations. The findings revealed that 84.5% of the respondent agreed that all open tenders were advertised in the dedicated government websites and portals for every interested and qualifying member of the public to apply with the mean and standard deviation of 4.09 and 0.96 respectively. On the statement “All open tender procurements have clear technical specifications that follow objective qualifications criteria” cumulatively, 3% disagreed while 88.5% agreed with the statement. The findings had the mean and the standard deviation of 4.17 and 0.77 respectively. Result indicated that most of the respondents at 69.4% agreed with the statement that “Our organization strictly follow all laid down procedures in Provision of open tender documents,”. The findings had the mean and the standard deviation of 3.80 and 0.97 respectively. These findings are in tandem with the findings of Wachiuri et al. (2018), who argued that one of the main causes of ineffectiveness in the tendering process between businesses and the government is misuse of restricted tendering and carrying out such processes of tendering without involvement of all key stakeholders.

The study sought to know the extent to which the respondents agreed on the given statement relating to restricted tendering a construct of methods of procurement on sustainable performance of state corporations. Result in table 2 indicated that most of the respondents at 76.0% agreed while 11.8% disagreed that ‘Restricted tender is always used in cases where the works are specialized in nature”, The findings had the mean and the standard deviation of 3.89 and 1.06 respectively. On the statement “There is a database of pre-qualified providers who are invited to tender in restricted tendering process” cumulatively, 55.7% disagreed while 23.6% agreed with the statement. The findings had the mean and the standard deviation of 3.51 and 1.20 respectively. Result in table 2 indicated that, most of the respondents at 55.9% disagreed with the statement while 41.5% agreed with the statement that “The tender committee always meet to consent to the use of restricted tendering”. The findings had the mean and the standard deviation of 4.28 and 0.87 respectively. The findings are in line with those by Mogikoyo et al. (2019), who established that the procurement methods applied by most of the state agencies are not effectively in line with what is articulated under the PPAD regulation and this could affect the efficiency and goodwill of the entire process towards promoting the sustainable performance of these agencies.

The study sought to know the extent to which the respondents agreed on the given statement relating to direct procurement a construct of methods of procurement on sustainable performance of state corporations. Result in table 2 indicated that most of the respondents at 75.0% agreed while 12.5% disagreed with the statement that “Direct procurement is used strictly where circumstances do not allow for competitive tendering”. The findings had the mean and the standard deviation of 3.91 and 1.04 respectively. On the statement “Direct procurement is strictly used where the total cost is within the threshold set in the regulation” as indicated in table 2, cumulatively, 70.8% agreed while 15.5% disagreed with the statement. The findings had the mean and the standard deviation of 3.73 and 1.09 respectively. Result in table 2 indicated that most of the respondents at 38.8% disagreed with the statement while 35.9% agreed with the statement that “There are streamlined processes in place to manage direct procurement requirements to ensure its effectiveness”. The findings had the mean and the standard deviation of 2.98 and 1.29 respectively. The findings echo the findings of Iregi and Kipkorir (2019), who observed that procurement methods were essential in determining how effective the entire procurement process was towards promoting firm’s sustainable performance.

### 4.2 Sustainable Performance of State Corporations in Kenya

The study sought to assess the sustainable performance of State Corporations in relation to the compliance with the public procurement regulation guidelines. The sustainable performance in this case was assessed using environmental, economic and social performance indicators. The respondents were asked to indicate the percentage increase/decrease on specific aspects of sustainable performance for the period between 2016 and 2020. The findings are as shown in Table 3.

#### Table 3: Descriptive Statistics on the Sustainable Performance of State Corporations

<table>
<thead>
<tr>
<th>Measurement Aspects</th>
<th>Below 5%</th>
<th>5 - 10%</th>
<th>11 - 15%</th>
<th>16 - 20%</th>
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The percentage increase the efficient use of resources for the last 3-5years | 137(45.1%) | 81(26.6) | 63(20.7%) | 16(5.3%) | 7(2.3%) | 1.93 | 1.03
The percentage waste reduction rate for the last 3-5years | 155(51.0%) | 92(30.3%) | 31(10.2%) | 16(5.3%) | 10(3.3%) | 1.79 | 1.03
The percentage increase in the use of renewable resources for the last 3-5years | 99(32.6%) | 28 (9.2%) | 52(17.1%) | 79(26.0%) | 46(15.1%) | 2.81 | 1.49
Please indicate the percentage decrease in organizational expenditure for the last 3-5years | 139(45.7%) | 136(44.7%) | 22 (7.2%) | 4(1.3%) | 3(1.0%) | 1.67 | 0.75
Please indicate the percentage increase in technology investment for the last 3-5years | 145(47.7%) | 83(27.3%) | 40(13.2%) | 24(7.9%) | 12(3.9%) | 1.93 | 1.13
Please indicate the percentage increase in procurement opportunities for the last 3-5years | 147(48.4%) | 58(19.1%) | 42(13.8%) | 43(14.1%) | 14(4.6%) | 2.07 | 1.26
The percentage increase in stakeholder satisfaction rate for the last 3-5years | 62(20.4%) | 81(26.6%) | 74(24.3%) | 62(20.4%) | 25(8.2%) | 2.69 | 1.23
The percentage increase in social initiatives participations for the last 3-5years | 81(26.6%) | 92(30.3%) | 60(19.7%) | 44(14.5%) | 27(8.9%) | 2.48 | 1.26
The percentage increase in equal access to procurement opportunities for the last 3-5years | 155(51.0%) | 40(13.2%) | 53(17.4%) | 38(12.5%) | 18(5.9%) | 2.09 | 1.30

Key: SD= Strongly Disagree, D= Disagree, U= Uncertain, A= Agree, SA= Strongly Agree

As the results portray, on the percentage increase in efficient use of resources for the previous 3 to 5 years, most of the respondents indicated that their respective organizations had below 5% increase. This is as shown by a mean of 1.93 and a standard deviation of 1.03. The respondents also indicated that their respective organizations had less than 5% decline in reduction of waste rate for the same period (Mean= 1.79) and the use of renewable sources was also achieved by less than 5%. This is an indication that the environmental factors had seen minimal increment among the state corporations. The findings are in tandem with the findings of Mbati and Osoro (2020) who found out that procurement activities and procedures have a correlation to the improvement of business’ economic, social and environmental performance which is seen through sustainable performance.

On the economic measures of sustainable performance, the majority of the respondents stated that their respective organizations less than 5% decrease in organizational expenditure for a period of between 3 and 5 years (Mean = 1.67; standard deviation= 0.75) and that the organizations recorded a less than 5% increase in procurement budget for the same period (Mean= 1.93; standard deviation = 1.13). The findings further revealed that most of the surveyed corporations had a less than 5% increase in technological investment for a period of between 3 and 5 years. The findings imply that the economic factors are also not effectively achieved in most of the surveyed state corporations. The findings are in line with the findings of Kariuki and Aduda (2019), who indicated that achievement of an organizational goal is considered in form of achieving economic performance measures of cost reduction, reduction in lead time, customer satisfaction, quality improvement and compliance to policies, laws and regulations.

On the social measures, the study established that the satisfaction of stakeholders was below 10% in most of the surveyed state corporations (Mean = 2.69; standard deviation= 1.23) while the increase in the participation in social initiatives was below 10% in most of the state corporations (Mean = 2.48; standard deviation= 1.26). The percentage increase in the equal access to procurement opportunities for the period between 3 and 5 years was below 5% (Mean = 2.09; standard deviation = 1.30). The findings imply that the state corporations still have a below average sustainable performance as far as social measures are concerned. The findings concur with the findings of Ongeri and Osoro (2021), who indicated that for a business to achieve social performance they need to focus on embracing sustainability initiatives on social responsibility as measure of performance.

### 4.3 Test of Hypothesis

**H₂**: There is no significant effect of procurement methods on sustainable performance of state corporations in Kenya.

The study sought to find out the effect of procurement methods on sustainable performance of state corporations. A regression model of the form; \( Y = \beta_0 + \beta_1X_1 \) was used to determine the relationship. The model summary results on Table 4.18 reveal a correlation coefficient R value of 0.660 and a coefficient of determination R² value of 0.436 an indication that a unit change in procurement methods could explain up to 43.6% increase in sustainable performance of the state corporations in Kenya.

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Table 4: Model Summary (Procurement Methods)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.660&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.436</td>
<td>.434</td>
<td>.54926</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Procurement Methods
b. Dependent Variable: Sustainable Performance of State Corporations

The ANOVA results on Table 5 revealed that the F calculated was 233.303 and the P-value was 0.000 an indication that procurement methods significantly predicts the sustainable performance of state corporations in Kenya. This also implies that model is significant. These results support the findings of Mose, Ombui, and Iravo (2018) that procurement methods selected when procuring goods and services helps an organization achieve sustainable performance.

Table 5: Analysis of Variance (ANOVA)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>70.383</td>
<td>1</td>
<td>70.383</td>
<td>233.056</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>91.108</td>
<td>302</td>
<td>.302</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>161.492</td>
<td>303</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Performance of State Corporations
b. Predictors: (Constant), Procurement Methods

The findings from the regression coefficients as shown in Table 6 revealed that at the coefficient of determination, 73.4% of the firm performance could be explained by a unit change in procurement methods as evidenced by the Beta coefficient of 0.734. With these results the null hypothesis that procurement methods have no influence on firm’s sustainable performance was rejected. The model so derived was:  \[ Y = 0.732 + 0.734X \]. The findings also reveal that the P-value for procurement methods is 0.000 which is less than the standard p-value of 0.05 thus the null hypothesis was rejected and adopted alternative hypothesis that procurement methods positively and significantly influence sustainable performance of state corporations in Kenya at 0.000 significance level. These findings are in line with the findings of Munyao and Moronge (2018) that procurement practices affect performance of an organization.

Table 6: Regression Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>.732</td>
<td>.182</td>
<td>4.025</td>
</tr>
<tr>
<td></td>
<td>Procurement Methods</td>
<td>.734</td>
<td>.048</td>
<td>.660</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Sustainable Performance of State Corporations

The study sought to prove the effect of procurement methods on sustainable performance of the state corporations in Kenya using the scatter plot diagram as herein shown on Figure 2. The findings revealed that the scatter plots had a positive gradient an indication that procurement methods positively influenced the sustainable performance of state corporations in Kenya.

Figure 2: Scatter Plot on Procurement Methods
A Histogram was used to show the distribution of the standardized residuals in the model. As the results in Figure 3 portray, the standardized residual is normally distributed as evidenced by the curve that is bell-shaped and the symmetric nature of the histogram. This is an implication that the regression model significantly predicts the effect of procurement methods on sustainable performance of state corporations in Kenya. These results tally with those of Giathi, Abayo & Muhoho (2021), that procurement management methods and processes positively influence the performance of public entities in Kenya.

**Figure 3: A Histogram on Procurement Methods**

### 5.0 Conclusion

The study concluded that the procurement methods had a significant influence on the sustainable performance of state corporations in Kenya. Through a well-defined tendering process under the open and restricted tenders, the credibility and effectiveness of the entire process is enhanced thus enabling efficiency in the tendering process. The study concluded that while open tendering was efficient in most of the state corporations, this was not the case when it comes to direct procurement and restricted tendering. The study concluded that some of the measures that were taken to streamline the restricted tendering and direct procurement were not effective towards promoting the sustainable performance of the corporations.

### 6.0 Recommendations of the Study

The management of the state corporations ought to embrace the appropriate procurement methods as a way of enhancing sustainable performance of the corporations. Upholding effectiveness ways of handling open tenders and restricted tenders would shape the openness and efficiency in the procurement process of the corporations which is essential to their sustainable performance. The enforcing agencies also should be keen in ensuring that the procurement methods utilized by the state corporations match the ones provided for under the PPAD Regulation. Then there is need to ensure that all relevant stakeholders are involved when planning for acquiring goods, services, works and consultancy services and ensure that when using a competitive procurement method an objective qualifications criterion is applied so at award tender to the most competent bidder. The management should also develop relevant policies in order to ensure accountability, competitiveness, transparency, integrity and value for money is achieved in a procurement process.

### REFERENCES


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