

INFLUENCE OF SUPPLIER RELATIONSHIP MANAGEMENT ON PROCUREMENT PERFORMANCE IN STATE CORPORATIONS IN KENYA: (A CASE OF GEOTHERMAL DEVELOPMENT COMPANY)

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Abstract: The purpose of this study was to investigate the effects of supplier relationship management on procurement performance in Kenya. State corporations play a major role in the development of a country through provisions of essential services to the public therefore propelling development. However, state corporations are faced with lack of clarity of vision, poor management, corruption and inefficiency during procurement processes. Supplier relations are not fully exploited with short term contracts and arms-length approaches still being reported. In this process value is lost. The overall objective of this study was to establish how supplier relationship management can influence procurement performance in state corporations in Kenya. In particular, this study examined the influence of collaboration, trust, supplier evaluation and Supplier development on procurement performance in State corporations in Kenya. This study adopted a descriptive survey design to establish to which extent the independent variables affected procurement performance in state corporations in Kenya. Qualitative data was obtained from published sources like internet sites, library books, reports from journals and published theses. The top management and staff from procurement, stores, ICT, finance and production staff formed the target population. A sample frame of 80 respondents were chosen for this study. Self-administered questionnaires were dropped and picked at a later date to give ample time for them to fill. The questionnaires were tested for validity and reliability using Cronbach Alpha coefficient. Multiple regression analysis and correlational analysis were used to analyze the effect of independent variables on dependent variable. Data was analyzed using SPSS version 23 and Excel 2016 to obtain quantitative measures used in this study. Charts and tables were used to present analyzed results. The findings indicate that collaboration, supplier evaluation, trust and supplier development had a positive statistical relationship on procurement performance in state corporations in Kenya. Further, supplier development showed a stronger positive influence on procurement performance. The study recommends more stringent measures to ensure contractual obligations of suppliers are met. In addition, more funds should be allocated to supplier development activities to ensure capacity improvement of suppliers. Finally, state corporations should develop vendor rating systems and information communication tools to facilitate closer relations and appraisal so that remedial action can be taken.

Keywords: Collaboration, Supplier Evaluation, Supplier Development and State Corporation.

1. INTRODUCTION

Supplier relationship management main objective is to improve efficiency and effectiveness of inter-organizational processes with delivery of superior value to customer being supreme (Achieng & Kavale, 2016). In the past the customer was the main focus of businesses but due to outsourcing of non - core activities the supplier has gained more significance.

Suppliers were treated in adversarial manner with transactional technique prevalent. However, development of Information communication systems, development of Total Quality management and industrial restructuring change the buyer's behavior from transactional to more cooperative techniques

Statement of the Problem:

State corporations being public entities should use all procurement best practices to ensure transparency, reduce cost, boost delivery of services at minimal sustainable cost. Efficient procurement system leverage of supplier's capabilities through collaborative relationships to derive maximum benefits on behalf of the public. Countries that embraced efficient SC have achieved massive economic development. State corporations in countries like China, Malaysia, Saudi Arabia play a significant role in the economy of the named countries. According to a report on parastatals returns (R.O.K, 2013) reveal that SC accounted for 11.64% of Gross Domestic Product in 2010/2011, yet most state corporations lack clarity on their role in the economy. Inefficiency ensue most parastatals due to inadequate performance management framework. The (R.O.K, 2013) further records that eleven SC recorded losses which piles pressure on treasury to uplift them. Supplier performance management can improve efficiency of procurement processes therefore making them to compete with their private counterparts.

Most available literature on supplier relationship management have been focusing on a shift of approaches from adversarial approach to more collaborative ones when dealing with suppliers. In traditional approach a supplier is viewed as vendor instead of a source for external resources which the public sector can benefit. Mandiyambira (2012) posits that tendering processes in public procurement always put more weight on the lowest bidder; giving a tender to the lowest price offered with disregard to order crucial factors that measure capacity of potential suppliers to meet and even exceed contractual obligations.

In this open competitive tendering process, many suppliers bid for short term contracts. At expiry of contract means that the supplier- buyer relationships also terminate. Naturally, public procurement entity will always be in search for a new cohort of suppliers. Owing to the shift, short term relationship procurement costs are very high due to prequalification and tendering processes. Will the public-sector procurement continue handling of key suppliers for strategic items this casually yet there is a request for more collaborative long-term relationships which have proved successful? Mandiyambira (2012) posits that public procurement is an area that is rich for returns and cost saving. This study sought to find out the extent to which mutual longer relationship can influence procurement in parastatals performance which is clearly lacking in available literature.

Objectives:

1. To identify how collaboration influences procurement performance on state corporations in Kenya.
2. To determine how trust influences procurement performance on state corporations in Kenya.
3. To investigate how supplier evaluation influences procurement performance on state corporations in Kenya.
4. To find out how supplier development influences procurement performance on state corporations in Kenya.

2. THEORETICAL REVIEW

Theory of Constraint in Supply Chain:

This theory was propagated by Dr. Eliyahu Goldratt in 1986 that aims to improve performance of a system. A constraint is anything that limits the system from achieving higher performance relative to its purpose (Moore & Scheinkopf, 1998). This theory presupposes that a system is made up of units called chains. These units work together in unison to make an efficient and effective systems. In any organization, which is strong there is weakest link. An organization is as strong as its weakest link. Most organization have limited resources but have a lot of priorities to accomplish are many therefore TOC is crucial for success of the organization. Lack of awareness of constraints in supply chain collaboration among parties involved is common (Simatupang & Sridharan, 2004).

Transaction Cost Economics:

This theory focuses on reducing cost incurred when acquiring goods or services either internally or externally. The basic unit of analysis is the transaction which occurs when goods are exchanged across a technologically separable interface (Williamson, 1985). Since transaction involve humans. They are affected by human behavior and other factors in the environment. These factors produce costs. Lane (1998) in his report identifies these transaction costs to include managing

and monitoring personnel for internal suppliers. For external ones they include source selecting costs, contract management, performance measurement and dispute resolution cost.

Social Exchange Theory:

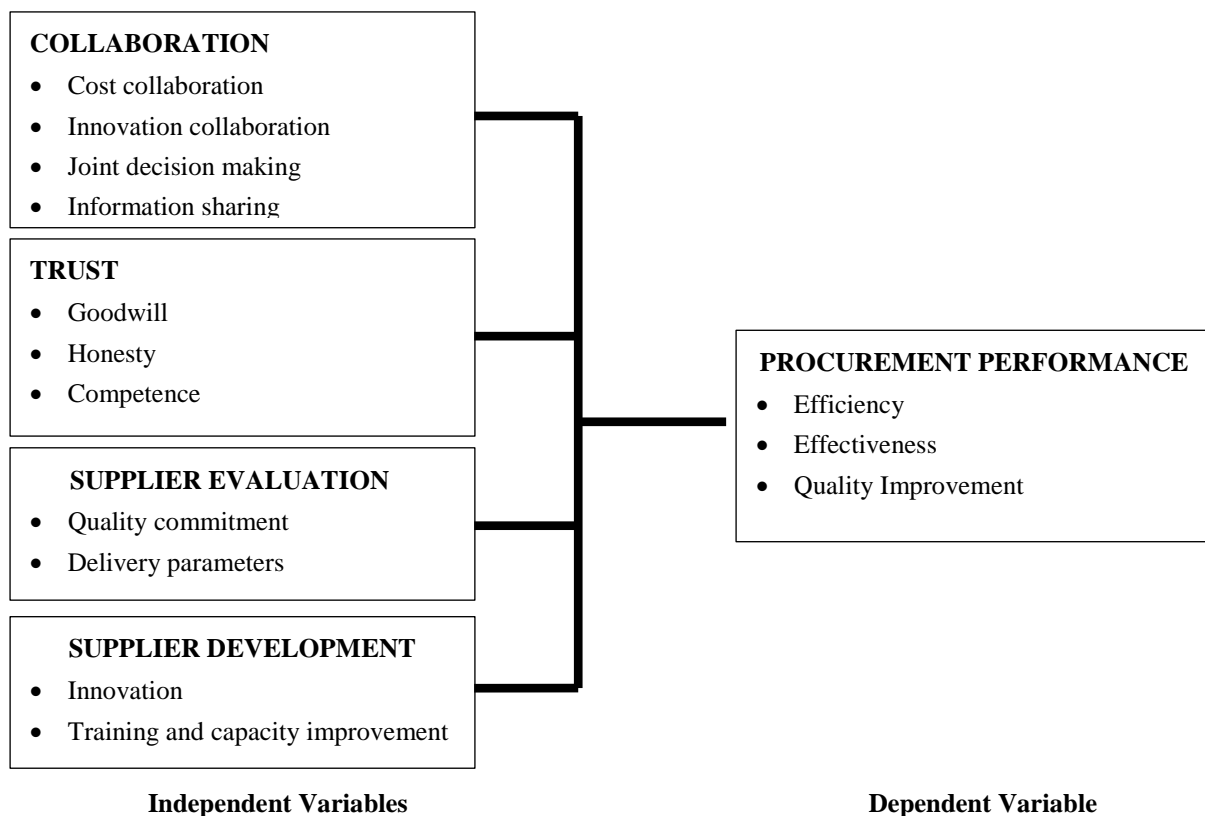
Individuals engage with each other expending rewards and avoid penalties (Emerson,1976). Relationships often evolve to become more mutual commitment with time and members in the relationship have to abide by the roles of engagements (Cropanzano & Mitchell, 2005). Social exchanges even though covered extensively in various disciplines is governed by three principles namely norms, reciprocity, resources exchanged and kinds of relationships that develop over time. Trust and commitment are key for the success of each relationship (Anderson and Narus,1990). Social Exchange Theory (SET) uses trust, commitment, dependence and power as major factors to consider (Ambrose, Marshall & Lych,2010).

Grey Systems Theory:

This theory was propagated by Professor Deng Long in 1982 to explain how decisions are made amid uncertainties and scarce information. This theory provides a platform for considering such complex issues when making decisions. According to Deng a grey system is one that is surrounded by lack of information or incomplete data. This can prove costly in modern day competitive world. With public funds under high scrutiny for accountability, selecting the best suppliers is compulsory. This theory has various frameworks namely: grey numbers, grey relational analysis, grey decision making, grey forecasting models, grey clustering, grey incidence analysis, grey generation and grey control (Liu, et al, 2017; Imeri,2015).

Conceptual Framework:

A variable is a symbol of an event, act, characteristic, trait or attribute that can be measured and to which we assign values (Cooper & Shindler, 2014). An independent variable (IV) can be manipulated by the researcher to cause an effect on dependent variable. In this case IV are shown in figure 2.1 below as collaboration, trust, supplier evaluation and supplier development. A dependent variable (DV) is usually the main focus of the study that a researcher wants to explain, describe and predict (Wethington, Cunningham & Pettinger, 2012). DV is influenced by IV. In this case, the dependent variable is procurement performance in state corporations in Kenya. Procurement performance in state corporations is therefore a function of other variables as shown in the diagram below.



Critique of Literature Reviewed:

Most research carried out focuses on role of supplier relation on procurement performance in private organizations. Available literature reveal tendency to underestimate the role of supplier relations to effective functioning of state corporation. Little has been done to establish how effective supplier relation can promote competitiveness of state corporations in Kenya since many of them are not performing optimally.

A research by Kamenya (2014) carried out it out in food and beverages firms in Nairobi however the study does not have a wide scope and its findings cannot fully reflect the circumstances at state corporations. Ndiga and Noor (2016), focused on how supplier management of quality and how supplier finances influence performance at Geothermal Development Company. There are many factors that could have affected supplier evaluation not highlighted not under that study such as technology organizational structure, competencies, human resources etc. Ondieki and Oteki (2015), in their study on how supplier relationship affects the effectiveness of a supply chain. None the less this study had a very wide scope and its finding are not conclusive enough to be applied in public sector procurement. Available literature tendency to treat each aspect of supplier relation on its own instead focusing on the big picture of supplier relationship management. This study will give an overall view

Summary of Literature:

This section summaries theoretical reviews, theories, conceptual framework and covered under this study. Various studies done in supplier relationship management concur that trust, commitment and communication are key pillars to successful relations. (Rousdy, 2015; Tom, Davis, & Graham, 2003). These aspects allow the buyer to integrate activities with key suppliers in order to raise their level of performance. The level of integration and the kind of relations a buyer should have with suppliers should be based on the strategic importance of goods, works or services offered by a supplier. The relationship continuum results in the supplier segmentation with many suppliers being handled according to tenets of Kraljic model (Ondieki & Oteki, 2015). The firm in a relationship should segment and rationalize its supply base and tailor relations for each supplier (Lambert, 2005). Most studies identify a paradigm shift with antagonistic relations to more collaborative ones. Instead of switching form supplier to the next buyer are developing their supplier bases (Hauser & Davis, 2003). Short term relations lead to sub- optimal performance. The attitude should on a win-win situation therefore promoting closer relations (Lambert& Schwieterman,2012).

Numerous literature indicates the importance of proper supplier selection and supplier management (Biel, 2009; CIPS,2016). Since most spend over 50% of total revenue on buying commodities from external suppliers. The benefits accrued form such relations include less wastage avoiding unnecessary cost customization, joint product development and embarrassment buy a supplier in ability to perform (CIPS, 2012).

The main reason from poor performance as Raheja and Ellis (2007), discuss is due to rigidity and wrong assumptions which misconstrue the original intentions of the business engagement. In a shallow relations value is lost since the buyers cannot fully derive benefits from numerous resources the suppliers may be having. The firm should develop strategies and implement them to reduce cost and development of new products (Barney & Arikan, 2001). Through research and development, a firm may customize its goods with suppliers in order to make its intellectual and physical resources far from being imitated. This can give a firm more economic value for more effective competitiveness (Peteraf, 2003).

In public sector procurement suppliers are not fully supervised during contract administration this leads to loss of value. A supplier will incur unnecessary costs and quality of work declines. Grey systems theory advises that clear supplier selection criteria using simple ways can assess multiple attributes in decision making (Tsai, 2003). This ensures selected suppliers will be chosen on past track record

Research Gap:

Several research studies carried on supplier relationships includes Ndiga & Noor, (2016) in the studies on role of supplier evaluation on procurement performance in state corporation: a case Geothermal Development company. This study found a positive role of finance e and quality management on procurement performance. However, study of two criteria are not adequate to get a conclusion on all factor on supplier evaluation that can affect procurement performance. In fact, the study does not focus on how length of relationship can affect procurement efficiency.

Shrimali (2013) on his study on analysis of success factor for supplier development. He identifies with supplier's point of view structural equation modelling could have been used to increase reliability results. Therefore, it does not reflect the buyers point of view.

Few scholars have ventured to study supplier relationship management as topic with many studies focusing on supplier evaluation and supplier development. This study addresses the wholesome aspects of management of supplier relations in public procurement.

3. RESEARCH METHODOLOGY

The research design used in this study was descriptive research design. Since this study was concerned with procurement performance; the researcher targeted individuals who are directly or indirectly involved in the procurement process. These individuals were in the procurement, stores, production, finance and top management cadres in Geothermal development company. The questionnaire had both open ended questions and a Likert Scale on some questions. The questionnaire was pre-tested with a small representative sample aimed at identifying potential misunderstandings or biasing effects for various questions. The data was coded and thereafter analyzed using descriptive statistics and inferential statistics (mainly linear regression models) with the aid of Statistical Package for Social Sciences (SPSS) program and presented using appropriate tables to give a clear picture of the research findings at a glance. A multiple linear regression analysis was performed to test the effect of the independent variables on the dependent variable

Model:

The model was specified as follows: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$

Where Y- procurement performance

$\beta_1, \beta_2, \beta_3$ and β_4 - Regression coefficients

α - is a constant

ϵ - error term

X_1 Collaboration

X_2 Trust

X_3 Supplier Evaluation

X_4 Supplier Development

4. REGRESSION RESULTS

The relationship between independent variables and dependent variable was established by a multiple regression model. The independent variables were Collaboration(CC), Trust(TR), Supplier Evaluation(SE) and Supplier Development(SD) and the dependent variable was procurement performance(PP). Table 4.9 provide an explanatory information of the variables.

Table 4.1: Model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.973 ^a	.947	.943	.10634

a. Predictors: (Constant), Supplier development, Trust, Supplier Evaluation, Collaboration

The coefficient of determination R^2 explains the extent to which changes in dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable and four variables that were studied can be explained. Adjusted R^2 value of 0.943 gives a better estimate of actual impact than R^2 on the general population. It also minimizes the effect of a small sample size. From this data 94.3% of variation in procurement Performance can be explained by the dependent variables which is very high. However, 5.7% of variation in procurement performance can be attributed to other factors that were not part of this research. This also implies that these variables are very significant and need to be considered in any effort to improve procurement performance in State Corporation in Kenya.

ANOVA Test:

An analysis of variance was done to ascertain whether the model was indeed significant and a true predictor of the whole population. F –test is done to test the effect of independent variables simultaneously. Table 4.10 summarizes the results from ANOVA test. The study reveals that significance of $p= 0.000$ which is less than $p= 0.05$ therefore the model is significant in predicting how CC, SE, TR and SD influence procurement performance Hence supplier relationship management has significant impact on describing procurement performance in state corporations in Kenya. At 5% level of significance the calculated F value was found to be 82.772 and critical value of F at 4 numerator and 45 denominator degrees of freedom was found to be 3.08604 at 0.05 significance level (two tailed). The F - critical is lower than the calculated F statistic indicating the model was fit in explaining the influence of 4 independent variables on dependent variables.

Table 4.2: ANOVA Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.171	4	2.293	82.772	.000 ^b
	Residual	.509	45	.011		
	Total	9.680	49			

a. Dependent Variable: Procurement Performance
b. Predictors: (Constant), Supplier development, Trust, Supplier Evaluation, Collaboration
F – Critical = 3.08604

Beta values

In order to answer the question about which independent variable is a significant contributor to procurement performance in State Corporation in Kenya the Beta values were used. Table 4.11 summarizes the results.

The first objective of this study was to assess the influence of collaboration with supplier on procurement performance in Kenya. The respondents indicate that they have instituted an e-procurement system that enables two-way communication. In addition, they engage them to ensure continuous improvement. In the multiple regression model, the study established that collaboration had a positive coefficient ($\beta_1=0.632$, $p=0.000$). Since $p< 0.05$ the results are significant. This implies that collaboration was a significant determinant on procurement performance. Numerically, 0.632 implies that a unit increase in collaboration results in 0.632-unit increase in procurement performance.

The second objective indicates that competent suppliers are engaged who keep their promises but they were uncertain about the level of honesty of suppliers and their ability to meet contractual obligations in full. On the optimal model of the study trust has a significant influence on procurement performance with beta values of ($\beta_2 = 0.719$, $p=0.000$). This implies that trust has a positive significant relationship on procurement performance.

The third objective was to examine the influence of supplier Evaluation on procurement performance in state corporations in Kenya. According to most respondent's close buyer-supplier relations reduces cost of inventory held, it improves on delivery; assuring on time in full regimes and motivated suppliers to reduce cost through the vendor rating systems. The regression model indicates that supplier evaluation had a statistically positive influence on procurement performance in state corporations in Kenya ($\beta_3 = 0.34$ $p=0.000$).

The fourth objective was to examine the influence of supplier development on procurement performance in state corporations in Kenya. According to majority of respondents enforcing competitions reduces prices; training remains a major supplier development activity. However, most respondents at GDC registered neutrality on a promise for high business volume in future for good performance. The results indicate that Supplier Development has a strongly positive influence on procurement performance with beta coefficient values of $\beta_4=3.714$, $p=0.000$. The intercept value (constant) for this study was $\beta_0 = 0.103$. It is the value of procurement performance when all independent variables were held constant at zero.it is the level of procurement performance without the consideration of supplier relationship management. A generalized multiple regression model for this study is therefore summarized and shown below.

$$Y = 0.103 + 0.632CC + 0.719TR + 0.34SE + 3.714SD + \varepsilon$$

The constant and regression coefficients β_0 , β_1 , β_2 , β_3 and β_4 were (0.103, 0.632, 0.719, 0.34 & 3.714) respectively. The results show that procurement performance is highly influenced by supplier development ($\beta=3.714$, $p \leq 0.05$) followed by trust ($\beta=0.719$, $p \leq 0.05$), collaboration ($\beta=-0.632$, $p \leq 0.05$) and supplier evaluation ($\beta=0.34$, $p \leq 0.05$) respectively.

Table 4.3: Beta coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
(Constant)	.103	.274		.376	.708	-.449	.656
Collaboration	.632	.215	.945	-6.529	.000	-1.293	-.683
Trust	.719	.279	.638	-5.822	.000	-1.230	-.598
Supplier Evaluation	.34	.188	0.058	-10.011	.000	-.970	-.645
Supplier Development	3.714	.279	3.349	10.949	.000	3.031	4.398

a. Dependent Variable: procurement performance

V. CONCLUSION

It can be concluded that collaboration played a significant role on procurement performance in Geothermal Development Company. Secondly, state corporations in Kenya have information systems that allow sharing of information with its suppliers. According to the findings supplier evaluation factors resulted in improved procurement performance. Aspects such as cost reduction, on-time delivery, inventory handling cost and vendor rating. It can also be deduced that trust significantly contributes towards procurement performance. Aspects of trust such as honesty, competency, and confidence in the relationship with suppliers resulted in an improvement in procurement performance. Finally, the study finally concluded that supplier development was an important factor which contributed to an improvement in procurement performance. Factors such as supplier education, training and commitment to continuous improvement had a positive significant relationship on procurement performance in State Corporation in Kenya.

VI. RECOMMENDATIONS

Based on the findings made the following are recommended. The government agencies should develop a structural mechanism to ensure cordial buyer-supplier relationships. This will ensure more structured communication, sharing of information and resolving conflicts so that benefits of collaborations are achieved. Parastatals should put more effort should be placed on developing trust since the relationships in public sector procurement are directly affected by the supplier's willingness to perform the contract with minimal supervision. State corporations should put more efforts to encourage suppliers to reveal cost structures which can justify prevailing prices as well as a need to increase prices indicated in the contract. Further, it will make it easier during contract administration and improve cost predictability. State corporations should improve the capability of suppliers for more improved procurement performance. This can be done through training and education programs. The organizations should allocate funding to allow supplier development activities within the financial year.

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