

# The Effect of Supplier Appraisal on Procurement Performance in Government Ministries in Rwanda; A Case Study of Mininfra

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**Abstract:** *The 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, non-completion of orders and even threats of litigation due to delayed payments is a common scenario experienced by public institutions. The main objective of this study is to assess the effect of supplier appraisal on procurement performance in government ministries: a case of MININFRA. In this study, the researcher used descriptive research design to investigate the relationship between supplier appraisal and procurement performance. The study population is 102 employees from all departments of MININFRA. 45 employees were sampled by using Slovin's formula. This study was used questionnaire technique to correct data. Supplier appraisal has an overall correlation with procurement performance of 0.743 which is strong and positive. The Results indicate that financial sustainability content is the most significant in explaining procurement performance in government ministries with a significance of 0.000 which is less than a p-value of 0.05 and contribute 85.3% to the procurement performance. MININFRA has supplier appraisal evaluation criteria in place for various supplier categories. Most of the respondents were strongly agreed and agreed; supplier appraisal influenced the procurement performance in MININFRA. Researcher found that, there is positive relationship between supplier appraisal and procurement performance. MININFRA should therefore invest on modern appraisal criteria that have been proven to have greater procurement performance.*

## 1. Background of the Study

Procurement is an increasingly important activity within most government ministries, and severe financial and operational consequences can result from the failure to optimize the procurement function. Specifically, 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 (Adamyam, 2002). Supplier evaluation is perceived as a tool which provides the buying firm with a better understanding of "which suppliers are performing well and which suppliers are not performing well" but studies reveal that even after having carried out an in-depth supplier evaluation plus appraisal coupled with the enactment of Public Procurement and Disposals Act (PPDA) of 2005 and other policies on supplier evaluation, inefficiencies still exist ranging from supplies being made halfway or even termination of contracts before conclusion. Any organizational success often hinges on the most appropriate selection of its partners and suppliers (Amin, 2011).

One of the ways through which organizations strive to reduce supplier related inefficiencies is through appraisal of suppliers. In ideal situations, supplier evaluation is expected to positively influence procurement performance. However it is puzzling to note that the relation has not been the case as studies reveal mixed findings with some indicating significant positive relationship while others indicate insignificant relationship (Vitez, 2015). One of the techniques used by organization to select best suppliers is supplier evaluation. Supplier evaluation is the quantitative and qualitative assessment of suppliers to ensure a portfolio of best in class suppliers is available for use. To sustain

effective and reliable sources of supplies, buyers should select their suppliers carefully and evaluate them regularly (Humphreys, 2003).

Organization's ability to offer consistent quality and compete largely depends on its access to quality products and services. As market factors change, organizations also need to change. This is particularly true in competitive and globalized markets. Organizations are constantly under pressure to find ways to cut material and production costs through engaging in strategic supplier selection process and evaluation (CIPS, 2013). According to report produced by EU (2008) in their survey on supplier evaluation in Germany, a competitive supplier sourcing process should be carried out in an open, objective and transparent manner can achieve best value for money in public procurement. Essential principles that should be observed in conducting the procurement function include supplier financial capacity, capability and readiness to embrace new technology among other factors (EU, 2008).

Tracey (2008) studied analysis of supplier and procurement issues in UK established that quality commitment is determining factor for qualified supplier and is a key element and a good resource to cut production and material costs in order to survive or sustain competitive position in respective markets, hence development of an effective and rational supplier evaluation and selection is desirable. In the study, she observed that in South Korea for example, the supplier quality evaluation function's role has dramatically increased as companies sought to gain competitive advantage in the global market place. The effects of supplier quality evaluation were seen as a strategic resource for reaching high quality levels, fast delivery and cost savings. Companies such as General Motors, Mark & Spencer have

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been able to gain an improved competitive position through a better management of their purchasing activities (Amelia & John, 2003).

The concept of supplier evaluation has gained popularity among practitioners and even scholars (Humphreys, 2003). In Malaysia, for instance, Junli (2008) conducted a study to assess the impact of supplier evaluation on business performance among private hospitals. 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.

Public procurement is the purchasing and logistics operations in the public sector or in public institutions (Osuga et al., 2015). In many countries, the public sector is the major source of market for suppliers sometimes demanding up to 40 percent of national demand. For instance, in the UK, the public sector demand per year stands at £150 billion. For this reason, the government of UK has formulated public contracts regulations 2015 aimed at enhancing transparency and efficiency in public procurement operations in the country (Church, 1993).

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 (2008) wrote a book that focused on the law governing public procurement in a number of African states 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 (Pontious, 2008).

The question arises in this case as to what criteria to government ministries use in selecting and evaluating its suppliers for better procurement performance. There have been reported concerns that procurement performance of the public institutions including public universities have a lot of grey areas in the procurement operations ranging from suppliers failure to meet delivery dates, delivery of inferior materials and even at times failing to furnish the orders completely (OECD, 2007). At the same time there is an increasing trend of a number of suppliers even those within the approved list of suppliers demanding payment before the deliveries are made (OECD., 2007). The aim of this research proposal therefore is to find out the effect of supplier appraisal on the performance of procurement in Government Ministries in Rwanda.

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).

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. 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 (Pontius, 2008)

Expert Group Meeting discussed by Rotich et al. (2015) pointed out that procurement performance is concerned with effectiveness and efficiency in procurement operations. The came up with eight indicators for measurement of procurement operational performance, the indicators include; the level of price variance, level of contract utilization, expiration management, supplier performance, procurement cycle time and variability, payment processing time, procurement cost and staff training. Procurement performance is associated with cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage (Rorich, 2015). This study intended to study how procurement operational performance can be enhanced through supplier evaluation.

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, 2013-11-13).

Organizations are facing difficulties of scheduling the supplier appraisal process that leads to an approved suppliers' 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

included reversal of procurement decisions made by well-constituted procurement boards (WB, 2013-11-13).

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 prequalification 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, 2007).

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 1994 Rwanda 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.

The Ministry's mission statement, as stated on its website, is "to ensure the sustainable development of infrastructure and contribute to economic growth with a view to enhancing the quality of life of the population." Its remit includes overseeing maintenance and development of infrastructure in Rwanda including transport, energy, habitat and urbanism, meteorology, and water and sanitation.

The Ministry of Infrastructure is located at Kacyiru, Gasabo District, City of Kigali. The name "Ministry of Infrastructure" is recent. Over the years, the Ministry has had many different incarnations. The chronological list of its names is as follows: 1962 to 1965: Ministry for Technical Businesses; 1965 to 1973: Ministry of Public services; 1973 to 1980: Ministry of Public Services and Energy; 1980 to 1994: Ministry of Public Services, Water and Energy; 1994 to 1997: Ministry of Public Services and Energy; 1997 to 1999: Ministry of Public Services; 1999 to 2002: Ministry of Public Services, Transport and Communication (MINITRACO); 15th November 2002 – Now: Ministry of Infrastructure (MININFRA).

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 policies and strategies concerning national 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 cross-cutting 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; To 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 sub-sectors And to facilitate, promote and engage the private sector to invest in infrastructure.

## **2. Statement of the problem**

Suppliers are important stakeholders whose operations can impact the overall performance of a given procurement function. The 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, non-completion of orders and even threats of litigation due to delayed payments is a common scenario experienced by public institutions. Report by RPPA (2014) Indicates that up to 20% of procurement inefficiencies in the 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 (RPPA, 2014). This study wants to address the impact of supplier appraisal on procurement performance in governance ministries.

Many studies were conducted on supplier evaluation like a study of Justus & Barrack Okello (2016), studied the Effects of Supplier Evaluation on Procurement Performance of Public Universities in Kenya. 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



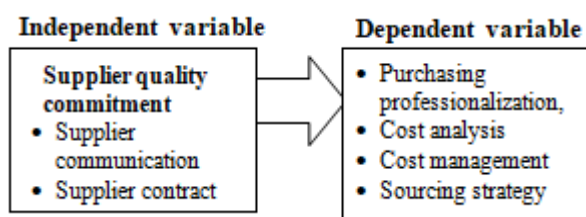
purchased, and obtain a large participation of qualified bidders (RPPA, 2012). Furthermore, the Suppliers claim the delays of payment for some invoice in government ministries in Rwanda. This is the problem may hinder the procurement performance in ministries of Rwanda.

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.

### 3. Objective of the study

To examine the effect of supplier quality commitment on the procurement performance within MININFRA.

### 4. Conceptual Framework



### Research Design

The main purpose of this study is 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 quantitative data because the data gathered by using questionnaires and interpreted based on frequency and percentage.

### Population of the Study

Population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. Quite often researcher selects only a few items from the population for the study purposes. The items so was selected constitute what is technically called a sample. The study population is 102 employees from all departments of MININFRA.

### Sample size determination

The sample size was derived from a population of 102 people being targeted in the study. The researcher used

Slovene's formula at a confidence interval of 95% and margin of error of 5% as described below.

$$\text{Where; } n = \frac{N}{1 + N(e)^2}$$

n = the minimum sample size

N = the population from which the sample was drawn estimated at 102 staffs from those different Hospitals.

e = the margin of error estimated at 10%.

$$n = \frac{102}{1 + 102(0.5)^2} = \frac{102}{1 + 102(0.25)} = 45 \text{ respondents.}$$

n = 45 respondents

### Data Collection instruments

This section describes the sources of data such are primary and secondary. This section describes also data collection technique and tools used to collect information related to the supplier management and procurement performance of MININFRA. This study was used questionnaire technique to correct data.

### 5. Research findings and discussion

#### Regression analysis on the effect of supplier quality commitment on the procurement performance within MININFRA

The influence of supplier quality commitment on procurement performance, in general the below Table shows the view of respondent of how supplier quality commitment influence the procurement performance in government ministries in Rwanda.

**Table 1: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824 <sup>a</sup>	.797	.679	.67048

a. Predictors: (Constant), Supplier quality commitment

R-square of Supplier quality commitment is equal to 0.797(79.7%), this implies that 79.7% variations of Supplier quality commitment influence the procurement performance in government ministries in Rwanda. have been captured by the model above, since the p value is 0000, this means that procurement performance in relation to Supplier quality commitment.

**Table 2: ANOVA<sup>a</sup>**

		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.313	1	76.303	174.532	.000 <sup>b</sup>
	Residual	25.357	43	.450		
	Total	109.120	44			

a. Dependent Variable: Procurement performance

b. Predictors: (Constant), Supplier quality commitment

This Table 4.9 show the value of ANOVA, the Sig-value is 0.000, which means that Supplier quality commitment influenced the procurement performance in government ministries in Rwanda and the F-statistic 174.532 is greater than p-value.

**Table 3: Coefficient<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	1.094	.633		1.719	.090	.173	2.352
Independent Variable2	.772	.035	.836	13.028	.000	.391	.532

a. Dependent Variable: Procurement performance

From coefficient table above, the researcher came up with following regression equation in order to justify the study.

Y = Procurement performance

B0 = Constant Term

B<sub>2</sub> = Beta coefficients

X<sub>2</sub> = Supplier quality commitment

Y = 1.094 + 0.772X<sub>2</sub> (Supplier quality commitment).....Equation (iii)

The results indicate that Supplier quality commitment have a relationship with Procurement performance. The significance is 0.000 which indicates that there is positive relationship (0.772) between Supplier quality commitment and Procurement performance. These results provide reasonable evidence to the consistent view that, Procurement performance of MININFRA justified by increase of Supplier quality commitment. The beta of Supplier quality commitment is .836 with a t-statistic of 13.028. The positive coefficients mean a unit change in Supplier quality commitment leads to a 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.

## 6. Conclusion

MININFRA has supplier appraisal evaluation criteria in place for various supplier categories. Most of the respondents were strongly agreed and agreed; supplier appraisal influenced the procurement performance in MININFRA. Supplier appraisal procedures adopted by MININFRA incorporate sustainability aspects and support procurement performance. Procurement Preference is given to the multidimensional methods of procurement performance. There was a strong positive relationship between supplier appraisals on procurement performance in government ministries.

## 7. Recommendations

Researcher found that, there is positive relationship between supplier appraisal and procurement performance. MININFRA should therefore invest on modern appraisal criteria that have been proven to have greater procurement performance.

The study established that capacity assessment affects procurement performance. The study recommends that, MININFRA should pursue capacity assessment techniques that are geared towards long term relationship, in order to save on the cost on regular supplier appraisal.

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