

# Effect of Ethical Values on the Efficiency of Procuring Entities of Public Institutions in Rwanda; A Case of Rwanda Utilities Regulatory Authority

Tumusiime Patrick<sup>1</sup>, Dr. Rusibana Claude, PhD<sup>2</sup>

<sup>1,2</sup>University of Kigali, P.O Box 2611 Kigali, Rwanda

<sup>1</sup>Corresponding author email: [mzeepatrick@yahoo.co.uk](mailto:mzeepatrick@yahoo.co.uk)

**Abstract:** *This study assessed the effect of ethical values on the efficiency of procuring entities of public institutions in Rwanda a case of Rwanda Utilities and Regulation Authority (RURA). The specific objectives included; to examine the influence of transparency on the efficiency of RURA; to establish the influence of integrity on the efficiency of RURA; to ascertain the influence of accountability on the efficiency of RURA; and to find out the influence of competency on the efficiency of RURA. Both descriptive and correlational research designs were adopted. Questionnaire and documentary reviews were used to collect data. The population was 126 employees of RURA. The regression and correlation analyses were used to determine the magnitude of the relationship between the study variables. Regression analysis results indicated that 81.6% on efficiency of procuring entities in RURA due to changes in transparency, integrity, accountability and competency. The ANOVA test was carried out and discovered P - value of 0.000 which was less than alpha, an indication of strong relationship. As revealed by coefficients, there is positive and significant effect of transparency on efficiency of procuring entities in RURA. Likewise, there is positive and significant effect of integrity on efficiency of procuring entities in RURA. In addition, there is positive and insignificant effect of accountability on efficiency of procuring entities in RURA. Finally, there is positive and significant effect of competency on efficiency of procuring entities in RURA. From these positive results which each component of ethical values would contribute to efficiency of procuring entities RURA by a big range, evidences that all the variables were statistically significant to efficiency of procuring entities in RURA. It was suggested that e - procurement be relied on. On public awareness about the tenders, even privately owned media houses ought to take part in sharing the information to the public.*

**Keywords:** Procurement, Ethics, Values, Efficiency, Rwanda

## 1. Introduction

Not until late 20<sup>th</sup> Century, governments world over began to be awakened on the significance of efficiency in the public institutions at both central and local government levels, and its subsequent contribution to improved governance of the public sector. Procurement, a function that was traditionally viewed as a clerical and reactive task has since positioned itself among core organizational functions, and its management is becoming increasingly critical for the well - functioning of any organization. Procurement is becoming important at the local level, in parallel with decentralization and the increasing range of functions performed by local governments in most countries. Around the world, as public procurement processes change, public institutions are forced to re - evaluate their policies and procedures in order to comply with the laws of the land and to be accountable to the public whose funds are keeping them in operation (Caerlewy & Marshall, 2017).

In the United States of America, rapid development of e - procurement was reported in early 2000 just before the recession. By the end of the same year, it was reported that all state functions were maintaining web presence in at least some stage of their procurement processes with some participating in online bidding (Boelhouwer, 2010). In Canada, the government at some point issued a statement calling for all suppliers to use the e - procurement. Canadian public sector is going through a rapid change especially as far as adoption of technology is concerned. Adoption of e - government and particularly e - procurement is inevitable

for any government. Based on a procurement values and conduct, specific framework conditions are set that are binding for public purchasers and efficiency of procurement activities (Bauer, 2016).

A review conducted by Commonwealth of Australia indicates that the National governments of Italy, New Zealand, Scotland, New South Wales and Western Australia in 2005 revealed that these countries were already using e - procurement system for public procurement activities (Clerx, 2017). In order to optimize the administrative activities in European countries, public procurement must thus observe, to the maximum extent practicable, the guidelines of politics and the postulate of economic efficiency while strictly adhering to contract award law. The construct conceptualization of public procurement excellence described in the following must take into account the framework conditions mentioned accordingly. With a view to the general problem concerning the “empirical tangibility” of latent constructs, an operational definition of Public Procurement Excellence is given first. Subsequently, initial findings about the underlying factor structure and dimensionality, the initial set of indicators and the pre - tests for the improvement and reduction of the set of indicators are presented (Dunjia, 2013).

In Sub - Saharan Africa, the current phase in the development of public procurement has seen the establishment of special public procurement bodies, whose task is to implement the new regulations. These bodies aim not just to bring domestic legislation, but to play a key role in the efficient implementation of the regulations. These

Volume 10 Issue 11, November 2021

[www.ijsr.net](http://www.ijsr.net)

Licensed Under Creative Commons Attribution CC BY

bodies have also been given increasing responsibility for monitoring of public procurement procedures. In this phase the regulatory frameworks have completed by the adoption of all necessary secondary legislation, intensive training programs have been organized and needed manuals and instructions have been published aimed to inform widest range of procuring entities and potential bidders on how to implement the law provisions properly (Boelhouwer, 2010). Over the last decade, the Government of Rwanda has undertaken a number of reforms including business registration, public finance management and procurement reforms which have initiated changes to the law and regulations; it has also successfully developed financial management information system (FMIS) and has installed country wide fiber optic backbone – both of these are huge developments and critical to the success of its vision. Building from these achievements, the Government of Rwanda initiated a project to automate the public procurement cycle known as e - Procurement and was designed to facilitate the transformation of the procurement discipline within Rwanda for the future (MINECOFIN, 2019).

Public procurement in Rwanda is described in its article No 39 and the ministerial order No 001/08/10/MIN of 16/01/2008 in its article No 7 addresses public procurement in the context of determining an effective and efficient public procurement processes. This part lays out the procedures for the evaluation of bids in formal bidding proceedings (formal competitive bidding procedures). All the bid evaluation steps in this most formal and comprehensive procurement method is laid out in this part. For other procurement methods, such as the request for quotations, the evaluation procedures are less formal and less extensive. Still, the fundamental notion applies to all methods of procurement: bid evaluation criteria must be objective, carefully drawn, and set forth clearly in the bidding documents (MINECOFIN, 2019).

Therefore, this study aimed at finding the effect of ethical values on the efficiency of procuring entities of public institutions in Rwanda with reference to Rwanda Utilities Regulatory Authority.

## 2. Statement of the Problem

Irrespective of where we live, the management of the public entities impacts our lives. Thus, we all have an interest, in one way or another attached to efficiency (Boelhouwer, 2010). Efficiency in the public entities is indeed a requisite and public procurement practitioners are always advised to ensure ethical values and principles in public procurement decisions and the use of public funds to boost their respective efficiency (Kafle, 2014).

A report that covered the period between August 2014 and June 2015 noted that there were loopholes in public procurement processes such as project design and study, bidding documents as well as enforcement of contracts, among others due to unethical values of the procurement staff. The report shows that more than Rwf23 billion was lost in poor contract management procedures, while nine contracts, worth Rwf908 million, were abandoned by

contractors. To the tune of 68% of the public entities were discovered to have fundamental accounting, corporate governance, financial management, contract management and value for money flaws (OAG, 2016).

This, therefore fascinated the researcher to carry out a study on the effect of ethical values on the efficiency of procuring entities of public institutions in Rwanda, a case of Rwanda Utilities Regulatory Authority.

### Specific Objectives

- 1) To examine the influence of transparency on the efficiency of Rwanda Utilities Regulatory Authority;
- 2) To establish the influence of integrity on the efficiency of Rwanda Utilities Regulatory Authority;
- 3) To ascertain the influence of accountability on the efficiency of Rwanda Utilities Regulatory Authority;
- 4) To find out the influence of competency on the efficiency of Rwanda Utilities Regulatory Authority.

## 3. Literature Review

Effective procurement must be associated with ethical values of the procurement personnel. There must be reduced transaction cost, improved process efficiency, increased contract compliance, reduced cycle times and reduced inventory costs and improved operational and cost efficiency. Ethical values of the staff necessitate to facilitate proper documentation of the bidding process enhancing integrity, competency, accountability and transparency thereby improving procurement efficiency

### Ethical Values

According to Pickell (2016), procurement has got an internet - based Bid/Quote Auction system integrated in the procurement process which improved transparency. Unlike the traditional bidding/auctioning process which requires the bidders to be in a specified bidding room at a specified time, electronic bid/quote and auctioning can take place using a centralized server approach and or an interconnected server approach for localized markets. When using a centralized server approach; a central server displays the item to be sold, announcing the deadline for placing bids.

Integrity in public procurement is critical. The manner in which government conducts itself in its business transactions immediately affects public opinion and the public's trust in good government. In addition to encouraging the public's good will and strengthened trust, the more practical business benefits of Integrity are increased competition and better value for goods, services, and construction. With the size and scope of government spending activity, it is critical that all stakeholders have confidence in the public procurement process. A transparent and informative public procurement process encourages this confidence through the free and open exchange of information, enhanced knowledge, improved efficiency, and reduction of the potential for corruption and waste (Rogers, 2010).

Promote fair and equitable treatment for potential suppliers by providing an adequate and timely degree of integrity in each phase of the public procurement cycle, while taking

into account the legitimate needs for protection of trade secrets and proprietary information and other privacy concerns, as well as the need to avoid information that can be used by interested suppliers to distort competition in the procurement process. Additionally, suppliers should be required to provide appropriate Integrity in subcontracting relationships. Adherents should have in place a legal and regulatory framework that requires public procuring entities to provide an adequate and timely degree of Integrity in each phase of the public procurement cycle (Schmitt & Jankowitsch, 2015).

Various new public management initiatives were based on the assumption that enhanced accountability would improve efficiency. But the empirical evidence that this has happened is inconclusive and evidence of whether efficiency measurement leads to better accountability is scarce (Booyesen, 2012).

The relationship between accountability and efficiency is characterized by tensions, ambiguities and contradictions, and more responsibility for efficiency does not lead to more accountability for efficiency (Mayers, 2014). Choi *et al* (2014) claims that there is an accountability dilemma and argues that efficiency audit tends to focus more on compliance than on efficiency and is biased towards hierarchy and punishment and hence tends to undermine public trust. It is argued that the idea that accountability increases efficiency has been accepted without careful scrutiny and he claims that there is an «accountability paradox» in which more accountability actually diminishes organizational efficiency.

The question of accountability is also closely related to power relations. Increased identification often means transferring power from political executives to managers, and technocrats are emerging as highly influential bureaucrats enjoying broad institutional autonomy. One observation is that power relations seem to be changing faster than accountability relations. The political leadership often finds itself in situations where it has responsibility without the corresponding power and control. Conversely, many of the autonomous government agencies may gain more power without necessarily becoming more accountable (Byrne *et al*, 2017).

In order to have a competent auditor, a company should identify which personnel already have the required internationally accepted audit competences, decide what additional audit competences are required, decide how these additional audit competences are to be obtained training of personnel, theoretical or practical training, hiring of new audit competent personnel, assignment of existing audit competent personnel to different work, train, hire or reassign personnel, review the effectiveness of actions taken to satisfy audit competence needs and to ensure that the necessary audit competence has been achieved (Horneff *et al*, 2016).

Companies hire external auditors to evaluate the economy, efficiency and effectiveness of the processes that are critical to meeting their strategic objectives. These professionals are required to examine, monitor and analyze activities related

to the business' structure, and like in most professions there is a certain set of skills that can aid them in their work. Making an effort in this area should encourage the business to embrace the internal audit's consultative role and understand how their suggestions for improvement can benefit the company as a whole (Muga, 2012).

### Efficiency in Procuring Entities

There is a difference between business efficiency and organizational efficiency. Business efficiency reveals the efficiency of input and output ratio, while organizational efficiency reflects the improvement of internal processes of the organization, such as organizational structure, culture and community. Excellent organizational efficiency could improve entities efficiency in terms of management, productivity and quality (Clerx, 2017).

Organizational efficiency = effectiveness x efficiency; as a result, overall efficiency can be measured by quantifying the efficiency and the effectiveness. Efficiency is all about resource allocation across alternative uses. It is important to understand that efficiency doesn't mean that the organization is achieving excellent efficiency in the market, although it reveals its operational excellence in the process of source utilization. Organizations can be managed effectively, yet, due to the poor operational management, the entities will be performing inefficiently (Muga, 2012).

Inefficient and ineffective organization is set for an expensive failure. In such case there is no proper resources allocation policy and there is no organizational perspective of their future. Organization has leadership issues, high employee turnover rate and no clear vision where the organization will be standing tomorrow. If the organization is able to manage its resources effectively, yet it does not realize its long term goals, it will bankrupt slowly. This strategy is cost efficient but it is not innovative and creates no value. Management has no clear customer oriented policy set in place, which leads to constant focus on efficiency. Such organization uses all its efforts to implement strict resource allocation policy, which translates into strict staff cost control, training cost reduction or even elimination (Horneff *et al*, 2016).

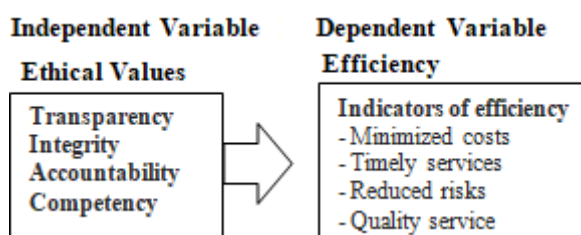
Before designing a cost reduction program, make sure your overall institutional strategy is still relevant within the current environment. Traditionally, an institution bases its strategy on its best prediction of what events could affect its business, and when. But in a fast - changing business environment, you need an approach that doesn't require you to pretend to have a clear picture of the future. One way to do this is to define a range of scenarios of what the future may hold. Then, develop the best strategy to respond to each scenario. Initiatives that make sense only for certain scenarios become your "contingent strategies (Peursem, 2016).

To maximize the output of ethical values suggests the elimination of six losses, which are: reduced yield from start up to stable production; process defects; reduced speed; idling and minor stoppages; set - up and adjustment; and equipment failure. The fewer the inputs used to generate outputs, the greater the efficiency. There is a difference

between business efficiency and organizational efficiency. Business efficiency reveals the efficiency of input and output ratio, while organizational efficiency reflects the improvement of internal processes of the organization, such as organizational structure, culture (Dunjia, 2013).

#### 4. Conceptual Framework

According to McKenzi (2016), a conceptual framework is an analytical tool with several variations and contexts. It is used to make conceptual distinctions and organize ideas. Thus, the below framework breaks down the variables of ethical values and efficiency into their respective sub variables. The independent sub variables include transparency, integrity, accountability and competency while dependent sub variables include: minimized costs, timely services and reduced risks.



#### 5. Methodology

This research did embrace both descriptive and correlational study designs. Descriptive design was used to analyse the ethical values and the efficiency level of Rwanda Utilities Regulatory Authority whereas correlational design was used in the study to establish the nature and magnitude of the relationship and the significance between ethical values of procurement practitioners and the efficiency level in Rwanda Utilities Regulatory Authority (RURA).

The population of interest in this research constitutes of RURA staffs working at the headquarter in different departments who have more clue about the topic of the study. In line with this, the target population the population of this research comprised of one hundred twenty - six (126) staff working in procurement unit, finance unit, legal unit, planning and budget, directorate departments at Rwanda Utilities Regulatory Authority. The study population is stratified in the table below from various procurement related departments and units. The team who serve as the heads of the department. This study majorly focused on the bank employees and middle level managers from each of the department in question as mentioned in the study population.

The researcher used universal sampling technique to consider the entire population as a sample size and thus the study included the all the (126) RURA staff working in procurement unit, finance unit, legal unit, planning and budget, directorate and audit departments at Rwanda Utilities Regulatory Authority. The researcher used this technique to sample the 126 employees without neglecting any. The respondents were tasked to point out their agreement levels as regards to the effect of ethical values on the efficiency level of Rwanda Utilities Regulatory

Authority. Ethical values were looked at different terms such as transparency, integrity, accountability and competency of the procurement practitioners in procuring entities in public institutions and in particular theirs

In this study, a pilot study was conducted with 14 employees from RURA, Bugesera branch located in Eastern Province. The researcher's target in conducting pilot study was to ascertain the reliability of the instruments before distributing them to the respondents. In addition, the Cronbach's alpha coefficient test was considered to ensure reliability of the research tools. Indeed, the overall reliability Cronbach alpha ( $\alpha$ ) coefficient ( $\alpha \leq 0.7$ ), the acceptable, good and excellent standards are relied on to produce consistent results for describing internal consistency. Thus, this study's reliability index was found to be 0.811 which indicated good consistency and the study models typically possess high reliability. For ensuring validity, the questionnaires were presented to research supervisor to solicit his opinion in order guarantee correctness and relevance of the instrument.

Data collection was followed by data processing. The researcher had to exercise good care for ensuring reliable data collection because all data collection efforts ends in vain if the collected are not well processed. Thus, the following task envisions to be undergone during the data processing. The first activity under data processing was data editing. Through editing, the researcher was able to eliminate errors in the completed questionnaires and this ensured that answers are accurate and consistent. After carrying out data editing, the researcher proceeded to data coding stage. The researcher embarked on the task of establishing coding frames by use of his own code categories based on the research questions and responses. After data coding, the researcher used the Statistical Package for Social Sciences (SPSS) version 22.0 in coming up with the statistical analysis for the study.

The research data was analyzed using both descriptive and correlational statistical. In particular, regression analysis and correlation analysis. Therefore, after acquiring adequate research data, the researcher employed qualitative data analysis which was used to analyze data from different sources as prior mentioned. With the help of SPSS, the researcher applied descriptive statistics and besides, regression analysis was used to measure the significance level of ethical values in terms of transparency, integrity, accountability and competency on the efficiency in procuring entities in public institutions, in particular Rwanda Utilities Regulatory. The following is a regression model which was used in the study:  $\text{Efficiency} = \alpha + \beta_1 (\text{Transparency}) + \beta_2 (\text{Integrity}) + \beta_3 (\text{Accountability}) + \beta_4 (\text{Competency}) + \epsilon (\text{Error})$

#### 6. Results and Findings

Findings were presented in form of correlation analysis and regression analysis. In particular, Spearman test was considered for correlation analysis whereas regression analysis considered model summary, ANOVA and correlation analyses.

1) Correlation Analysis

a) Spearman test for Transparency

Findings for the correlation analysis for both transparency and efficiency was presented in table 1.

Table 1: Transparency

Model		Variables	Trans	Eff
Spearman's rho	Trans	Correlation Coefficient	1	.617**
		Sig. (2 - tailed)	.	0
		N	126	126
	Eff	Correlation Coefficient	.617**	1
		Sig. (2 - tailed)	0	.
		N	126	126

Table 1 presents results of the Spearman test and they discovered the value of  $r_s=0.798$  while P - value was 0.000 which explains that there was a strong, positive monotonic correlation between transparency (trans) and the efficiency (eff) of procuring entities in RURA ( $=.617$ ,  $n = 126$ ,  $p <.000$ ). Based on this spearman analysis as indicated in table 1, therefore, the researcher learnt that transparency has strong relationship on the efficiency of procuring entities in Rwanda.

b) Spearman test for Integrity

Table 2: Integrity

Model		Variables	Int	Eff
Spearman's rho	Int	Correlation Coefficient	1	.845**
		Sig. (2 - tailed)	.	0
		N	126	126
	Eff	Correlation Coefficient	.845**	1
		Sig. (2 - tailed)	0	.
		N	126	126

Table 2 presents results of the Spearman test and they discovered the value of the value of  $r_s=0.845$  and  $p=0.000$  which explains that there was a strong, positive monotonic correlation between integrity (int) and the efficiency (eff) of procuring entities in RURA ( $=.845$ ,  $n = 126$ ,  $p <.000$ ). Based on this spearman analysis as indicated in table 1, therefore, the researcher captured that ethical values in terms of integrity has strong relationship on the efficiency of procuring entities in Rwanda.

c) Spearman test for Accountability

Table 3: Accountability

Model		Variables	Acc	Eff
Spearman's rho	Acc	Correlation Coefficient	1	.845**
		Sig. (2 - tailed)	.	0
		N	126	126
	Eff	Correlation Coefficient	.845**	1
		Sig. (2 - tailed)	0	.
		N	126	126

Table 3 presents results of the Spearman test and they discovered the value of  $r_s=0.956$  and  $p=0.000$  which explains that there was a strong, positive monotonic correlation between accountability (acc) and the efficiency (eff) of procuring entities in RURA ( $=.617$ ,  $n = 956$ ,  $p <.000$ ). Based on the spearman analysis, therefore, the researcher affirmed that ethical values in terms of:

accountability has strong relationship on the efficiency of procuring entities in public institutions in Rwanda.

d) Spearman test for Competency

Table 4: Competency

Model		Variables	Comp	Eff
Spearman's rho	Comp	Correlation Coefficient	1	.837**
		Sig. (2 - tailed)	.	0
		N	126	126
	Eff	Correlation Coefficient	.837**	1
		Sig. (2 - tailed)	0	.
		N	126	126

Table 4 presents results of the Spearman test and they discovered the value of  $r_s=0.837$  and  $p=0.000$  which explains that there was a strong, positive monotonic correlation between ethical values and the efficiency of procuring entities in RURA ( $=.837$ ,  $n = 126$ ,  $p <.000$ ). Based on the spearman analysis, therefore, the researcher learnt that ethical values in terms of: competency has strong relationship on the efficiency of procuring entities in public institutions in Rwanda.

2) Regression Analysis

The regression analysis presented results that were all about model summary, ANOVA and coefficients findings.

Model Summary

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911 <sup>a</sup>	.821	.886	.10418
a. Predictor: (Constant), Transparency, Integrity, Accountability, Competency				

In the model summary table, it was indicated that an adjusted R squared is coefficient that administrates the consistency in the reliant variables due to the variations in the independent variable. As showed in table 5, the value of adjusted R squared was 0.886. This is an indication that there was variation of 81.6% on efficiency of procuring entities in RURA due to changes in transparency, integrity, accountability and competency.

The results indicated in the table show that 88.6% of the changes in efficiency of procuring entities in RURA could be accounted on transparency, integrity, accountability and competency among the employees of the institution as discovered by the study. Hence, there is significant and positive relationship between the study variables marked the model summary table.

Analysis of Variance (ANOVA)

Table 6: Analysis of Variance (ANOVA)

Model	Sum of Squares	Df	Mean Square	F	Sig.	
1	Regression	20.22	4	5.06	33	0
	Residual	1.56	121	0.01		
	Total	21.78	125			
a. Dependent Variable: Efficiency						
b. Predictors: (Constant), Transparency, Integrity, Accountability, Competency						

Findings presented in table 6 are about ANOVA test and they indicated that a p - value was 0.000 which is less than alpha (5%), significance level. This exhibits that the data which were collected fit well with the multiple regression models hence an indication that ethical values have a positive effect on the efficiency RURA. In addition, this manifests that the model adopted by the researcher was statistically significant.

### Coefficients

**Table 7: Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Cons)	1.911	0.678		0.345	0.774
Trans	0.731	0.169	0.765	1.876	0.004
Int	0.879	0.271	0.541	0.871	0.012
Acc	0.783	0.387	0.733	1.336	0.003
Comp	0.783	0.189	0.687	1.336	0

a. Dependent Variable: Efficiency

Findings obtained and presented in table 4 were established as a regression equation as showed below: Efficiency =  $\alpha + \beta_1$  (Trans) +  $\beta_2$  (Int) +  $\beta_3$  (Acc) +  $\beta_4$  (Comp) +  $\epsilon$  (Error)  
 Efficiency = 1.911 + 0.765 Trans (Transparency) + 0.541 Int (Integrity) + 0.733 Acc (Accountability) + 0.687 (Error)  
 Grounded on regression analysis equation presented above, it was discovered that by having electronic banking to a constant zero, financial performance would have a value of 1.911. These study results in other words meant that an increase of a single unit in transparency would lead to an increase of 76.5.7% of efficiency of RURA. More to this, an increase of a single unit in integrity would lead to an increase of 54.1% of efficiency at RURA. In addition, an increase of a single unit in accountability would lead to an increase of 73.3% of efficiency at RURA. Lastly, an increase of a single unit in competency would lead to an increase of 68.7% of efficiency at RURA.

In addition to the findings, since earlier the study also found that all the p - values were less than alpha (0.05) and this is a confirmation that all the variables were statistically significant in influencing efficiency of procuring entities in public institutions in Rwanda and particularly RURA.

## 7. Discussion of Findings

This study's primary objective was to assess the effect of ethical values on the efficiency of procuring entities of public institutions in Rwanda. Based on the findings reached after the primary and secondary data, the study objective was achieved as indicated in previous section.

The findings of this study were supported by findings discovered in a study that was carried out by Borchgrevilko & Hambarg on the effect of employee ethical values effect on the efficiency of public procurement entities in Northern Canada in 2012. The findings revealed that 87.6% of the respondents suggested that organizations should categories their purchases based on two broad dimensions, the complexity of the supply market and the importance or profit impact of the good or service. The findings revealed

that 81.3% of the respondents asserted that the importance or profit impact of a good or service is defined by criteria such as the volume purchased, the cost as a percentage of the organization's total purchasing expenditure, and the impact on the quality or reliability of the organization's end product.

In addition, the study results of this study were in line with findings discovered in a study conducted by Byrne *et al* in 2017. The study was done on sustainable procurement efficiency management: a case study in a mining company in Brazil. Results from 2310 employees represented by 76.3% showed that the contracts of the internal movement's category of the studied company fit as Strategic Commodity, which means that the items in this category have a risk in the strategic supply, because they need investments made by the buyer in the relationship with the supplier. In addition, the study revealed that 75.2% of the respondents were in the support that the individual ethical values of the Procurement Practitioners affect the efficiency and effectiveness of procurement process.

More so, the study findings of this study were in line with findings revealed by Horneff *et al*, in the year, 2016. The study investigated the influence of procurement procedures on the procurement efficiency, effects of logistics management on procurement efficiency and the impacts of adherence to procurement plans on procurement efficiency on in Tokyo City Council, Japan. The study found out that there existed a strong relationship between ethical values and the procurement efficiency and this was supported by 80.1% of the respondents, therefore the study concludes that the presence of a procurement portfolio, efficient logistics management and adherence to ethical values positively affects procurement efficiency in public institutions. According to 76.9% of the respondents, the purpose of ethical values therefore is to be able to utilize the available resources to achieve the overall procurement objectives.

Findings of this study were supported by results realized through a study results discovered by Pickell in 2016. The study was done on the effect of procurement policies and procedures on supply chain efficiency of public institutions in Middle East. The research design involved a cross sectional survey of all public authorities in Middle East. Data from 87.6% of the respondents was collected using a questionnaire that was administered through drop and pick later method. Percentages and frequencies were used to analyze objective one whereas regression analysis was used to analyze the relationship between business integration and supply chain efficiency. The findings were presented in tables and pie charts. The study established that 88.4% of the public authorities in Middle East have in place procurement policies and procedures that have enabled them achieve transparency, efficiency and accountability in their operations.

## 8. Conclusion and Recommendation

The general objective of the study was to assess the effect of ethical values on the efficiency of procuring entities of public institutions in Rwanda with reference to Rwanda Utilities Regulatory Authority. The research embraced both

descriptive and correlational study designs. It used questionnaires to collect primary data from employees in different department in RURA. The study based its findings on the data from 126 respondents who were involved in the study.

Findings were presented in form of correlation analysis and regression analysis. In particular, Spearman test was considered for correlation analysis whereas regression analysis considered model summary, ANOVA and correlation analyses. The correlation analyses were carried out and specifically Spearman. Based on this spearman analysis as earlier indicated, therefore, the researcher learnt that ethical values have strong relationship on the efficiency of procuring entities in Rwanda.

The regression analysis presented results that were all about model summary, ANOVA and coefficients findings. In the model summary table, it was indicated that an adjusted R squared is coefficient that administrates the consistency in the reliant variables due to the variations in the independent variable. As showed in the findings, the value of adjusted R squared was 0.886. This is an indication that there was variation of 81.6% on efficiency of procuring entities in RURA due to changes in transparency, integrity, accountability and competency. The results indicated in the table show that 88.6% of the changes in efficiency of procuring entities in RURA could be accounted on transparency, integrity, accountability and competency among the employees of the institution as discovered by the study. Hence, there is significant and positive relationship between the study variables marked the model summary table.

Basing on the study results, the following are the recommendation which if implemented will raise the efficiency level of RURA as regards to the procurement practitioners' ethical values such that it reaches the level of the other institutions and agencies in Rwanda:

As regards to some officers who don't uphold the constitution and the laws, the top management should ensure and rely on the use of e - procurement, Umucyo components to watch over all such bad ethical values of some individuals.

On public awareness about the tenders, the involved partners to ensure that media even privately owned media house take part in sharing the information to the public. Let the public also be advised about the electronic procurement system called Umucyo.

Regarding functionality analysis by the top management should be looked into and be made a culture by the responsible personnel at the agency.

Officials who delay RURA procurement activities and processes should also be handled individually so as other staff could avoid doing similar mistakes in future.

## References

- [1] Boelhouwer, J (2010). *Wellbeing in the Netherlands. The SCP life situation index since 2008*. The Hague: Institute for social research.
- [2] Booyesen, F (2012). *An overview and evaluation of composite indices of development. Social Indicators*. The Hague: Heerlen Publications
- [3] Borchgrevilko, S and Hambarg, K. (2012). *Procurement, History, Evolution and Prospects*. 9<sup>th</sup> edition, New York: The Riot
- [4] Byrne A., Harrison D. & Blake, D. (2017) *Dealing with the Procuring Entities*, New York: Ernst & Young LLP
- [5] Caerlewy E. & Marshall J. C., (2017), *The Consistency of Procuring Entities*, 4th edition, Washington: Dictionary le petit Robert.
- [6] Choi M, Keilla, D and Fish, K. (2014). *Role of the Procurement Management*. New York: Ernst & Young LLP.
- [7] Clerx, G. L., (2017) *The Growing Procurement between Expertise and Legislation*, Natorp Boulevard: Erin Joyner Publications House.
- [8] Dunjia, Y. J. (2013). *Public in E - Procurement*. 3<sup>rd</sup> edition, London: WellComp. com Publishers.
- [9] Horneff, J, Ghalley, N and Phill, F, (2016). *Factors Affecting Efficiency of Social Fund*. 5<sup>th</sup> edition, London: Independent Publishers Ltd.
- [10] Kafle, A. (2014). *The Effectiveness of Procuring Entities: Australian Review*, Johannes Burg: Richlies Horse Publishers
- [11] Ministry of Finance and Economic Planning. (2019). *The Integrated Business Enterprise Survey in Rwanda 2015*. Retrieved: <http://www.minecofin.gov.rw/publication/integrated-business-enterprise-survey-ibes-2019>
- [12] Muga, (2012). *Effects of Business Process Outsourcing on Procurement Efficiency in EU*, Kansas: Dreamland Publishers
- [13] National Bank of Rwanda. (2017). *2017 Annual report of the National Bank of Rwanda*, Retrieved [https://www.bnr.rw/fileadmin/uploaded/BNR\\_Annual\\_Report\\_2016-2017.d.pdf](https://www.bnr.rw/fileadmin/uploaded/BNR_Annual_Report_2016-2017.d.pdf)
- [14] Mayers, J. O. (2014). *Efficiency and Financial Ratios of Procurement Institutions*. Nairobi: ACK Uzima Publishing House
- [15] Office of Auditor General (2016). *2014/2015 financial report of Office of Auditor General*, retrieved from [http://www.oag.gov.rw/fileadmin/user\\_upload/Financial\\_Reports/ANNUA\\_L\\_REPORT\\_JUNE\\_2016\\_EXECUTIVE\\_SUMMARY.pdf](http://www.oag.gov.rw/fileadmin/user_upload/Financial_Reports/ANNUA_L_REPORT_JUNE_2016_EXECUTIVE_SUMMARY.pdf)
- [16] Peurseem, K. (2016). *Pension Institutions' Role and Authorities: New Zealand Evidence*. New York: Palgrave Publishers Hall
- [17] Pickell, S. (2016). *Developing E - Procurement*. London Independent Publishers Ltd.
- [18] Rogers, L (2010). *Procurement Theories*. Quebec: CPA Journal publishers.

- [19] Schmitt, R., & Jankowitsch, B. (2015). *Systems of social indicators and social reporting: The state of the art*. Mannheim: Centre for Survey
- [20] United Nations Development Program. (2015). *2015 United Nations Development Program*, Retrieved from <http://web.undp.org/evaluation/documents/annual-report/2015/ARE-2014.pdf>
- [21] World Bank (2015). *2015 World Bank report on the economy of Rwanda*, Retrieved from <http://www.worldbank.org/en/about/annual-report-2015.pdf>