Effect of Supplier Appraisal on Performance of Construction Projects of Counties in Lake Region Economic Bloc, Kenya

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ABSTRACT

Procurement Laws and Regulations 2015 are a yardstick that directs how buying of goods, services, and works by governments and state-owned businesses should be conducted (Thiankolu, 2019). However, there exists an absence of compliance to these laws as envisaged by its framers which results to bias and uncompetitive bidding, evaluation and award of contracts process something that compromises the effectiveness of the project's accomplishment (Kagume & Wamalwa, 2018). The primary objective relating to this research entailed investigating the effect of supplier appraisal on performance of construction projects of counties in Lake Region Economic Bloc, Kenya. The study adopted a descriptive research design with stratified random sampling technique being applied to select a sample of 342 respondents from a total population of 2346 county officials that include finance and procurement officers. A survey instrument was utilized for gathering data, using questions that were both open and closed-ended. The survey instrument was piloted in Marsabit County. It was conducted to ensure that the instrument is both valid and reliable. SPSS was used to perform analysis of data. Supplier appraisal was established to have a positive and significant correlation on the performance of counties in Lake Region Economic Bloc with a coefficient of determination R value of 0.816 and P<0.05. Supplier appraisal with a coefficient of determination (R²=0.700, P<0.05) could account for 70% of variation in the performance of construction projects if other factors were to be held constant. Specifically, when Supplier appraisal increases by a single unit, there will be a subsequent increase in performance of construction projects by 0.885 units (β1=0.885, P<0.05). This suggests a positive and strong correlation between supplier appraisal and performance of construction projects and thus the study suggests that evaluating suppliers using technical, financial, and legal criteria might help construction projects succeed in Kenya’s Lake Region Economic Bloc.

Keywords: Construction Projects, Lake Region Economic Bloc, Procurement Laws and Regulations, Supplier Appraisal.

APA CITATION:

1.0 INTRODUCTION

1.1 Background of the Study

On a global scale effective purchasing management strategy have become an important focus for public as well as private businesses seeking to maintain an edge in attaining their strategic objectives (Tatrai, 2020). Japan came up with its Procurement Act to encourage assurance of quality in public projects and passed it 2005, making history of Japanese purchasing systems as well as practices in terms of bidding processes, evaluation techniques for public works that allow purchasing organizations to negotiate with tenderers to discuss enhancements to submitted technical proposals, and a cap on projected bid prices that is established prior to the planned tendering date (Shigoki, 2017).

Ghana’s procurement sector has been characterized through scarcity of purchasing professionals, little interaction among purchasing organizations and the Public Procurement Authority (PPA), conflicts of interest, failing to comply with legal provisions, a contract leading to less being achieved, insufficient resources, and suppliers’ non-cooperation as significant obstacles to the enforcement pertaining public procurement law (Ameyaw et al., 2012).
In Nigeria, purchasing organizations, as seen in certain governmental organizations, continue to use lengthy bureaucratic purchasing procedures to acquire goods, services, and works, as well as fraud, which has culminated to the failure of some construction projects in higher educational institutions (Ugochi, 2020).

In Kenya, the public purchasing system has developed into a well-organized and legally regulated system under the purchasing law of 2015 that governs the procurement processes. Notwithstanding the government's attempts to enhance the delivery of construction projects via the purchasing law of 2015, efficiency is limited by continuing obstacles in project completion (Agnes, 2015).

Recently, Kenya has seen a rapid expansion of development projects throughout the country because of devolved money. According to stakeholder comments and research, a substantial sum of funds has been devoted to public infrastructure projects that fall short of expectations. Fraud had led to the allocation of funds to phantom public building projects (NTA, 2012). The studies also revealed how bad workmanship on public construction projects were allowed by the public works ministry personnel via fraud, with significant amounts of money paid for substandard projects (NTA, 2012).

As indicated by Joel, Ngacho, and Yobes (2022), failing to follow purchasing procedures impose hurdles that are addressed by entities, beginning with the shortages of vendors to handle infrastructure construction projects. According to Margoluis, Honzak, and Aibe (2019), communities within the Lake Region Economic Bloc experience many challenges, which includes food insecurity due to unfinished irrigation projects and poor fertility owing to inaccessible healthcare facilities, a factor linked to the procurement practices adopted to ensure completion of road construction to open up the interior. It’s from the backdrop of this background that this study explored a study on effect of supplier appraisal on performance of construction projects of Counties in Lake Region Economic Bloc, Kenya

1.2 Statement of the Problem
Kenya's purchasing structure has grown into well-organized and formally controlled framework under the Purchasing laws 2015 that governs purchasing processes (Agnes, 2015). According to Nekesa, despite the government's attempts through the 2015 Laws regulating Procurement to enhance the efficiency of construction projects, success has been limited by widespread inefficiencies associated with project completion. According to Joel, Ngacho, and Yobes (2022), not complying with procurement standards creates problems for public entities, beginning with a scarcity of suppliers to execute infrastructure projects. In accordance with Margoluis et al. (2019), populations in the Lake Region Economic Bloc face various obstacles, including insufficient food supply as a result of unfinished irrigation projects and lack of adhering to purchasing laws that guarantee construction of roads completion. Further, there is no study that has been undertaken to focus on supplier appraisal and performance of counties in the “LREB” region warranting a gap to be investigated.

1.2 Research Objective
To assess the effect of Supplier Appraisal on Performance of Construction Projects of Counties in Lake Region Economic Bloc, Kenya.

1.4 Research Hypotheses
HO1: There is no significant effect of Supplier Appraisal on Performance of Construction Projects of Counties in Lake Region Economic Bloc, Kenya.

2.0 LITERATURE REVIEW
2.1 Theoretical Review
The study was based on the Project Management Competency Theory. McClelland and McBer brought forward this theory back in the 1980s (Dainty, 2004). According to the theory, competency in managing projects is realized through a mix of knowledge obtained during training.
and application of the same, in addition to additional skills developed at work. Making decisions, 
reciprocity and accessibility, integrity and honesty, communication, learning, comprehension and 
execution, self-efficacy, and sustaining external links are among the measures for PM proficiency 
(Dainty, 2004). Within the context of managing projects for infrastructure development in the 
County Government, it is believed that projects are likely to be accomplished if both the project 
leadership team possess all of the necessary competencies. Therefore, the theory befits this study 
in terms of addressing the need for getting competent suppliers through supplier appraisal and 
establishment of various teams for monitoring the effective and timely completion of these 
projects.

2.2 Empirical Review
Kosgei and Kibet (2019) undertook a study on establishing how Supplier evaluation on the 
implementation of road construction projects by the Kenya Urban Roads Authority using a 
descriptive survey approach. The research gathered data on a selected sample of 296 responders. 
Using a structured survey. In line with the findings of the analysed results, an increase in one unit 
on vendor assessment leads to improvement in terms of performance of “KURA’S” Road 
construction projects by 0.755 units if all factors are held constant. From the findings of the study 
it was suggested that in order to improve material control, KURA's management ought to 
successfully integrate its personnel resources and competencies. They should also implement 
materials control models that have been established to be in line with their business practices and 
beneficiaries' expectations. The present research will be conducted among the counties in the Lake 
Region Economic bloc, whereas the previous study was conducted within the Kenya Urban Roads 
Authority.
The impact of supplier appraisal on the purchasing function's effectiveness was examined by 
(Obura, Shale & Mukanzi, 2021). To provide further light on the subject, our investigation 
concentrated on three important dimensions: supplier loyalty, communication, and due diligence. 
The current study used a survey research design. The study's sample size was established through 
the use of a stratified random sampling technique. The study discovered that supplier rating greatly 
predicts the purchasing department's success. The research findings indicate that companies who 
implement supplier appraisal procedures experience enhancements in quality, customer 
contentment, and decreased acquisition expenses. While the current study will use an explanatory 
research strategy, this study made use of a survey research design.

3.0 RESEARCH METHODOLOGY

3.1 Research Design
This study employed an explanatory research design that looks at cause effect correlations. The 
main objective of explanatory research, as it does in this study, is to address any causation between 
variables that are connected to the phenomenon under investigation. The explanatory research 
design precedes the standardized gathering of data from an established population or representative 
sample (Mugenda & Mugenda, 2008).

3.2 Target Population
The study's targeted universe entailed procurement and finance officers from every single one of 
the Kenyan 47 counties.

3.3 Sample Size and Sampling Technique
Stratified random sampling technique was used to select a sample of 342 respondents. The Yamane 
formula was utilized during the research for determining the sample size. A questionnaire that 
entailed closed ended questions was administered to help gather primary data for the study. Closed 
ended questions were analysed through the statistical package for social sciences.
4.0 FINDINGS AND DISCUSSION

4.1 Descriptive Statistics for Supplier Appraisal

The study intended to establish the capabilities of county governments within LREB region in completing construction projects and how they were affected by Supplier Appraisal. A scale that ranges from 1 (strongly disagree) to 5 (strongly agree) was used to ask those who participated to express their feelings regarding a number of issues. The relevant findings were captured in the table 1 below:

<table>
<thead>
<tr>
<th>Opinion statement</th>
<th>SD (%)</th>
<th>D (%)</th>
<th>FA (%)</th>
<th>A (%)</th>
<th>SA (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feasibility study is conducted to determine the viability.</td>
<td>0.0</td>
<td>0.9</td>
<td>1.2</td>
<td>53.5</td>
<td>44.4</td>
<td>4.42</td>
<td>0.565</td>
</tr>
<tr>
<td>Contractor financial ability influences the performance.</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>40.9</td>
<td>59.1</td>
<td>4.59</td>
<td>0.492</td>
</tr>
<tr>
<td>There is full investigation of technically complex design</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>37.4</td>
<td>62.6</td>
<td>4.63</td>
<td>0.485</td>
</tr>
<tr>
<td>Technical appraisals reduces project uncertainty</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>53.5</td>
<td>46.5</td>
<td>4.46</td>
<td>0.499</td>
</tr>
<tr>
<td>Legal due diligence is done to ensure</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>44.2</td>
<td>55.8</td>
<td>4.56</td>
<td>0.497</td>
</tr>
</tbody>
</table>

Majority of the respondents with a percentage rating of 62.6 percent and a mean rating of 4.63 strongly agreed that there is full investigation of technically complex design of all design proposals. This result is consistent with the argument made by Murigi (2014) that the criteria applied in the assessment and selection of suppliers establishes the overall suitability of the appropriate suppliers who may assist the purchasing organization in gaining a competitive edge. Furthermore, the criteria applied in the assessment and choice of suppliers establishes the overall appropriateness of the appropriate suppliers who may aid the purchasing organization in gaining a competitive edge.

A significant majority of respondents, comprising 59.1% of those surveyed with an average rating of 4.59, strongly agreed that the financial capability of contractors impacts the performance of construction projects. This aligns with the findings of Mutai and Philip (2017), who suggested that adopting capacity measures could help businesses reduce the costs associated with frequent supplier evaluations assessment methodologies that are focused toward long-term relationships.

Majority, those surveyed also strongly agreed with a mean rating of 4.56 and a percentage rating of 55.8 percent that legal due diligence is done to ensure that the construction projects are carried out in accordance to current local and international terms.

Those surveyed also agreed with a mean rating of 4.46 and a percentage rating of 53.5 percent that technical appraisal reduces project uncertainty and thus resolves uncertainties. This aligns with the conclusions of Ngugi and Moronge (2020), who observed that the effectiveness of supplier appraisal procedures significantly affects the ability to select suitable suppliers for assigned tasks and lastly the responses of those surveyed, 53.5 percent with a mean rating of 4.42 agreed that feasibility study is conducted in determining viability of construction projects before actual implementation.

4.1.1 Results of Performance of Construction Projects

One of the aims of this study was in assessing the public procurement practices and its effects on performance of construction projects in county governments within the LREB region. A scale that falls between 1(Strongly disagree) and 5 (strongly agree) was used to ask those who participated to express their feelings regarding a number of issues.
Table 2: Dependent Variable [Performance of Construction Projects]

<table>
<thead>
<tr>
<th>Opinion statement</th>
<th>SD (%)</th>
<th>D (%)</th>
<th>FA (%)</th>
<th>A (%)</th>
<th>SA (%)</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project completion time is an essential tool in ensuring</td>
<td>0.0</td>
<td>0.0</td>
<td>33.9</td>
<td>52.0</td>
<td>14.0</td>
<td>3.80</td>
<td>0.664</td>
</tr>
<tr>
<td>Construction projects are completed within the stipulated</td>
<td>0.0</td>
<td>0.0</td>
<td>54.7</td>
<td>44.4</td>
<td>0.9</td>
<td>3.46</td>
<td>0.517</td>
</tr>
<tr>
<td>The completed projects meet the client’s expectations</td>
<td>0.0</td>
<td>0.0</td>
<td>54.1</td>
<td>45.0</td>
<td>0.9</td>
<td>3.47</td>
<td>0.517</td>
</tr>
<tr>
<td>Construction projects are completed within the stipulated cost</td>
<td>0.0</td>
<td>0.0</td>
<td>47.1</td>
<td>52.0</td>
<td>0.9</td>
<td>3.54</td>
<td>0.517</td>
</tr>
<tr>
<td>Project costs are calculated during the planning phase</td>
<td>0.0</td>
<td>0.0</td>
<td>55.8</td>
<td>44.2</td>
<td>0.0</td>
<td>3.44</td>
<td>0.497</td>
</tr>
</tbody>
</table>

Majority of those surveyed fairly agreed with a mean rating of 3.44 and a percentage rating of 55.8 percent that project costs are calculated during the planning phase of a project which must be approved before works begin. However, a significant majority of respondents, accounting for 54.7% of those surveyed with an average rating of 3.46, expressed moderate agreement that construction projects are completed within the stipulated time frame. This finding aligns with Nekesa's (2015) research, which observed that projects often exceed their anticipated completion times due to frequent contract changes, leading to increased project costs and subsequent rises in claims and disputes. Majority of the respondents with a percentage rating of 54.1 percent and a mean rating of 3.47 fairly agreed that construction projects are completed within the stipulated cost and hence achievement of value for money. This result is consistent with that of Ogutu and Muturi (2017), who indicated that the majority of road construction projects in Kenya had been completed above the allocated funds, in subpar quality, later than expected, and outside of the project’s scope. From the responses of those surveyed, 52 percent with a mean rating of 3.80 agreed that project completion time is an essential tool in ensuring coordination of resources and personnel. Those surveyed also agreed with a mean rating of 3.54 and a percentage rating of 52 percent that goods, works, and services procured are within the allocated budget.

4.1.2 Correlation between Supplier Appraisal and Performance of Construction Projects

Through the use of Pearson correlation that assesses the strength (ranging from -1 to +1) and direction (negative/positive) of the correlation between two continuous or ratio and scale variables, the correlation coefficient (r) values are presented in Table 3 below:

Table 3: Correlation between Supplier Appraisal on Performance of Construction Projects

<table>
<thead>
<tr>
<th>SA</th>
<th>PCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>.816**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>320</td>
</tr>
</tbody>
</table>

4.1.3 Regression results of Supplier Appraisal on performance of construction projects

Regression analysis was conducted to assess the impact of Supplier Appraisal on the performance of construction projects. The results are shown in Table 4 below.

Table 4: Model Summary

<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>.816a</td>
<td>.700</td>
<td>.700</td>
<td>.105127</td>
</tr>
<tr>
<td>a. Predictors: (Constant), SA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Dependent Variable: PCP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 revealed an R value of 0.816, with a significance level of P<0.05, indicating a strong and positive association between the performance of construction projects and supplier appraisal. Therefore, if all other variables remain the same, a rise in supplier appraisal will lead to increased construction project performance. The R², indicates that supplier appraisal accounts for 70% variation of construction project success (R²=0.700, P<0.05).

Table 5: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Means Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>18.244</td>
<td>1</td>
<td>18.244</td>
<td>1650.745</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>3.514</td>
<td>318</td>
<td>.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21.758</td>
<td>319</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. **Dependent Variable:** PCP  
b. **Predictors:** (Constant), SA

The F test resulted in a score of (F=1650.745, P<0.05), depicting the fitness of the model in adducing variance in the depended variable. This suggests that Supplier Appraisal can effectively predict the Construction projects performance.

Table 6: Coefficients of Supplier Appraisal

<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>1 (Constant)</td>
<td>.086</td>
<td>.893</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>.885</td>
<td>.700</td>
<td>40.629</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. **Dependent Variable:** PCP

Based on Table 6, the Supplier Appraisal's unstandardized regression coefficient (β) value was 0.885, with a level of significance of p<0.05. This suggested that there will be a 0.885 change in construction project performance for each unit change in supplier appraisal. As a result, the following was the regression equation used for calculating the performance of construction projects in Kenya as a result of supplier appraisal:

\[
\text{Performance} = 0.086 + 0.885 \times \text{Supplier Appraisal}
\]

**CONCLUSION AND RECOMMENDATION OF THE STUDY**

5.1 Conclusion of the Study  
The performance of Construction projects in Kenya's Lake Region Economic Bloc is positively correlated with supplier appraisal. Most counties within the Lake Region Economic Bloc thoroughly examine technically complex design proposals, evaluate the financial capability of contractors as it impacts project performance, conduct legal due diligence to guarantee that construction projects are executed in compliance with current local and international regulations, conduct feasibility studies to ascertain the viability of construction projects prior to actual implementation, and conduct technical appraisals to mitigate project uncertainty and thereby resolve uncertainties.

5.2 Recommendations of the study  
Since supplier appraisal had a strong predictive capacity on construction project performance, it deserves special attention by the county governments in evaluating their suppliers critically to ensure performance improvement levels. Even though the study's focus was on county governments, the Kenyan national government can still benefit from this study’s findings in terms of policy, since they could improve procurement procedures such as supplier appraisal and help the country achieve its 2030 vision goals.
REFERENCES


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