Supplier Evaluation Management Practice and Supply Chain Performance of Kenyan Selected County Governments in Nyanza Region

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ABSTRACT

Adequate supplier evaluations reduce the cost of projects. Therefore, inadequate supplier monitoring can lead to high costs, non-performance risks, and poor quality of the deliverables. The study examined the influence of supplier evaluation management practices on the supply chain performance of selected Kenyan county governments in Nyanza Region. The study used a number of methods, first utilising a descriptive and correlational research design. The study targeted 112 staff in the procurement department as well as nine lead prequalified suppliers. Data was collected using closed-ended questionnaires and an interview schedule. For data analysis, descriptive and inferential statistics were used. The study utilised both descriptive and inferential statistics. Supplier evaluation management practice had a positive and significant effect on supply chain performance ($t = 5.789$, $p<0.05$). The study recommends that devolved units in Kenya should evaluate suppliers to ensure that effectiveness, efficiency, customer satisfaction, and a shortened lead time are realized. This can be achieved through quality commitments, distributions, and delivery strategies and evaluating the cost, thus leading to improved performance of the supply chain of devolved units.

Key words: County Government, Supplier Evaluation Management Practice, Supply Chain Performance
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I. INTRODUCTION

Supplier evaluation refers to the detailed, step-by-step process of identifying potential suppliers. Technical and financial capabilities are the most common forms of supplier evaluation. Supplier evaluation refers to the procedural approaches undertaken to ensure the supplier process is effective (Mungai, 2014). Studies have shown that supplier evaluation management practices improve performance (Sreejith &Vinaya, 2017). Supplier evaluation critically analyses the protective and preventive initiatives applied to see the supplier relationship in the right light.

According to Khan et al. *(*2018) supplier selection and evaluation entail the evaluation and approval of potential suppliers through quantitative assessment. Supplier evaluation has been measured using different aspects such as quality commitment, financial stability, competence (Wanzala & Moronge, 2018), flexibility, reliability, and stability (Onyango, 2020), and method, process, and criteria (Kiplagat & Kiarie, 2015). In this study, aspects of supplier evaluation management practice include quality commitments, distribution and delivery strategies, and evaluation costs. According to Sreejith and Vinaya (2017), a quality assessment of supplies is part of the evaluation process. Evaluation also checks on working ability, training installed, and all that is needed in the procurement department. Quality evaluation contributes to positive lead times, customer concerns, and loyalty among customers (Daudi, 2012). Studies have indicated that supplier evaluation has an influence on performance (Kiplagat & Kiarie, 2015; Wanzala & Moronge, 2018; Onyango, 2020). Similarly, Mutai and Okello (2016) pointed out that engaging suppliers by considering their quality, financial capability, and capabilities impacted the performance of Kenyan universities.

Mani et al. (2018) posited that supply chain performance is aimed at driving a firm towards meeting end-user requirements such as ensuring product availability and that products are delivered on time. Thus, it's the extent to which a firm is able to attain end users' needs, thus delivering value. In this study, aspects of supply chain performance include effectiveness, efficiency, customer satisfaction, and lead time reduction.

The Kenyan system of governance has a national government and county governments. The study bases its argument on the devolved systems that undertake one-on-one procurement activities. Supply of goods and services has been in existence in counties in Kenya with either dissatisfaction or satisfaction among suppliers and buyers. In the

national government, though Kshs. 234 billion is spent on procurement services per year, Kshs. 121 billion is lost on unpredictable procurement mischief (KISM, 2015). Audit reports indicate there are ghost workers and suppliers who supplied or bought nothing to receive payments on fictitious bank accounts for the financial year 2019/20.

Supplier evaluation has elicited mixed reactions (Homabay Procurement Report, 2021). The counties were founded in 2013 after the Kenyan eight provinces were subdivided into 47 counties and are among the counties in the Nyanza region. Homabay, Migori, and Kisumu are among the county governments envisioned by the devolution brought about by the Kenyan Constitution of 2010. The leadership of the counties is held by the governor, who is the head county. Noncompliance was reported based on the audit report for Homabay County. The risk score places procurement at risk (PPOA Annual Report, 2021). This tendency has posed a laxity in the supplier evaluation process for the county. The county government of Migori reported discrepancies in most of the public accounts, inaccuracy of deposits and retention, inaccuracy of the statement of assets and liabilities, and unsupported expenditures (EACC, 2020). The study covered Homabay, Migori, and Kisumu.

1.1 Statement of the Problem

Counties desire to achieve the best when it comes to procurement; hence, they need to avoid corruption in procurement entries. Supplier evaluation becomes a supplier relationship approach that scores the best on procurement management. However, distrust has led to a need for the evaluation of suppliers in counties (PPRA, 2020). The PPRA report (2020) reveals ghost projects, supplier malpractices, and fictitious activities probing the need for supplier evaluation. Homabay County reports articulate risks in the procurement sector. The risk score places procurement at risk (PPOA Annual Report, 2021). Bungoma, Busia, Nairobi, Migori, and Homabay recorded irregular procurement activities (EACC, 2020). Homabay County Government did not submit needed material for auditing, questioning its procurement efficiency and compliance (PPOA Annual Report, 2021).

Studies have shown mixed results in relation to the effect of supplier evaluation on performance. Dobos (2013), Rodeghier (2017), Sreejith, and Vinaya (2017) found that supplier evaluation positively influenced performance, while Jens (2014) found that it negatively influenced performance. Further, studies done in Kenya have been done in different sectors, such as state corporations, alcoholic manufacturing firms, and universities (Onyango, 2020). This study therefore intends to establish the effect of supplier evaluation management practices on the supply chain performance of selected Kenyan county governments in Nyanza Region.

1.2 Objectives of the Study

To examine the effect of supplier evaluation management practices on the supply chain performance of selected Kenyan county governments in Nyanza Region.

1.3 Research Hypothesis

H_0: Supplier evaluation management practices do not have a significant effect on the supply chain performance of Kenyan Selected County Governments in Nyanza Region.

II. LITERATURE REVIEW

2.1 Theoretical Literature Review

The Systems Grey Theory was opined by Professor Long (1982). It explains the decision-making under fairly agreed-upon ties and limited information. This theory provides a platform for considering such complex issues when making decisions. To solve the limited information access problem, staff are encouraged to share reasonable information. County governments need to ascertain complex issues, such as supplier evaluation. The complexity of issues requires trust; hence, supplier trust is a key component of this theory. According to Dobos (2013), a grey system is one that is surrounded by a lack of information or incomplete data. This can be costly in today's competitive environment. With public funds under high scrutiny for accountability, selecting the best suppliers and buyers is mandatory. Criticism is alluded to as reasoning that information is limited to access to aid procurement since adequate information is usually sought before undertaking supplier relationship management practices. This theory has various frameworks, namely: pure numbers, relational analysis, decision-making, forecasting models, clustering, generation, and control (Imeri, 2015). This therefore calls for grey supplier evaluation.

2.2 Empirical Review

Sreejith and Vinaya (2017) examined supplier evaluations on the supply chain performance of construction companies in Vietnam. The study employed an explanatory research design, and the data collection instruments were both based on primary and secondary data. The findings were that supplier evaluation had a positive and significant effect on procurement performance.

Dobos (2013) evaluated the influence of supplier selection and evaluation decisions on the performance of private organisations in Uganda. The study keenly addressed data collection concerns using both questionnaires and interview guides. A survey research design was applied, and for data analysis, percentages, correlation, and regression were used. The study found that supplier evaluation measured in terms of supplier development, integration, and audits had a positive and significant influence on the performance of private organisations in Uganda.

Rodeghier (2017) carried out a study on the effect of supplier evaluation on supply chain performance. Using closed-ended questionnaires and a descriptive research design, the study explored supplier evaluation tenets. Data analysis employed both descriptive and inferential statistics on the basis of frequencies, percentages, Pearson correlation, and hierarchical regression. The results showed that supplier evaluation tenets had a positive and significant effect on performance.

Jens (2014) carried out research on supplier strategic evaluation of the environmental performance of Linkoping University. The study employed several methodology elements, starting with the case study design. The data tool was a questionnaire with a sample size of 80 employees sampled through stratified and simple random sampling techniques. Correlation and regression analysis were done, and the results showed that supplier evaluation had a negative influence on supply chain performance.

Kiplagat and Kiarie (2015), Wanzala and Moronge (2018), and Onyango (2020) confirmed that supplier selection and evaluation influenced the supply chain performance of state corporations, Kenyan county governments, and alcoholic manufacturing firms in Kenya, respectively. Similarly, Mutai and Okello (2016) pointed out that engaging suppliers by considering their quality, financial capability, and capabilities impacted the performance of Kenyan universities.

From the foregoing empirical review, it can be seen that the studies were done in different contexts and different sectors and elicited conflicting results regarding the effect of supplier evaluation on performance, thus providing a need to conduct the study.

III. METHODOLOGY

The study used a number of methods, first utilising a descriptive and correlational research design. The study targeted 112 staff in the procurement department as well as nine lead prequalified suppliers. Data was collected using closed-ended questionnaires and an interview schedule. The study sampled 88 staff members. For data collection, closed-ended questionnaires and an interview schedule were used. Reliability results revealed that supplier evaluation management practice and supply chain performance had a Cronbach alpha of 0.845 and 0.837, respectively.

Data analysis employed both descriptive and inferential statistics, guided by SPSS version 23. In this case, standard deviation and mean were the basis for descriptive statistics, as person correlations as well as simple linear regression were the basis for inferential analysis.
This was regressed as follows:

$$Y = \beta0 + \beta_1 X_1 + \varepsilon$$

Thus:

Y = Supply Chain Performance
X_1 = Supplier Evaluation Management Practice
β_0 = Constant
B_1 = Regression Coefficient
ε = Error Term

IV. FINDINGS AND DISCUSSION

4.1 Response Rate

From the eighty-eight (88) respondents, seventy-six (76) responded thus giving a response rate of 86.4% which is deemed desirable.

4.2 Descriptive Analysis Results
4.2.1 Descriptive Analysis Results on Supplier Evaluation Management Practice
The descriptive analysis results for statements on Supplier evaluation management practice are summarized in Table 1 as shown below.

Table 1

Descriptive Analysis on Supplier Evaluation Management Practice

Statement	Mean	Std. Dev
(i) The county has a quality commitment program that checks on quality of goods or services supplied	3.51	1.04
(ii) The county has qualified personnel that inspect on the quantity and quality of goods supplied	3.51	0.94
(iii) The county has procurement evaluation committee which adheres to evaluations criteria	4.01	0.79
(iv) The counties had adopted a cost evaluation criterion	3.51	1.14
(v) The county has an active tender evaluation committee	3.51	1.00

From table 1, most of the respondents were in agreement that the county has a quality commitment programme that checks on the quality of goods or services supplied (mean 3.51), that the county has qualified personnel that inspect the quantity and quality of goods supplied (3.51), that the county has a procurement evaluation committee that adheres to evaluation criteria (4.01), that the counties have adopted a cost evaluation criteria (3.51), and that their county has an active tender evaluation committee (3.51).

During interviews, the suppliers acknowledged that supplier evaluation practices for the county were in practice. The suppliers further mentioned that evaluations were done in accordance with the tender documents and therefore improved supply chain performance. The findings are in agreement with Sreejith and Vinaya (2017), who found that supplier evaluation is positively affected by the performance of the construction sector. This also agrees with Rodeghier (2017), who carried out a study on the effect of supplier evaluation on supply chain performance and found that supplier evaluation tenets had a positive and significant effect on performance.

4.2.2 Descriptive Analysis Results on Supply Chain Performance
There are descriptive statistics on Kenyan selected county government of Nyanza region supply chain performance as summarized in Table 2.

Table 2

Descriptive Analysis on Supply Chain Performance

Statement	Mean	Std. Dev.
(i) My county ensure it delivers services to suppliers within the stipulated time.	3.71	0.79
(ii) My county ensures that there is cost effectiveness.	3.72	0.88
(iii) My county ensures proper supply of goods	3.60	1.01
(iv) My county ensures that user departments are secure.	3.61	0.88
(v) My county ensures that there is consistent supply of goods	3.61	0.91

Table 2 indicates that most participants agreed regarding the following statements on supplier evaluation management practice: that the county ensures it delivers services to suppliers within the stipulated time (mean 3.71, std dev. 0.79); that the county ensures that theirs is cost effectiveness (mean 3.72, std dev. 0.88); that the county ensures their cost effectiveness (mean 3.60, std dev. 1.01); that the county ensures that user departments are secure (mean 3.61, std dev. 0.88); and that my county ensures a consistent supply of goods (mean 3.61, std dev. 0.91).

4.3 Inferential Statistics Results
4.3.1 Correlation Analysis Results
Pearson A correlation was conducted to find the interrelationship between the variables. Supplier evaluation management practice was positively correlated to supply chain performance ($r = 0.508$; $p < 0.01$). A value below 0.9 indicates a lack of multicollinearity in Pearson correlation values; hence, there was no multicollinearity as the value was below 0.9.

Table 3
Correlation Analysis

		SEM	SCP
SEM: Supplier Evaluation Management practice	Correlation Pearson	1	.508**
	Sig. (2-t)		.000
	N	76	76
SCP: Supply Chain Performance	Correlation Pearson	.508**	1
	Sig. (2-t)	.000	
	N	76	76

4.3.2 Simple Linear Regression Results on Supplier Evaluation Management practice

Simple linear regression was conducted to establish the effect of supplier evaluation on the performance of the supply chain in the selected devolved government of the Nyanza region in Kenya.

Table 4
Simple Linear Regression Results on Supplier Evaluation Management practice

Model Summary									
Model	**R**	**R Sq**	**Adj R Sq**	**Std. Err**	**Change Statistics**				
					R Sq Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.508ᵃ	.312	.302	.595451	.312	33.511	1	74	.000

a. Predictors: (Constant), Supplier Evaluation Management practice

ANOVAᵃ							
Model		**Sum of Sq**	**Df**	**Mean Sq**		**F**	**Sig.**
1	Regression	11.882	1	11.882		33.511	.001ᵇ
	Residual	26.238	74	.349			
	Total	38.119	75				

a. Dependent Variable: Supply Chain Performance
b. Predictors: (Constant), Supplier Evaluation Management practice

Coefficients						
Model		**Coefficients Unstandardized**		**Coefficients Standardized**	**T**	**Sig.**
		B	**Std. Err**	**Beta**		
1	(Const)	1.595	.321		4.966	.000
	Supplier Evaluation Management	.506	.087	.508	5.789	.000

The findings regarding the model summary table were that supplier evaluation management practice accounted for 31.2% ($R^2 = 0.312$) variations in supply chain performance. Further, the Anova table indicated that the model was feasible because it was significant.

According to the coefficient table, supplier evaluation management practices positively and significantly influenced supply chain performance. Thus, the null hypothesis that **H₀:** Supplier evaluation management practice has no significant effect on the supply chain performance of Kenyan Selected County Governments in Nyanza Region was rejected. As such, the substitution of the model $Y = \beta_0 + \beta_1 X_1 + \varepsilon$ therefore becomes $Y = 1.595 + .506X3 + \varepsilon$.

The implication is that an additional unit of supplier evaluation management practice leads to an additional unit of supply chain performance by 50.6%. The findings agree with Sreejith and Vinaya (2017) found supplier evaluation to be positively affected by performance of the construction sector. This also agrees with Rodeghier (2017), who carried out a study on the effect of supplier evaluation on supply chain performance and found that supplier evaluation tenets had a positive and significant effect on performance. However, Jens (2014) established that supplier evaluation had a negative influence on supply chain performance.

V. CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

Regarding supplier evaluation management practices, the study concludes that there exists a positive and significant association between supplier evaluation management practices and the performance of the supply chain in

the selected devolved units of the Nyanza region, Kenya. This indicated that an increase in supplier evaluation management practices through quality commitment, distributions, delivery strategy, and cost evaluation would result in an additional unit increase in the performance of the supply chain in the selected devolved units of the Nyanza region.

5.2 Recommendations

The devolved units in Kenya should evaluate suppliers to ensure supply chain performance. This can be achieved through quality commitments, distributions, and delivery strategies and by evaluating the costs so as to improve the performance of the supply chain of devolved units through effectiveness, efficiency, customer satisfaction, and reduced lead time.

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