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EFFECT OF SUPPLIER QUALITY COMMITMENT ON THE PROCUREMENT PERFORMANCE GOVERNMENT MINISTRIES IN RWANDA

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ABSTRACT

Selection and maintaining competent suppliers are very essential in procurement. There are many factors that affect a firm's ability to choose the right supplier. Less has been done to investigate the supplier quality commitment on the procurement performance in the Rwandan context. The purpose of the study was to examine the effect of supplier quality commitment on the procurement performance within MININFRA. The study adopted descriptive research design to effect of supplier quality commitment on the procurement performance within MININFRA. The study population was 102 employees from all departments of MININFRA. 45 employees were sampled by using Slovin's formula. This study used questionnaire technique to correct data. Quantitative data obtained from close ended questions was analyzed by using descriptive statistics. Narrative data obtained from interviews and open-ended questions in the questionnaire were analyzed using qualitative approaches. Data collected was analyzed using SPSS version 21. The results indicated that Supplier quality commitment have a relationship with Procurement performance. The significance was 0.000 which indicated that there is positive relationship (0.772) between Supplier quality commitment and Procurement performance. These results provided reasonable evidence to the consistent view that, Procurement performance of MININFRA justified by increase of Supplier quality commitment. The beta of Supplier quality commitment was .444 with a t-statistic of 2.241. The positive coefficients mean a unit change in Supplier quality commitment leads to 0.772 units increase in Procurement performance while keeping financial sustainability and Supplier competence constant. P- value = 0.000 < 0.05 the positive tstatistic value indicated that the effect is statistically significant at 5 % test level. The study concluded that the ministry of infrastructure has supplier appraisal evaluation criteria in place for various supplier categories. In overall, achievement of product quality affects procurement performance though the effect is not significant. The study recommended that supplier evaluation should be done by experts who are knowledgeable and have expertise to conduct the exercise professionally. This is because supplier selection and evaluation are a process vulnerable to personal and political interference especially in the public sector. Quality commitment must be considered a critical factor in supplier evaluation and supplier selection.

Keywords: Supplier evaluation, supplier performance management, procurement performance

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INTRODUCTION

Globally, selection and maintaining competent suppliers are very essential in procurement (Kemunto, 2014). Specifically, supplier evaluation is an increasingly important activity within most public institutions since severe financial and operational consequences can result from the failure to optimize the function. It is a fundamental strategy to select appropriate suppliers' selection is one of the fundamental strategies for enhancing the quality of output of any organization, which has a direct influence on the company's competitiveness and reputation (Adamyan, 2012). One of the techniques used by organization to select best suppliers is supplier evaluation.

Concept of supplier evaluation has gained popularity among practitioners and even scholars (Humphreys, 2012). In China, for instance, Liu and Hai, (2010) conducted a study to assess the impact of supplier evaluation on business performance among private hospitals. According Pamela (2013) in her study on the determinants of supplier selection and evaluation in Pakistan Telecom industry, supplier financial capacity expertise is one of the key factors which determine the eventual performance of both the supplier and procurement performance, the study depicted high correlation between the financial capacity of supplier and ability of supplier to deliver which in turn enhances procurement performance indicating a need for a strategic alliances for improved performance of the parties

In Africa, owing to the importance of public procurement, conference on public procurement has been constituted to look at issues of integrity and transparency in public procurement. Similarly, scholars have developed interest on the subject of public procurement in the recent past conducting a number of studies on the subject. For instance, Quinot & Pontious (2013) wrote a book that focused on the law governing public procurement in a number of African systems and looks at key themes relevant to all African states to provide a focused view of the African systems and bring a comparative perspective in understanding Public Procurement in Africa and other parts of the world (Humphreys, *et al.*, 2013).

In Nigeria, the study conducted by Akenroye et al. (2012) on supply chain practices identified supplier evaluation and a critical supply chain activity that every organization must engage in. Similarly, a study on the evaluation of procurement process in public institutions of Uganda, conducted in Makerere University established that reduction in purchasing cost through effective supplier evaluations is one of the most significant purposes of procurement. On average, public Universities in Uganda spent 80% of their budgets on activities related to the purchase of materials, hence cost reductions as a result of effective supplier evaluation allow the firm to pursue price competition strategies in downstream markets and sustain growth throughout the entire supply chain stream.

In Kenya, the PPDA Act 2005 and procedure 2006 serves as a guide that provides guidelines and procurement procedure and supplier evaluation for public procurement entities to ensure judicious, economic and efficient use of state resources ensuring that public procurement is carried out in affair, transparent and non-discriminatory manner. Among other criteria, the Act 2005 states that tenderers and other suppliers should possess the necessary professional and technical qualifications and competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience in the procurement object and reputation; and the personnel to perform the procurement contract. In spite of all these, public institutions such as Universities have never realized the objective of supplier evaluation (PPOA, 2009).

In Rwanda, World bank (2013) outlined that the process through which the government operates and spends public money. It is estimated that in Rwanda public procurement accounts for over 10% of the Gross Domestic Product (GDP), making it a large market for suppliers and contractors. With

this amount of resource, public procurement tops the list of sectors with high opportunities for corruption. This therefore means that every effort should be made to erect safeguards to check against corrupt malpractices in public procurement (WB, 2013). Organizations are facing difficulties of scheduling the supplier appraisal process that leads to an approved supplier listing. Many organizations, in an effort to reduce risks of trading with bogus companies, have employed real time audits that involve supplier capability assessment, but unfortunately at the wrong stage, when suppliers are waiting for payments for services rendered. Service delivery inevitably was declining owing to internal squabbles that It is for this reason that there is a need to assess both the potential and current suppliers on one on one basis to improve their performance and capabilities for the benefit of buying organization. After the pregualification of suppliers through supplier evaluation, improvement in procurement performance is expected, however it puzzling to note that buyer supplier relationship does not last any longer, suppliers are in most cases conventionally selected on the basis of low price and less importance is given to the suppliers who give assurance of on time delivery and long term relationships (OECD, 2017).

The Ministry of Infrastructure (MININFRA; is a department of the Government of Rwanda. The Ministry is responsible for infrastructure policy and development throughout the country. According to Albert, (2011), the ministry was founded after Rwandan independence in 1962 as the Ministry for Technical Businesses. Three years later it was renamed to the Ministry of Public services. Following the military coup which brought President Juvenal Habyarimana to power, the ministry was renamed again to the Ministry of Public Services and Energy. It retained this name until 1980, when it was expanded to include a water remit. The Ministry of Public Services was retained after the 1994Rwanda Genocide, reverting first to its former title of Ministry of Public Services and Energy, from 1994 then back to its 1960s title

of Ministry of Public Services in 1997 and to the new name of Ministry of Public Services, Transport and Communication in 1999. The Ministry gained its current name Ministry of Infrastructure in 2002.

To initiate programs to develop, rehabilitate and maintain an efficient and integrated national transport infrastructure network, including roads, bridges, airports, railways, and water transportation which will contribute towards economic development and regional integration, To initiate, develop and maintain sustainable power generation facilities to supply clean, cost-effective and uninterrupted energy for the country and the region; To initiate, develop and facilitate urban development programs with a view to providing affordable shelter with due regard to adequate water and sanitation facilities for the population and promote grouped settlement (Imidugudu); To initiate programs aimed at increasing access to affordable energy, water and sanitation, and transport infrastructure and related services for the population; To ensure that the development of and strategies concerning national policies infrastructure are in line with regional integration and harmonization policies with the EAC; To supervise the implementation of quality standards and norms, cost effectiveness, response to environmental sustainability, safety and crosscutting issues in infrastructure development; To supervise activities meant to elaborate, monitor and assess the implementation of national policies and programs on matters relating to habitat and urbanism, transport, energy, water and sanitation; То support and supervise infrastructure development programs under the decentralized structures under the respective sub-sectors as per the District Development Programs in each district; To orient and supervise the functioning and management of public institutions, agencies and companies under the Ministry of Infrastructure including existing agencies such as Road Maintenance Fund (RMF), Rwanda Civil Aviation Authority (RCAA), Rwanda Energy Group (Energy Development Company Ltd and Energy Utility

Company Ltd), Water and Sanitation Corporation Ltd, Rwanda Transport Development Agency (RTDA), Rwanda Housing Authority (RHA), RwandAir and other agencies to be formed under its subsectors And to facilitate, promote and engage the private sector to invest in infrastructure

Statement of the Problem

In Rwanda, impact the overall performance of a given procurement function. Choice of an organization's supplier should be guided by an elaborate evaluation of the potential suppliers since the suppliers can impact the performance of any procurement function or process. Delayed deliveries, poor quality products or services, noncompletion of orders and even threats of litigation due to delayed payments is a common scenario experienced by public institutions. In 2015, Rwanda Public Procurement Authority reported that that up to 20% of procurement inefficiencies in public sector in Rwanda are attributed to supplier's performance issues. There is therefore concern as to what can be done to reduce supplier related procurement issues. One of the ways through which organizations strive to reduce supplier related inefficiencies is through evaluation of suppliers. In ideal situations, supplier evaluation is expected to positively influence procurement performance. However, it puzzling to note that the relation has not been the case as various studies revealed mixed findings with some indicating significant positive relationship while other indicate insignificant relationship. In Rwanda, as reported by Rwanda Public Procurement Authority (RPPA), in public institutions; suppliers are in most cases conventionally selected on the basis of low price and less importance is given to the suppliers who give assurance of on time delivery and long-term relationships.

Although several previous studies have been conducted regarding supplier evaluation, but this has rarely been covered by researchers from the perspective of Rwandan context. Although government ministries in Rwanda manifested good procurement performance, there still the problem in selecting a procurement method such as to consider what method will maximize competition, given the nature of what is being purchased, and obtain a large participation of qualified bidders (RPPA, 2012). Furthermore, the Suppliers claim the delays of payment for some invoice in government ministries in Rwanda. This is the problem may hinder the procurement performance in ministries of Rwanda.

The question arises in this case as to what criteria the government ministries should use in evaluation of their suppliers for better procurement performance. Supplier appraisal is arguably one of the popularly used approaches of ensuring the right suppliers are awarded contracts. It is from this point of view; this study focuses on the effect of supplier appraisal on procurement performance in government ministries. As reported by RPPA (2014), in the public sector like government ministries in Rwanda, suppliers are in most cases conventionally selected on the basis of low price and less importance is given to the suppliers who give assurance of on time delivery and long-term relationships.

LITERATURE REVIEW

Theoretical framework (Transaction Cost Economics Theory)

In transaction of cost economics (TCE), the focus of the firm is to minimize the sum of transaction costs and production costs (Williamson, 2010). Transaction costs affect the firms' decisions on how they organize their activities, whether to move towards vertical integration (hierarchy) or to prefer market exchange. Thus, According to TCE, the decision of whether to collaborate or not should be based on the efficiency of governance. Transaction cost economics theory identifies and explains the conditions suitable for a firm to manage an economic exchange internally, and the conditions under which it should manage an economic exchange externally.

Hald et.al (2012) argue that transaction cost analysis is useful in studies of relationships, because

it provides insights into the circumstances that cause the development of a closer relationship between the buyers and suppliers. They base their theoretical argument on Williamson's (2010) studies stating that the establishment of a closer relationship corresponds to a shift away from market-based exchange toward bilateral governance.

Resource based view(RBV) and transaction cost economics (TCE) are important to the study of supplier management, as superior performance achieved in supply chain activities relative to competitors, would explain how these activities can be supported by suppliers and how supplier selection/evaluation/development can contribute to the supply chain core competences (Lysons & Farrington, 2012). Applying TCE underlies the aspects of efficiency and cost focus.

Especially, it defines the boundaries of a firm. RBV refers to the firm's internal value creation through its resources and capabilities. Value can be created from supplier relationship management through learning mechanisms, routines and experience. RBV applies the aspects of external and internal social relations, power distribution and the level of dependency on external counterparts. It aims at the optimization of the continuity of the business and the autonomy of affirm. As a summary, it can be said that these theories support the purpose of supplier management, diffusion of supplier information between business units, minimization of transaction costs, value creation through internal capabilities and resources, and reducing the risks of supply dependence and availability. In this study TCE and RBV theories were used to assess how finances and supplier relationship supplier management affects procurement performance Government ministries in Rwanda.

Supplier quality commitment on the procurement performance

A study which was carried out by Hofmann (2013)) on supplier evaluation and selection by using the analytic hierarchy process approach found out that the issues of supplier selection have attracted the interest of researchers since the 1960s, and research in this area has evolved. Continuing the previous works in supplier selection area, the work has successfully achieved its objectives. The main contribution of the work was the identification of the important criteria for the supplier selection process. Then a multi-criteria decision model for evaluating and selecting a supplier was developed. The model for supplier evaluation and selection was developed using the AHP method. The AHP model is assessing decision-makers to identify and evaluate the supplier selection. ABC Company could be satisfied when using the developed model that gives the price criterion unbiased ability to evaluate suppliers. Choosing the right supplier could give the right quantity and the right cost on the right timeline.

A study conducted by Kitheka (2013) on supplier evaluation practices established that supplier performance measurement, supplier audits, supplier development and supplier integration are the most used supplier quality management practices. The study also established that from supplier quality management, an organization may enjoy among other benefits reduced lead times, increased responsiveness to customers', orders and enquiries, customer loyalty, increased profitability, reduced opportunity cost from lost sales and effective communication between the organization suppliers as well as customers. The study further recommended that suppliers should maintain reliable records so as to avoid the problem of poor visibility and traceability and that the organizations must build into their systems quality measures and continuous inspections so that disappointments of customers through discontinuous supply or supply of poor-quality products.

A study by Tully (2011) on supplier evaluation and performance of large food and beverage manufacturing firms in Nairobi, Kenya concluded that large food and beverage firms in Nairobi City County evaluate their suppliers using the criteria established: The financial stability of the supplier, quality issues, price factors, environmental friendliness of the supplier, production capacity of the supplier, employee capabilities of the supplier and preference and reservation. Environmental friendliness of the supplier, employ capabilities and price factors of the supplier are the most domineering criteria which mean that firms are

Supplier's Quality Commitment

- Conformance
- Reliability
- Responsiveness

Independent variables

Figure 1: Conceptual Framework

METHODOLOGY

The main purpose of this study was to gain deeper knowledge about the research problem but also describe the effects of supplier appraisal on procurement performance in government ministries of Rwanda, A case of MININFRA. In this study, the researcher used descriptive research design to investigate the relationship between supplier appraisal and procurement performance. Both qualitative and quantitative data were collected. Qualitative data was obtained by using questionnaire. This research used guantitative data because the data gathered by using questionnaires and interpreted based on frequency and percentage. The items selected constituted what is technically called a sample. The study population was 102 employees from all departments of MININFRA. The sample size was derived from a population of 102 people being targeted in the study. The researcher used Slovin's formula and a sample of 45 respondents was got. Data collected using the questionnaire was analyzed through SPSS (Statistical Packages of Social Sciences) version 21. Data was coded for analysis. Descriptive statistics such as mean and standard deviation was used to describe indicators of supplier quality commitment on the procurement performance. Correlation analysis with one tailed significant test was used to test the correlation between individual indicators of supplier evaluation and procurement performance

keen on producing at minimum costs and the right volumes employing the right expertise to be able to satisfy the available market while being compliant to environmental issues. Supplier evaluation as one of the supply chain practices are able to reap from the benefits associated with it.

Procurement Performance

- Cost analysis (Lower cost)
- Reduced risk of Supplier failure
- Higher quality supplies
- Shorter delivery time

Dependent variable

while a multiple regression was used to test the overall effect of supplier evaluation on procurement performance. ANOVA test was conducted to test the statistical significance of the overall effect of supplier quality commitment on the procurement performance.

RESULTS AND FINDINGS

Descriptive Statistical analysis for Supplier quality commitment on procurement performance

Supplier's quality commitment on procurement performance in government ministries in Rwanda. Respondents' opinions against the statements were recorded using the scale shown below: 1-Strongly disagree; 2 – Disagree; 3 – Indifferent; 4 – Agree; 5 –Strongly agree. The statements, respondents' opinions and their percentages are as shown in Table 1.

Analysis of the responses to the statement that Supplier Selection is affected by politicians and other external players it was found that 21% of the respondents strongly agreed, 40% agreed, 3% were neutral, 19% disagreed while 17% strongly disagreed. Analysis of the statement that open tendering is done transparently was also done and it was found that, 39% of the respondents strongly agreed, 15% agreed, 10% were neutral, 39% disagreed while none of them strongly disagreed. When the responses to the statement that restricted tendering is never done in the Ministry of Infrastructure were analyzed, it was found that 39% of the respondents strongly agreed, 43% agreed, 10% were neutral, 8% disagreed while none strongly disagreed. Analysis of the statement that bids evaluation is handled by competent members was also done. From the analysis, it was found that 35% of the respondents strongly agreed with the statement, 25% agreed, 25% were neutral, 12% disagreed while 3% strongly disagreed. Analysis of the statement that the annual procurement plan is not prepared in good time was also done. From the analysis, it was found that 15% of the respondents strongly agreed with the statement, 35% agreed, 13% were neutral, 19% disagreed while 18% strongly disagreed. When the responses to the statement that Composure of tender committee is all inclusive (all departments represented) were analyzed, it was found that 39% of the respondents strongly agreed, 15% agreed, 10% were neutral, 39% disagreed while none of them strongly disagreed. Analysis of the statement that deliveries' inspection process is not handled well by inspection committee was also done and it was found that, 39% of the respondents strongly agreed, 15% agreed, 10% were neutral, 39% of the respondents strongly agreed, 15% agreed, 10% were neutral, 39% disagreed while none of them strongly agreed, 15% agreed, 10% were neutral, 39% disagreed while none of them strongly disagreed.

Table 1: Statements relating to effects of Supplier's quality commitment on procurement performance

Statements	1	2	3	4	5
Supplier Selection is affected by politicians and other external players.	21%	40%	3%	19%	17%
Open tendering is done transparently	39%	15%	10%	36%	0%
Restricted tendering is never done in the Ministry of Infrastructure	39%	43%	10%	8%	0%
Bids evaluation is handled by competent members	25%	35%	25%	12%	3%
Annual procurement plan is not prepared in good time	15%	35%	13%	19%	18%
Composure of tender committee is all inclusive (all departments represented)	39%	15%	10%	36%	0%
Deliveries' inspection process is not handled well by inspection committee.	33%	34%	9%	19%	5%
All suppliers are promptly paid on delivery.	15%	23%	25%	19%	18%

Correlation analysis between supplier's quality commitment and procurement performance

Correlation analysis was conducted to empirically determine whether supplier's quality commitment was a significant determinant of procurement performance. Table 2 indicate that supplier's quality commitment is significantly correlated to the performance (r=0.347, p<0.01). This implied that the increasing the supplier's quality commitment in this case public institutions would result to increased performance of the public institutions.

Table 2: Correlation between supplier's quality commitment and procurement performance

		Supplier Quality commitment Procurement performance		
Supplier Quality	Pearson Correlation Sig. (2-tailed)	1		
commitment	Ν	45		
Procurement performance	Pearson Correlation	.347**	1	
	Sig. (2-tailed)	.000		
	Ν	45	45	
**. Correlation is sign	nificant at the 0.01 level (2-t	ailed).		

Regression Analysis – supplier's quality commitment and procurement performance

Regression analysis was conducted to empirically determine whether supplier's quality commitment was a significant determinant of procurement performance. Regression results in Table 3 indicated the goodness of fit for the regression between supplier's quality commitment and procurement performance was satisfactory in the linear regression. An R squared of 0.679 indicates that 67.9% of the variances in procurement performance in government ministries in Rwanda are explained by the variances in supplier's quality commitment in the linear model. The correlation coefficient of 34. % indicates that the combined effect of the predictor variables has a positive correlation with procurement performance.

Table 3: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.824ª	.797	.679	.65724	
a. Predictors: (Constant), Supplier's quality commitment					

Result review that supplier's quality commitment is statistically significant in explaining procurement performance in government ministries in Rwanda. An F statistic of 174.532 indicated that the combined model was significant. From the analysis, a p-value less than 0.05 (p-value =0.0000) was obtained. This implied that the simple linear model with supplier's quality commitment as the only independent variable is significant.

Table 4: ANOVA results showing the effect of supplier's quality commitment on financial performance ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	12.14	1	12.14	174.532	.000 ^a
1	Residual	28.684	43	.476		
	Total	40.824	44			

c. Predictors: (Constant), Supplier's quality commitment

Correlation coefficients showed that Supplier's quality commitment (X1) is significant (p-value = 0.0000) in influencing procurement performance (Y). The results of the analysis are shown in Table 5

and the fitted model from this analysis is shown below:

Y= 2.487 + 0.342X₁

Table 5: Coefficient results showing the relationship between Supplier's quality commitment and procurement performance Coefficients (a)

Mode	I	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
1	(Constant)	1.094	.270		7.169	.000
	Supplier's quality commitment	.772	.062	.444	2.241	.000
a.	Dependent variable: Procurement pe	rformance				

The results indicated that Supplier quality commitment have a relationship with Procurement

performance. The significance was 0.000 which indicated that there is positive relationship (0.772)

between Supplier quality commitment and Procurement performance. These results provided reasonable evidence to the consistent view that, Procurement performance of MININFRA justified by increase of Supplier quality commitment. The beta of Supplier quality commitment was .444 with a tstatistic of 2.241. The positive coefficients mean a unit change in Supplier quality commitment leads to 0.772 units increase in Procurement performance while keeping financial sustainability and Supplier competence constant. P- value = 0.000 < 0.05 the positive t-statistic value indicates that the effect is statistically significant at 5 % test level.

Discussions

The results supported argument by Handfield et al. (2012) who explains that for purchasing managers, the evaluation and monitoring of supplier performance is also a critical responsibility. He further argues that price has been traditionally considered as the single most important factor in evaluating and monitoring suppliers. Changes in competitive priorities have also seen other dimensions of performance, including quality, delivery and flexibility become increasingly important. Consequently, in order to maintain effective partnerships, the buyer must continuously monitor supplier's quality commitment across multiple dimensions and provide feedback for improvement. These dimensions may be both operational performance) and tangible (e.g. intangible (e.g. relationship status), and should provide timely information to suppliers which both communicate buyer expectations and, where necessary, enables corrective action to be undertaken.

These findings also agreed with the findings of Kitheka (2013) that the effect of supplier quality commitment is significant for organizations with documented strategies of supplier evaluation. He pointed out that from supplier quality management, an organization may enjoy among other benefits reduced lead times, increased responsiveness to customers, orders and enquiries, customer loyalty, increased profitability, reduced opportunity cost from lost sales and effective communication between the organization suppliers as well as customers.

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that the ministry of infrastructure has supplier appraisal evaluation criteria in place for various supplier categories. Supplier quality commitment has significant effect on procurement performance of Ministry of infrastructure Suppliers' level of quality commitment directly determines the level of quality in products and services obtained through procurement activities; product quality is just an aspect of procurement performance. In overall, achievement of product quality affects procurement performance though the effect is not significant.

The study recommended that supplier evaluation should be done by experts who are knowledgeable and have expertise to conduct the exercise professionally. This is because supplier selection and evaluation are a process vulnerable to personal and political interference especially in the public sector. Quality commitment must be considered a critical factor in supplier evaluation and supplier selection.

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