Effect of Tendering Processes on Procurement Performance in Government Ministries in Rwanda; A Case of Rwanda's Ministry of Infrastructure

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Abstract: *Some government institutions which practice lengthy bureaucratic procurement process with discriminatory tendencies in award of tenders consequently leading to poor performance or failure of public projects such as Kalisimbi project and Methane Kivu. The general objective of the study is to examine the effect of tendering processes on procurement performance in government ministries in Rwanda. Descriptive research designs researcher was used frequencies and percentages. The target population for this study included all procurement managers and officers in different departments that comprise MININFRA. The target population for the study is 140 individuals. A sample size of 104 respondents was determined from a total population of 140 individuals using the formula by Yamane. Primary data was collected fresh from the field through use of interviews and questionnaires. Tender solicitation process, Bid evaluation process, approval process and contracts award and administration process contribute the procurement performance, where (R=0.953). This implies that tender solicitation process, Bid evaluation process, approval process and contracts award and administration process have positive contribution on procurement performance. ANOVA results further show explains procurement performance. The sig value (0.000) less than the level significance (0.05). The F-statistics (F=214.135) is far greater than the P-value (0.000). Using linear regression analysis from SPSS data bases, shows that Tender solicitation process, Bid evaluation process, approval process and contracts award and administration process were significant with (sig=0.000 and 0.001 this means that all variables influence the procurement performance. Among the findings, tender solicitation process positively and significantly influence procurement performance in Rwanda's ministry of infrastructure although results of a standard multiple regression analysis conducted on the variable do not reach significant levels in terms of contribution to variance in procurement performance. Government should be an investigation into the effect of the tender solicitation since results from multiple regression analysis reveal that this variable does not reach statistical significance in terms of influencing procurement performance. The bid evaluation process should make use of competent skilled personnel in procurement as the study findings reveal that use of skilled competent personnel boosts procurement performance in public institutions.*

1. Background of the Study

Poor tendering plays a key role in delaying various procurement orders and sabotaging contract management (Lwitiko, 2013). Such problems have resulted into increased cycle time due delays. Moreover, the tendering process is a key phase of the procurement process involving solicitation of documents, evaluation of bids received, approvals and negotiations. The solicitation documents play an important role towards successful procurement process since it is through these documents that the procuring entities are able to select the best supplier, service provider, contractor or consultant for undertaking or supply of procurement requirements (Mlinga, 2008). Equally, the evaluation of proposals or bids is considerably the most complex and significant part of any tendering process and a central part to evaluation in formulation and application of suitable award criteria (Ngobeni, 2011).

According to Sigma (2011), Public procurement contracts represent a major share of any country's GDP and public expenditure budget. According to data published by the European Union Commission in the 2011 evaluation report, public procurement in EU accounted for 19% of GDP. Hence, the level of expenditure alone provides a sound basis for analyzing the performance of public procurement operations such as the tendering process (Sigma, 2011).

In Africa, most African governments spend a lot of public moneys through the procurement function (Lwitiko, 2013). These include tax payers money and donor funds allocated for development projects. In Ghana for instance, empirical studies reveal that there is a long time taken in evaluation of tenders, delayed payments to contractors or service providers as well as the cumbersome procedure in tender process as among the leading causes of delay in government procurement (Surfo, 2010). Another study in Kenya by Patrick et al, (2010) investigated procurement practices among secondary schools in Mosocho division of Kisii county. The findings revealed that regulations on tendering process have had a significant influence on procurement of goods through affecting procurement cycle/lead times. Moreover, the in the same study, transparency which is emphasized as a key principle was reported as having little significance on transparency and quality of goods obtained through the procurement process. In Tanzania, Mamiro (2010) highlights that achieving value for money in public spending is a big challenges due to lack of appropriate tender management skills and incompetence among managers and staff responsible for procurement in procuring entities. Another study in Tanzania conducted by Rashid (2009) on assessment of attitude of bidders towards public procurement processes shows that the tendering process takes roughly 60 to 90 days on aspects of evaluation contrary to the stipulated requirements in the procurement law which provides a maximum time of 30 days/ the same study also reveals that bidders and some public procurement

practitioners lack knowledge of public procurement and its regulations in the area of preparing the tender documents and tender evaluation. The study adds that there was limited transparency in tender opening procedure and bids evaluation criteria.

In Rwanda, since the introduction of public procurement reforms and the enactment of the Rwanda Public Procurement Act (RPPA) in 2013, a few studies have been conducted relating to public procurement system but a survey of the extant literature does not reveal any study on Rwanda that exclusively address the tendering process in particular. Moreover, Kabega, Kule and Mbera (2016) in a study on the effect of procurement practices on performance of public projects in Rwanda highlight a MINECOFIN (2011) report which revealed that public procurement in Rwanda accounted for 52% of total public expenditure with the figure rising to 66% if salaries are ignored. Moreover, the study report of the Rwanda Association of Local Government Authorities (RALGA, 2010) indicated failures in the procurement practices in the public sector.

The ministry of infrastructure in Rwanda is primarily mandated with overseeing construction and maintenance of the major government infrastructure such as roads, airports, government buildings and utilities. This naturally implies that the ministry is responsible for a large share of the national construction contracts. It is from such background that this study intends to assess how the tendering process within the ministry affects the performance of the procurement processes.

2. Statement of the Problem

As an economic and public finance management instrument, the role of procurement in general and the tendering process in particular if well executed, in ensuring accountability, transparency, value for money as well as realization of cost effective, timely and quality service delivery to clients and public cannot be underscored (Dombroski, 2014).
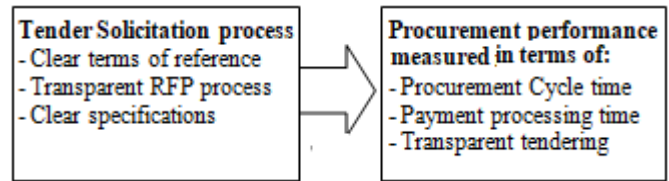
Despite the above, there are reports in Rwanda of some government institutions which practice lengthy bureaucratic procurement process with discriminatory tendencies in award of tenders consequently leading to poor performance or failure of public projects such as Kalisimbi project and Methane Kivu (Kabega et al, 2016).

It is from such background that this study intends to investigate how the tendering process affects procurement performance of government ministries in Rwanda using the case study of the ministry of infrastructure.

3. Objective of the Study

To examine the influence of tender solicitation process on procurement performance of Rwanda's ministry of infrastructure in Rwanda

4. Conceptual Framework

5. Research Design

A descriptive survey was undertaken. This method is preferred as it permits gathering of data from the respondents in natural settings. Descriptive research designs researcher was used frequencies and percentages. In this framework, questions were composed to be responded to by participants. The goal of the survey is to derive comparable data across subsets of the chosen sample subjects so that similarities and differences can be determined

6. Target Population

The target population for this study included all procurement managers and officers in different departments that comprise MININFRA. The study also targets project managers and operation managers of different projects executed in the jurisdiction of the ministry as well as contractors who are involved in service or goods provision to particular MININFRA projects in Rwanda. Hence the target population for the study is estimated at 140 individuals for scope purposes.

7. Sample Size Determination

A sample size of 104 respondents was determined from a total population of one hundred and forty (140) individuals using the formula by Yamane. Since there are different categories of respondents to be involved then it is important to stratify and treat each category as a sub population for better representation and thus stratification justifies use of stratified random sampling technique to select the respondents. Stratified random sampling technique ensures that different groups of a population are adequately represented in the sample. Stratified sampling divides the population into homogeneous groups such that the elements within each group are more alike than the elements in the population. The formula used to precise the sample size is stated as follows:

$$n = \frac{N}{1 + N\,(e)^2}$$

Where n = the desired sample size

e= probability of error (i.e. the desired precision, e.g.,0.05 for 95% confidence level)

N=the estimate of the population size.

Hence: $n = \frac{140}{1+140\,(0.05)^2} = 103.7 = $ **104 people**

8. Data Collection Method

The researcher was collected data from both primary and secondary sources. Primary data refers to the original data compiled and studied for specific purpose. It refers to the

raw data obtained from the field, or data by respondents to the research particularly on the variables that are of interest in the study. Primary data was collected fresh from the field through use of interviews and questionnaires. Primary data was collected by administering questionnaires to a selected sample of MININFRA officials, Contractors and member of the public using public utilities like roads constructed under MINIFRA's jurisdiction.

9. Research Findings and Discussion

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.875[a]	.802	.752	.56429
a. Predictors: (Constant), Tender solicitation process				

The influence of tender Solicitation process on procurement performance of Rwanda's ministry of infrastructure in Rwanda**.**

R-square is equal to 0.802(80.2%), this implies that variations change tender solicitation process influence the procurement performance in MININFRA, since the p value is 0000, this means that tender solicitation process in relation to procurement performance is statistically significant as seen further in ANOVA table below. The rule of Thumb is that, usually an R square of more than 50% is considered as better.

Table 2: ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	84.417	1	85.453	224.241	.000[b]
	Residual	25.637	107	.324		
	Total	111.254	108			

a. Dependent Variable: project sustainability
b. Predictors: (Constant),Stakeholders participation

ANOVA results further show that Stakeholders participation explains project sustainability. The sig value (0.000) less than the level significance (0.05). The F-statistics (F=224.241) is far greater than the P-value (0.000) hence a further confirmation that stakeholder participation was significantly influenced the project sustainability.

Table 3: Coefficients[a]

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.125	.542		.159	.810	-1.001	1.245
	Independent Variable1	.785	.014	.885	16.235	.000	.439	.462

a. Dependent Variable: project sustainability

From coefficient table above, the researcher came up with following regression equation in order to justify the study.
Y = Project sustainability
B_2 = Constant Term
B_2= Beta coefficients
X_1= Stakeholders' contribution
Y= 0. 125+ .0785X_2 (Stakeholders Participation)…(2)

The results indicate that Stakeholders' Participation have a relationship with Project sustainability. The significance is 0.000 which indicates that there is positive relationship between Stakeholders' Participation and Project sustainability.

Table 3: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	.125	.542		.159	.810	-1.001	1.245
	Independent Variable1	.865	.014	.885	16.235	.000	.439	.462
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
B_2 = Constant Term
B_2= Beta coefficients
X_1= Tender Solicitation process.
Y= 0. 125+ 0.865X_2

The results indicate that Tender Solicitation process have a relationship with Procurement performance. The significance is 0.000 which indicates that there is positive relationship between Tender Solicitation process and Procurement performance.

10. Conclusions

The study sought to analyze the effect of tendering processes on procurement performance in government ministries in Rwanda. The four specific study objectives were to: examine the influence of tender solicitation process on procurement performance of Rwanda's ministry of infrastructure, assess the contribution of bid evaluation process towards procurement performance of Rwanda's ministry of infrastructure, analyze the role of the tender approval process in procurement performance of Rwanda's ministry of infrastructure and examine the influence of contract administration and management on procurement performance of Rwanda's ministry of infrastructure. Among the findings, tender solicitation process positively and significantly influence procurement performance in Rwanda's ministry of infrastructure although results of a

standard multiple regression analysis conducted on the variable do not reach significant levels in terms of contribution to variance in procurement performance. Furthermore, bid evaluation process was also found to positively and significantly contribute to procurement performance in Rwanda's ministry of infrastructure with correlation results corroborating with individual variable dimension analysis of multiple regression analysis with positive and significant beta values for tender evaluation process. Equally, results on the influence of tender approval process on procurement performance in MININFRA. This is further affirmed by individual factor dimension analysis from standard multiple regression analysis which indicated positive significant beta values thereby implying that tender approval process plays a significant role in determining procurement performance in Rwanda's ministry of infrastructure.

11. Recommendation

Given the above findings from the study, the following as recommendations are made by the researcher.

1) There should be an investigation into the effect of the tender solicitation since results from multiple regression analysis reveal that this variable does not reach statistical significance in terms of influencing procurement performance.

2) Similarly, there should be further examination of the role of contract administration and management since results of multiple regression analysis also indicate that the variable does not reach statistical significance in terms of determining procurement performance. There should also be more openness and transparency in public procurement as results of the study show that it improves procurement performance.

3) Equally, the bid evaluation process should make use of competent skilled personnel in procurement as the study findings reveal that use of skilled competent personnel boosts procurement performance in public institutions.

4) There should be well streamlined tender approval process with less bureaucracy and cumbersome procedures as these were found by the study to influence procurement performance.

5) Finally, the tender ward process should be kept competitive as results of descriptive analysis show that tenders awarded through a competitive process yield a greater value for money.

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