



INFLUENCE OF ETHICAL PRACTICES ON PROCUREMENT PERFORMANCE OF SUGAR PROCESSING FIRMS IN WESTERN KENYA

Okwedo, I. A., & Muthini, J. N.

INFLUENCE OF ETHICAL PRACTICES ON PROCUREMENT PERFORMANCE OF SUGAR PROCESSING FIRMS IN WESTERN KENYA

Okwedo, I. A.,^{1*} & Muthini, J. N.²

^{1*} Msc. Candidate, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

² Ph.D, Lecturer, Jomo Kenyatta University of Agriculture & Technology [JKUAT], Kenya

Accepted: November 1, 2020

ABSTRACT

This study sought to establish the influence of ethical practices on procurement performance of sugar processing firms in Western Kenya. Specifically the study established the influence of transparency on procurement performance of Sugar Processing Firms in Western Kenya. The study further determined how ICT adoption moderates the relationship between independent and dependent variable. Descriptive survey research design was adopted. The study targeted 4 sugar processing firms in Western Kenya which included Nzoia, Mumias, Butali and west Kenya sugar processing firms. The study population comprised of 131 procurement staff and 8 procurement managers. Stratified random sampling was used to determine the sample size. The study used self-administered questionnaire to collect primary data. Both descriptive and inferential statistics was used to analyze data and test hypothesis of the relationship. The data was then processed by use of Statistical Package for Social Sciences (SPSS 24.0). Multiple regression analysis was adopted to measure the relationship between independent and dependent variable. The research findings indicated that transparency had statistical significant influence on procurement performance in sugar processing firms in Western Kenya. For this reasons, the null hypothesis of the study was rejected. ICT had significant moderating influence as it significantly accounted for additional change in procurement performance. There was significant increase in regression coefficients for transparency in regard to ICT and procurement performance. It was concluded that transparency had statistically significant influence on procurement performance and ICT was significant moderator in this study. The study recommended that the management of Sugar processing firms in Western Kenya need to advertise all bid opened in front of public to improve transparency of procuring proces and that they should invest in ICT infrastructure to ensure that all processes of procurement are technology based. The study suggested that there is need to examine other ethical practices such as stewardship and confidentiality on the procurement performance. Further studies should also to focus on ethical policies as a moderating variable on the relationship between the two variables.

Key Words; Ethical Practices, Transparency, Information Communication Technology, Procurement Performance, Sugar Processing Firms

CITATION: Okwedo, I. A., & Muthini, J. N. (2020). Influence of ethical practices on procurement performance of sugar processing firms in Western Kenya. *The Strategic Journal of Business & Change Management*, 7 (4), 863 – 877.

INTRODUCTION

Procurement of goods, works and services is a pivotal activity in every organization that wants to attain competitive advantage. The main objective of public procurement is to purchase goods, works and services and to provide legal framework for all economic activities. Procurement policy aims at promoting efficiency through the selection of supplier with the lowest price to achieve value for money (OECD, 2011). The total volume of public procurement is accounted for 12% of GDP and 29% of general government expenditure in OECD countries amounting to EUR 4.2 trillion in 2013. Public procurement is a key economic activity of governments representing a significant percentage of the Gross Domestic Product (GDP) generating huge financial flows, estimated on average at 10-15% of GDP across the world. In Kenya, public procurement accounts for over 10% of Gross Domestic Product (GDP), making it a large market for suppliers and contractors (GoK 2010).

According to Institute of Social and Ethical Accountability, to satisfy the aspirations of stakeholders there is need to measure, track and report on social and ethical performance within the procurement function. In most instances, procurement is conducted through the contract term with good intent and actions. According to Gilbert (2017) there are instances where the line is blurred and behaviors of one or more parties are unpleasant and unacceptable. Procurement professions are governed by code of ethics to ensure transparency, accountability, openness and equitability by giving contracts to best bidders (Aliza, Stephene & Bambang, 2011).

Procurement of goods, works and services is a pivotal activity in every organization that wants to attain competitive advantage. The main objective of public procurement is to purchase goods, works and services and to provide legal framework for all economic activities. Procurement policy aims at promoting efficiency through the selection of supplier with the lowest price to achieve value for money (OECD, 2011). The total volume of public

procurement is accounted for 12% of GDP and 29% of general government expenditure in OECD countries amounting to EUR 4.2 trillion in 2013. Public procurement is a key economic activity of governments representing a significant percentage of the Gross Domestic Product (GDP) generating huge financial flows, estimated on average at 10-15% of GDP across the world. In Kenya, public procurement accounts for over 10% of Gross Domestic Product (GDP), making it a large market for suppliers and contractors (GoK 2010).

According to Institute of Social and Ethical Accountability, to satisfy the aspirations of stakeholders there is need to measure, track and report on social and ethical performance within the procurement function. In most instances, procurement is conducted through the contract term with good intent and actions. According to Gilbert (2017) there are instances where the line is blurred and behaviors of one or more parties are unpleasant and unacceptable. Procurement professions are governed by code of ethics to ensure transparency, accountability, openness and equitability by giving contracts to best bidders (Aliza, Stephene & Bambang, 2011).

In Kenya, the presence of procurement laws, regulations, and rules stipulated governs procurement practitioners for ethical maintenance. PPDA of 2005 has set standards concerning public procurement implementing principles like fair competition, green procurement, transparency and accountability. Procurement regulations of 2006 approved by the minister of finance established legal basis for transparent, fair, equal, efficient and competitive of public procurement procedures and for the disposal of obsolete products, (PPDA 2005 & PPOA, 2006). The new constitution of 2010 outlined principles for the Public procurement and disposal to ensure service delivery and on time production (Kariri, 2013) thereby reducing operational cost (Muange 2013). Ndolo and Njagi (2014) suggest that for procurement professions to be well versed with the requirements of PPDA, trainings should be encouraged. Moreover, the governance framework

provides principles that establish ethical practices during procurement process.

The core principle underpinning the government is value for money. According to Aliza et al, (2011), procurement governance framework should ensure accountability and transparency during contract award. Schroeder (2010) notes that the UN is guided by the general principles like best value for money, fairness, integrity and transparency and effective international competition. Government achieves value for money when it procures from sources who meet its requirement and offers best value.

Regardless of reforms in public procurement systems, wastage of public resource and money is still rampant (Odhiambo & Kamau, 2003). This is as a result of corruption, secrecy, inefficiency, and unaccountability. Oanda (2012) indicate that procurement practitioners face numerous challenges, many of which are ethical in nature. This raises the need for code of ethics to govern the practitioners. Nevertheless, in order to mitigate these challenges, breach of codes by a practitioner should lead to penalties as provided under paragraph 23 of the Suppliers Practitioners Management Act.

Kakwezi and Nyeko (2010) argue that procurement performance can be measured by financial and non-financial measures. Furthermore, preferred measures of procurement performance include quality of goods and services, timely delivery of orders, customer satisfaction, dependability and flexibility. According to Kutosi, Moses and Eya (2015), procurement performance can be measured by efficiency and effectiveness. Efficient procurement practices are those that meet the needs of customers, achieve optimum conditions and value in regard to allocation of scarce taxpayers resources, efficient use of public resources, manage risk and pose a less liability to the public while effective procurement practices enhances high level of transparency, accountability and value for money.

Kenya sugar processing firms are facing a lot of challenges as from 1990's to date. During review of the policy, legal and regulatory framework for the Sugar Sub- Sector in Kenya by KACC (2010), it noted that the challenges include; strikes, factory shut downs, agitations by politicians and advocacy groups, poor stewardship, mismanagement, low utilization of capabilities, obsolete technologies in the mills, sugar importation and corruption. Western province being a geographical area where sugar cane farming is mainly done, it has 4 sugar processing firms which Nzoia Sugar Company, Mumias Sugar Company, West Kenya Sugar Company and Butali Sugar Company. These firms have diversified in different activities like electricity generation for their own. However, Mumias Sugar Company is the only one that has divested into energy production for exportation to the national grid.

Statement of the Problem

The enactment of public procurement regulations in Kenya aimed at promoting fairness, equality, integrity, transparency and accountability in procurement procedures (PPDA 2005; PPOA 2006). However, this has not been fully achieved due to high level of corruption that results from huge financial flows involved in public procurement (EACC 2015). Corruption has been the most serious unethical practice that undermines trust and confidence of public officials (Syengo, 2015). According to EACC (2015), procurement department and procurement process are most prone to corruption by 30% and 46% respectively. Nevertheless, lack of accountability causes high level of corruption by 8.2%. Procurement process has been ranked to receive bribe amounting to Ksh. 107,059 due to lack of professionalism. Furthermore, the report indicates that procurement irregularities include bid rigging, inflation of prices, splitting of tenders to meet threshold, tempering with the client documents, and conflict of interest in awarding tenders.

Non-performance in sugar industry is as a result of the challenges they encounter regardless of its

contribution on the country's GDP by 7.5% (KACC, 2010). According to (Jabuya, 2012), lack of transparency and corruption has remained the major challenge in the management of sugar firms. Moreover, sugar production has remained stagnant regardless of the increase in consumption with the country hard-pressed to meet the demand of 900,000 tonnes each year against a local supply of just 300,000 tonnes due to unethical practices like bribery, illegal sugar imports, huge debt, and low utilization of capabilities, mismanagement and political interest (KSB Report, 2012).

A number of studies have been conducted on ethics in procurement; however, there is no study that exhaustively investigated the influence of ethical practices on procurement performance of Sugar Processing Firms in Western Kenya. Okwiri (2012) examined the role of ethics in supply chain management of oil marketing firms in Kenya and how it can improve the supply chain performance. He found out a positive association between business practices, relativism and ethical measures. A study by Kabubu, Huho and Kyalo (2015) on the effects of ethics on procurement process of medical supplies in public hospitals in Kenya, ascertained that unethical behaviors affects the procurement process. Kilonzo (2017), in his study on procurement ethics and procurement performance of animal feeds in manufacturing firms in Kenya noted a correlation between procurement ethics and procurement performance. But his study had limited variables. As per the researches done, there is a knowledge gap since all studies ceased to look at procurement performance of Sugar Processing firms in Western Kenya with regard to ethical practices involved in procurement. For this reason, the study purposively sought to cover the research gap by establishing the influence of ethical practices on procurement performance of Sugar Processing firms in Western Kenya.

Research Objectives

- To establish the influence of transparency on procurement performance of Processing Firms in Western Kenya

- To examine the moderating effect of ICT on the relationship between the ethical practices and procurement performance of sugar processing firms in Western Kenya

The study was guided by the following research hypotheses

- H₀₁: There is no significant influence of transparency on procurement performance of Sugar Processing Firms in Western Kenya
- H₀₂: ICT has no significant effect on the relationship between ethical practices and procurement performance of Sugar Processing Firms in Western Kenya

LITERATURE REVIEW

Rule Utilitarianism Theory

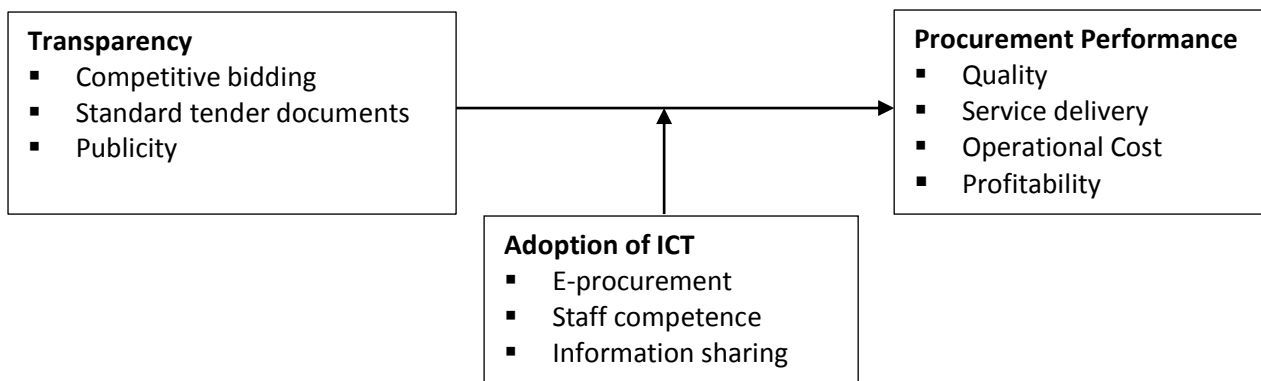
This theory was developed in 19th century by British philosophers John Stuart Mill. Its concept is that action should be defined in terms of what would be required by rules which would maximize either actual or expected utility if those rules gained general acceptance or general compliance. Simoes (2009) argues that an act is regarded as right only if they conform to the rules that can be supported on utilitarian grounds. He further notes that utility of an individual is not considered, but the application of the rule and its consequent utility. Rule utilitarianism is based on three aspects: a moral worth of an act is judged according to the good or bad consequences that result from following a moral conduct; a person should follow a moral rule that brings more consequences than another rule would; all moral rules which produce the greatest happiness for the greatest number should be obeyed. The study adopts this theory as procurement professions are subjected to act in accordance to the rules and regulations stipulated in PPDA of 2015 and PPOA of 2006 which aims at promoting transparency during procurement process. They are legally bound to fair competition and transparency in order to reduce the blame of malpractices and non-compliances (Hui, Othman, Normah, Rahman, & Haron, 2011). This theory is of importance in analyzing the influence of

transparency on procurement performance of sugar processing firms in western Kenya.

Resource Based View Theory

The proponent of resource based View theory was Penrose in 1959. Moreover, other contributors that served to advance this theory were Rubin in 1973 and Slater in 1980. It views resources as a one of the fundamental determinant to firm's performance and competitive advantage (Barney, Ketchen, & Wright, 2011). Resources are allocated unevenly within an industry. There are various categories of resources; physical capital, human capital, financial resources, informational resources, firms technology, organizational capital resources. Resources refer to tangible and intangible assets that firms use to implement its strategies and are used to accomplish its goal (Barney & Hesterly, 2012).

The use of resources in an efficient way enables organizations to achieve more with less cost. Mesa, Kwasira and Waweru (2017) while quoting Priem and Butler (2001) argue that managers have to develop and obtain strategic resources that meet the criteria valuable, rareness, non-imitable and non-substitution and how an appropriate organization can be developed. This means that procurement function should adopt the use of technology to promote transparency, accountability and integrity during procurement process thereby executing procurement performance. This theory relates to research objective on moderating influence of ICT on the relationship between the ethical practices and procurement performance of sugar processing firms in Western Kenya.



Independent Variables

Moderating Variables

Dependent Variable

Figure 1: Conceptual Framework

Empirical Review

Transparency is all about being open. According to OECD (2007), information about public procurement should be readily available in a precise, reliable and structured form. It further reports that transparent encompasses the debriefing and communication to create relationship of trust with the bidders that the process has been done in a fair manner. Moreover, UNOPS (2012) notes that transparency may be in form of several practices that is, publishing procurement manuals, advance publication of procurement plans, advertisement of tender

notices, disclosure of evaluation criteria in solicitation documents, publication of contract awards and prices paid and finally publishing supplier sanction lists.

Transparency is achieved through fair and open competition bidding process. This involves the process where more than one potential supplier or service provider submit quotations or proposals for the advertised work of government. According to UNOPS (2012), the goal of fairness, competition and economic value are vital and achieved through the establishment of effective and efficient procurement process. Anderson, Kovacic and

Muller (2011) argues that competition is an element that ensures that government receives best value for money in the procurement process thereby impacting on the procurement market in three ways; it shall drive prices towards marginal cost, will serve as a driver towards innovation, and make suppliers to reduce their production and other cost.

Kiawa (2012) indicated that publicity is all about the freedom of information. However, the government restricts sharing of sensitive information like commercial information of bidders and state information that can harm interest of the bidders or the state. Decio and Mario (2014) stated in his report that publicity reduces the amount of funds spent for public procurement as it fights collusion and corruption. He further notes that publicity increases the number of bidders participating in procurement process thus encouraging transparency. They also indicate that increased publicity selects different winners.

Panda, Sahu and Gupta (2010) conducted a study on promoting transparency and efficiency in Public procurement: e-procurement initiative by government of India. The study indicated that in order to achieve the benefits of information technology, web-based e-Procurement platform, e-Tendering, e-Reverse Auctioning and e-Informing has to be initiated. The study further reveals that an e-procurement system eliminates malpractices as it enhance transparency and probity by keeping a traceable online electronic record of transactions. On a further note, e-procurement benefits includes reduction of process time and cost, improved service level, increased efficiency, increased customer satisfaction, openness and transparency, increased economic competitiveness.

Mwai (2013) while quoting Maniam, Halimah and Hazman (2006) argue that information sharing helps the government to improve on service delivery. This is so as ICT ensures that suppliers get information in a timely and reliable manner which provides a competitive bidding. Furthermore, the use of ICT in procurement process may result to

cost reduction and limits opportunity of bribery thus promoting competitiveness. Nevertheless, use of information technology promotes the principle of procurement like accountability, transparency, and integrity as addressed in Transparency International report. Similarly, Muthuri (2014) indicates that a good ICT system enables in the interaction between the buyer and the supplier and it's used as a monitoring tool hence control cost and assures maximum supplier performance. This therefore improves product quality and reduces cost. A study by Neupane, Soar and Vaidya (2014) revealed that e-procurement promotes fair competition among bidders and increased transparency.

Procurement performance is about how effective or efficient purchasing function is (Kakwezi & Nyeko, 2010). According to OECD, (2011) the primary objective of an effective procurement policy is the promotion of efficiency for instant the selection of the supplier with the lowest price which yields to value for money. Kariuki (2013) while quoting Batenburg and Versendaal (2006) argue that measuring the performance of the purchasing function yields benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements and competitive advantage. The study further asserts that procurement performance can be achieved through sound public procurement and practices like accountability, competitive supply and consistency.

According to Kitheka, Mbithi and Ahmed (2014) established that procurement performance is evaluated by whether the firm receives competitive bids, and whether purchase price savings are higher than expected. The study further indicates that a common success measure in procurement is percent of savings achieved. Ndolo and Njagi (2014), the public procurement goals include the minimization of administrative operating costs and customer satisfaction in connection to cost, quality and timely delivery. He further indicates that transparency helps is the growth of in-country investment and competitiveness since officials ensures that goods, works, services and capital

assets are procured within the legal framework. Bartoli and Blatrix's (2015) note that performance is achieved through evaluation, piloting, effectiveness, efficiency and quality dimensions of a product. Every organization is in need of achieving performance, it therefore has to analyzed and defined closely the targeted objectives since it's a phenomenon with strong subjective. Savings can be achieved from professionalization of the procurement function within an organization.

Makali et al (2018) attributes that effective performance measurement can help non-profit managers make better decisions, improve performance and provide accountability. Her study further indicates that effectiveness in procurement considers indicators like supplier quality, delivery management, flexibility of suppliers, material quality defects, supplier profile, inventory incoming on-time, order cycle time and documentation. Her findings revealed that there is a positive association between procurement performance and ethical issues which implies that when procurement personnel implement ethical policies in their organizations, then procurement performance will also improve.

METHODOLOGY

The study adopted descriptive survey design. According to Mugenda and Mugenda (2003), descriptive survey attempts to collect data from members of a population in order to determine the current status of that population with respect to one or more variables. The target population for this study comprised of Nzoia Sugar Company, Mumias Sugar Company, West Kenya Sugar Company and finally Butali Sugar Company. The study population comprised of 139 procurement staff grouped into 131 subordinate staff and 8 top managers. This study sample frame entailed 131 subordinate staff and 8 top managers from procurement department of Mumias Sugar Company, Nzoia Sugar Company, West Kenya Company and Butali Sugar Company. This study used the formula provided by Yamane (1967) since it's a scientific and simplified formula for a sample

size of 103 respondents. The study used stratified random sampling. Simple random sampling was used to select the sample from each strata. This aimed at limiting biasness and ensured that the population was represented. The researcher used the proportions used in the target population to determine the representative in each stratum. Primary data was collected by means of self-administered structured questionnaires. These questionnaires were structured and designed in multiple choice formats. Likert scale was adopted for the questionnaire where 1= strongly disagreed 2= Disagreed 3= Neutral 4= Agreed 5= strongly agreed. Pilot test was administered so as to test for validity and reliability of the research instrument (questionnaires). That is, pretesting of research instrument was used to confirm that questions are well written, meaningful plus having adequate content so as to ensure content validity. Pilot testing was done and a Cronbach alpha was computed using SPSS version 24. Descriptive analysis such as frequencies, means, and standard deviation was utilized whereas analyzed data presented in tables and graphs. Simple linear regression analysis was used to determine the influence of independent variable on the dependent variable. Hierarchical linear regression analysis was used to determine the moderating effect of ICT adoption. The following study statistical models were used:

$$Y = \beta_0 + \beta_1 X_1 + \epsilon$$

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 Z + \beta_3 X_1 Z + \epsilon$$

Where

Y = Procurement performance

X₁ = Transparency

Z = the hypothesized moderator (ICT)

ε = error term

FINDINGS AND DISCUSSION

Descriptive Statistics

The descriptive statistics presented in this section are summated responses on the statements measuring the transparency and Adoption of ICT using Likert scale with values ranging from 5 to 1;

that is; 5=Strongly Agree, 4=Agree, 3= Neutral, 2=Disagree and 1= Strongly Disagree. The results are presented in the table form showing frequencies of responses as per each statement and

its corresponding percentage score in brackets, means and standard deviations. The descriptive results are presented in table 1.

Table 1: Descriptive statistics: Transparency

Statements	5	4	3	2	1	Mean	SDV
There is need for competitive bidding to ensure transparency during procurement process.	40 (47.1)	21 (24.7)	10 (11.8)	7 (8.2)	7 (8.2)	3.94	1.2 9
The firm ensures provision of standard tender document for all type of procurement.	34 (40)	41 (48.2)	5 (5.9)	2 (2.4)	3 (3.5)	4.19	0.9 2
All advertised bids are opened in front of public.	18 (21.2)	38 (44.7)	18 (21.2)	5 (5.9)	6 (7.1)	3.67	1.1 0
In case of procurement opportunities they are publicized to enhance transparency	23 (27.1)	39 (45.9)	9 (10.6)	6 (7.1)	8 (9.4)	3.74	1.2 1
The firm publishes notification of awards on procurement contract	25 (29.4)	40 (47.1)	8 (9.4)	7 (8.2)	5 (5.9)	3.86	1.1 1
Average						3.88	

From Table 1, 24.7% of the respondents agreed that there is need for competitive bidding to ensure transparency during procurement process while 47.1% strongly agreed. A mean of 3.94 postulated that there is need for competitive bidding to ensure transparency during procurement process. Slight majority of the respondents (48.2%) agreed that their firm ensures provision of standard tender document for all type of procurement and further 40.0% strongly agreed. A mean of 4.19 indicated that sugar process firms ensure provision of standard tender document for all type of procurement.

The results also revealed that 44.7% and 21.2% of the respondents agreed and strongly agreed respectively that all advertised bids are opened in front of public. However, 21.2% of the respondents were neutral that all advertised bids are opened in front of public. This assertion was supported by standard deviation of 1.10 implying that not all employees recognized that all advertised bids are opened in front of public. Slight majority of the respondents (45.9%) agreed in case of procurement opportunities they are publicized to enhance

transparency and 27.1% of them strongly agreed. However, with standard deviation of 1.21, some of the respondents were not sure whether procurement opportunities are publicized to enhance transparency.

Lastly, the results further revealed that 47.1% and 29.4% of the sampled respondents agreed and strongly agreed that their firm publishes notification of awards on procurement contract. However, 8.2% of the respondents disagreed and further 5.9% strongly disagreed that their firm publishes notification of awards on procurement contract. These findings are in agreement with Agyeman (2014) who argued that transparency in procurement is about procurement process being open to all suppliers and contractors of goods, works and services and to stakeholders and interested parties. This was further supported by Glendinning (2008) who revealed that competitiveness in procurement is achieved through advertising of tenders, sourcing reviews, prequalification and the adoption of transparent procedures in the procurement systems.

Table 2: Descriptive statistics: ICT Adoption

Statements	5	4	3	2	1	Mean	SDV
E-procurement system has enhanced transparency and accountability by keeping a traceable online electronic record of transactions.	17 (20)	35 (41.2)	8 (9.4)	12 (14.1)	13 (15.3)	3.36	1.36
There is reduction of process time and cost, improved service level, increased efficiency, openness and transparency and increased economic competitiveness as a result of e-procurement system.	33 (38.8)	32 (37.6)	7 (8.2)	6 (7.1)	7 (8.2)	3.92	1.23
E-procurement has led to fair competition among bidders and increased transparency	8 (9.4)	20 (23.5)	22 (25.9)	16 (18.8)	19 (22.4)	2.79	1.29
ICT adoption has encouraged professions training hence reduction of fraud and corruption cases.	21 (24.7)	29 (34.1)	17 (20)	8 (9.4)	10 (11.8)	3.51	1.29
Information sharing between the firm and suppliers hence promoting competitive bidding thereby improving on service delivery	15 (17.6)	24 (28.2)	22 (25.9)	15 (17.6)	9 (10.6)	3.25	1.24
Average						3.37	

From Table 2, slight majority of the sampled respondents (41.2%) agreed that E-procurement system has enhanced transparency and accountability by keeping a traceable online electronic record of transactions. This was further supported by 20% of the respondents who strongly agreed. However, 15.3% of the respondents strongly disagreed implying that some sampled respondents failed to indicate that E-procurement system has enhanced transparency and accountability by keeping a traceable online electronic record of transactions. The results also revealed that 23.5% agreed that E-procurement has led to fair competition among bidders and increased transparency and additional 9.4% strongly agreed on the same. However, 22.4% strongly disagreed and 18.9% disagreed that E-procurement has led to fair competition among bidders and increased transparency.

Majority of the respondents confirmed that there is reduction of process time and cost, improved service level, increased efficiency, openness and transparency and increased economic competitiveness as a result of e-procurement system. as shown by 37.6% and 38.8% who agreed and strongly agreed respectively. On the other

hand, 8.2% of the respondents strongly disagreed and further 71% disagreed. Small majority of the respondents agreed that ICT adoption has encouraged professions training hence reduction of fraud and corruption cases as shown by 34.1% while 24.7% strongly agreed on the same. However, 11.8% of the respondents strongly disagreed that ICT adoption has encouraged professions training hence reduction of fraud and corruption cases.

Lastly, 17.6% and 28.2% of the respondents agreed and strongly agreed respectively that information sharing between the firm and suppliers hence promoting competitive bidding thereby improving on service delivery. However, 17.6% of the respondents disagreed and 10.6% strongly disagreed on the same implying that information sharing between the firm and suppliers to some extents promoted competitive bidding thereby improving on service delivery. These results are in agreement with Panda, Sahu and Gupta (2010) who revealed that e-procurement system eliminates malpractices as it enhance transparency and probity by keeping a traceable online electronic record of transactions. On a further note, e-procurement benefits includes reduction of process time and cost, improved service level, increased efficiency,

increased customer satisfaction, openness and transparency, increased economic competitiveness. Mwai (2013) found out that the use of ICT in procurement process may result to cost reduction and limits opportunity of bribery thus promoting competitiveness.

Inferential Statistics

Inferential Analysis consisted of linear regression which yield R, R Square, F statistics and regression coefficients. The purpose of linear regression was to the linear influence of transparency on procurement performance. The R value indicated correlation between transparency procurement

performance while R square indicated changes in procurement performance that is been accounted for transparency. F statistic revealed whether the model is useful in predicting procurement performance and regression coefficients predicted changes in procurement performance as a result of transparency.

Transparency and Procurement Performance

The first objective was to establish the influence of transparency on procurement performance of Processing Firms in Western Kenya. This was tested using simple regression analysis, and the findings are presented in Table 3.

Table 3: Regression Results; Transparency and Procurement performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.552 ^a	.304	.296	.33178	.304	36.282	1	83	.000
a. Predictors: (Constant), Transparency									
b. Dependent Variable: Procurement Performance									
ANOVA ^a									
Model	Sum of Squares			df	Mean Square	F	Sig.		
1	Regression	3.994		1	3.994	36.282	.000 ^b		
1	Residual	9.136		83	.110				
	Total	13.130		84					
a. Dependent Variable: Procurement Performance									
b. Predictors: (Constant), Transparency									
Coefficients ^a									
Model	Unstandardized Coefficients			Standardized Coefficients	t	Sig.			
		B	Std. Error	Beta					
1	(Constant)	1.443	.370		3.901	.000			
1	Transparency	.664	.110	.552	6.023	.000			
a. Dependent Variable: Procurement Performance									

From the Table 3, the findings indicated that transparency had a value of r squared = 0.304 which translated to 30.4%. This was the percentage change of procurement performance caused by transparency. The results showed that F value = 36.282 and P value was 0.000. Tests were done at 0.5 or 5% level of significance. The results indicated that transparency had a statistically significant effect on procurement performance of Sugar Processing Firms in Western Kenya.

The study also sought to find out the regression coefficient between transparency and procurement performance of Sugar Processing Firms in Western Kenya. From the table, the value of regression coefficient B = 0.664 indicated that an increase in a unit of transparency was associated with an increase in 0.664 units of procurement performance. Based on the regression coefficient results, simple linear regression model equation was written as

$$Y = 1.443 + 0.664X_1$$

Where

Y = represents Procurement performance

X₁ = represents Transparency

These findings were in agreement with numerous extant studies. For instance, Syengo (2015) established that KRA had adopted and implemented ethical practices such as transparency within the organization to a great extent and that the ethical practices had affected supply chain performance to a great extent. Further, Mario (2014) stated in his report that publicity reduces the amount of funds spent for public procurement as it fights collusion and corruption. He further notes that publicity

increases the number of bidders participating in procurement process thus encouraging transparency. They also indicate that increased publicity selects different winners.

Hierarchical Regression Analysis of ICT

The second objective was to examine the moderating effect of ICT on the relationship between transparency and procurement performance of sugar processing firms in Western Kenya. In this analysis, transparency was added in the model, thereafter, ICT (moderator) was added in second model and the interaction of transparency practices and moderator were added in the final model.

Table 4: Hierarchical Regression Analysis; Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.646	0.525		-1.231	0.222
	Transparency	0.431	0.111	0.358	3.896	0
2	(Constant)	-1.366	0.494		-2.767	0.007
	Transparency	0.409	0.099	0.339	4.13	0
	ICT	0.559	0.121	0.406	4.628	0
	(Constant)	-8.287	6.871		-1.206	0.232
3	Transparency	2.425	1.206	2.013	2.01	0.048
	ICT	2.339	1.906	1.701	1.227	0.224
	Transparency*IC T	1.252	0.465	5.847	2.692	0.009

a. Dependent Variable: Procurement Performance

From the table 4, it can be seen that the results before introducing ICT as moderator, transparency had regression coefficient of 0.431, p=0.000 while after moderating the effect of ICT, the regression coefficient was 0.1.252, P=.000. This implied that increase in ICT would results to significant increase on the effect of transparency on procurement performance. Based on the beta coefficient results, the second equation of hierarchical multiple linear regression models was written as

$$Y = -8.287 + 2.425X_1 + 2.339Z + 1.252X_1Z$$

Where;

Y = Procurement Performance

X₁ = Transparency

X₂ = Integrity

X₃ = Professionalism

X₄ = Fairness

Z = ICT

The outcome of this study was in agreement with Svidronova and Mikus (2015) who attributed that possible solution to the lack of transparency and related problems could be in e-procurement which has benefits like quality improvement; flexibility of services; decreasing of service prices and variability; a solution for information asymmetry; increasing of a competitive effect, increasing transparency; reducing costs of procurement; increasing in time savings; increase competition. Ogal and Moronge (2017) established how information technology improves performance and noted that ICT promote transparency in procurement. Findings indicated that online communication, online tender

advertising and computerized tendering process influence the performance of the procurement function as it offers smoother and faster process flow and efficient distribution of information.

CONCLUSION AND RECOMMENDATIONS

The study concluded that the Sugar Processing Firms in Western Kenya competitive bidding in place to ensure transparency during procurement process. Sugar Processing Firms in Western Kenya ensured provision of standard tender document for all type of procurement. This has led to improvement in procurement cycle time especially in regard to minimize the time it takes to produce and approve a requisition. Therefore, transparency as ethical practices has significant positive influence on the procurement performance of Sugar Processing Firms in Western Kenya. the study concluded that ICT had statistically significant moderating effect on the relationship between ethical practices and procurement performance of Sugar Processing Firms in Western Kenya. Specifically, the study concluded that ICT has led to

reduction of process time and cost, improved service level, increased efficiency, openness and transparency and increased economic competitiveness. This has enhanced procurement performance via ethical practices as ICT has improved transparency and integrity during various procurement processes.

The study recommended that the management of Sugar processing firms in Western Kenya need to advertise all bid opened in front of public to improve transparency of procuring process. This can be done by increasing awareness and publicizing bid opening through various media so that all stakeholders participate in bid opening. The study recommended that management of sugar processing firms should continuously invest in ICT infrastructure so that all processes of procurement are technology based. This would increase transparency and integrity thereby achieving professionalism and fairness in procurement function hence improvement in procurement performance.

REFERENCE

- Adom, D., Hussein, E. K., & Agyem, J. A. (2018). Theoretical and conceptual framework: Mandatory ingredients of a quality research. *International journal of scientific research*, 7(1).
- Agyeman, F. (2014). Assessing ethical procurement practices at Accra Metropolitan Assembly. *Unpublished Master project, Kwame Nkrumah University of Science and Technology*.
- Aliza, Stephene & Bambang (2011). *Materials Management & Purchasing*; (4th ed). Longman publishers: Edinburgh Gate, UK.
- Anderson, R., Kovacic, W., & Müller, A. (2011). Ensuring integrity and competition in public procurement markets: a dual challenge for good governance. In: S. Arrowsmith & R. Anderson (Eds.), *The WTO Regime on Government Procurement: Challenge and Reform*. Cambridge: Cambridge University Press.
- Barney, J., & Hesterly, W. (2012). *Strategic management and competitive advantage: Concepts and cases* (4th ed.). New Jersey: Pearson.
- Barney, J., Ketchen, D., & Wright, M. (2011). The future of resource based theory: Revitalization or decline? *Journal of Management*, 37(5), 1299–1315
- Bartoli, A., & Blatrix, C., (2015) *Management in Public Organizations* (4th ed.). Dunod: Paris.
- Decio. C., & Mario. M. (2014). Publicity requirements in public procurement evidence from a regression discontinuity design. *Journal of Public Economics, Elsevier*, 109(c), 76-100.

- Gilbert, M., (2017). *Procurement and Ethics Fraud: Procurement and supply Australasia*. Retrieved from <https://procurementandsupply.com/pro>.
- Hui, W. S., Othman, R. O., Normah, O., Rahman, R. A., & Haron, N. H. (2011). Procurement issues in Malaysia. *International Journal of Public Sector Management*, 24(6), 567- 593.
- Jabuya, D. O. (2015). Productivity of sugar factories in Kenya. *Unpublished Master Paper, University of Nairobi*.
- Kabubu. C., Huho. J., & Kyalo. T. (2015). The effects of ethics on the procurement process of medical supplies in the public hospital in Kenya. *International Journal of Economics, Commerce & Management*, 3(9), 627-635.
- Kakwezi, P. (2012). Procurement Contract Management in Public Procurement and Disposal Entities(PDES). *The International Journal's Research Journals of Economics and Business Studies*, 2(1), 230-240.
- Kariri, J. (2013). The Effect of Capital Stricture on the Financial Performance of Commercial Banks in Kenya. *International Journal of Business, Humanities and Technology*, 1(2), 26–29.
- Kariuki, E. (2013). Procurement Performance Measurement in Commercial Banks in Kenya. *International Journal of Social Sciences and Entrepreneurship*, 3(3), 14–19.
- Kauppi, K. & van Raay, E. M. (2014). Opportunism and Honest Incompetence in Public Procurement. *Journal of Public Administration Research and Theory*, 25, 953-979.
- Kiawa, F. M. (2012). Accountability in public sector procurement: A case study of the state law office. *Unpublished Thesis, University of Nairobi*.
- Kilonzo. D. M., (2017). Procurement Ethics and Procurement performance of Animal Feeds Manufacturing Firms in Kenya. *Unpublished Master Project, University of Nairobi*.
- Kipkemoi, R. T. (2017). Effects of Procurement Practices on Organizational Performance within the Public Sector: A Case of East African Portland Cement Company Limited. *Unpublished Project, Management University of Africa*.
- Kitheka, S., & Ochieng, G. (2014). Inventory management automation and performance of supermarkets in Western Kenya. *International Journal of Research in Management and Business Studies*, 1(4), 9-18.
- Kitheka, S., Mbith, S. M ., & Ahmed, H. A. (2017). Supplier Selection Ethics and Procurement Performance among State Corporations in Kenya. *International Journal of Research in Management and Business Studies*, 5(1), 455-462
- Kutosi, A. M., Muhwezi, M., & Eya, S. (2015). Behavioural Practices and Procurement Performance in Uganda. *International Journal of Social Science and Economics Invention*, 1(1).
- Makali, J. M., Wainaina, G., & Ogoro, T. O. (2018) Ethics and Procurement Performance of Humanitarian Organizations in Kenya. *American Journal of Industrial and Business Management*, 8, 833-849.
- Mesa, R. N., Kwasira, J. Waweru, L. (2017). Determinants of procurement performance in judiciary department at the Nakuru law courts, Kenya. *International Journal of Economics, Commerce and Management United Kingdom*, 5(12).
- Muange, E. (2013). Procurement Legislation and Performance of Constituency Fund Committees in Kenya. *International Journal of Science and Research*, 2(3), 19–22.

- Mugenda, O. M., & Mugenda, A. G., (2003). *Research Methods; Quantitative and Qualitative Approaches* (2nd ed). Nairobi Acts Press
- Muthuri, C. G. (2014). Information and Communication Technology and procurement performance in star rated hotels in Nairobi, Kenya. *Unpublished MBA Project, University of Nairobi. q*
- Mwai, G. M. (2013). Application of ICT in procurement: Case of Nairobi city water and sewerage company. *Unpublished MBA project, University of Nairobi.*
- Mwangi, L. W., & J. Kwasira. (2015). Assessment of effects of ethical practices on performance of procurement function in state corporations: A case of state regulatory agencies in Nairobi County, Kenya. *International Journal of Economics, Commerce and Manage*
- Ndolo, J., & Njagi, E. (2014). Role of Ethics in Procurement Process Effectiveness in the Water Sector in Kenya. *International Journal of Supply Chain* 3(3), 128-133.
- Neupane, A., soar, J., & Vaidyaan, K. (2014). Empirical evaluation of the potential of public e-procurement to reduce corruption *Australasian Journal of Information Systems*, 18(2).
- Oanda, C. (2012, Nov. 14th). Code of ethics invaluable for procurement, supply chain practice. *Standard Digital.*
- Odhiambo, V. A. (2015). Supplier selection practices and procurement performance in Nairobi City County. *Unpublished MBA project, University of Nairobi.*
- Odhiambo, W., & Kamau, P. (2003). *Public Procurement: Lessons from Kenya, Tanzania and Uganda.* OECD Development Centre Working Paper No. 208
- Oduma, E. O., & Getuno, P. (2017). Effects of Procurement Regulations on Performance of Public Secondary Schools in Nairobi City, County, Kenya. *International Journal of Innovative Social Sciences & Humanities Research*, 5(3), 50-68.
- Ogol, O. Chillon., & Moronge, M (2017). Effects of ethical issues on procurement performance in public hospitals in Kenya. *The Strategic Journal of Business and Change Management*, 4(3), 787-805.
- Okwiri J. O. (2012). Role of ethics in supply chain management of oil marketing firms in Kenya. *Unpublished MBA project, University of Nairobi.*
- Organization for Economic Cooperation and Development (2005). *Fighting corruption and promoting integrity in public procurement.* Paris: OECD Publishing.
- Organization for Economic Cooperation and Development (2007). *Integrity in public procurement: Good practice from A to Z.* Paris: OECD Publishing.
- Organization for Economic Cooperation and Development (2009). *Managing development resources: The use of country systems in Public Financial Management.* Paris: OECD Publishing.
- Organization for Economic Cooperation and Development (2011). *Competition and Procurement: Competition Committee.* Paris: OECD Publishing.
- Osei-Afoakwa, K. (2014). How Relevant is the Principle of Transparency in Public Procurement? *Developing Country Studies*, 4(6).

- Panda, P., Sahu, G.P. & Gupta, P. (2010). Promoting Transparency and Efficiency in Public Procurement: E-Procurement Initiatives by Government of India. *7th International Conference on E-Government (ICEG) 2010, 22-24 Apr 2010, IIM Bangalore, India.*
- Republic of Kenya Gazette Supplement Acts (2005). *Public Procurement and Disposal Act, 2005*, Supplement No. 77, Act No. 3. Nairobi: Government Press.
- Republic of Kenya Gazette Supplement No. 207 (2015). *Public Procurement and Asset Disposal Act, 2015*, supplement No. 207, Nairobi: Government Press.
- Republic of Kenya Gazette Supplement No. 92 (2006). *Public Procurement and Disposal Regulations, 2006*, Supplement No. 92, Nairobi: Government Press.
- Republic of Kenya, (2012). *Constitution of Kenya, 2010*, National council for law reporting, 4th Upper Hill Close, off Ngong Rd, Nairobi: Government Press.
- Schroeder, J., (2010). Procurement Reform at the United Nations: Launching a Pilot Programme to Promote Fairness, Transparency and Efficiency. *4th International Public Procurement Conference*. Seoul, Republic of Korea, 26-28 August 2010.
- Sengbeh, B. A. (2015). Ethical procurement practices and supply chain performance of Kenyan energy sector. *Unpublished MBA project, University of Nairobi.*
- Simoes, M. C. (2009). Rule-Utilitarianism. *Ethic@ Florianopolis*, 8 (3), 47 – 61.
- Svidronova, M. M., & Mikus, T. (2015). E-procurement as the ICT innovation in the public services management: Case of Slovakia. *Journal of public procurement*, 15 (3), 317-340
- Syengo, J. (2015). Ethical practices and supply chain performance at Kenya revenue authority. *Unpublished MBA project, University of Nairobi.*
- United Nation Office for Projects Services (2012). Transparency and public procurement: *Supplement to the 2011 annual statistical report on United Nations procurement*. United Nations: UNOPS.
- Wanyonyi, S. C., & Muturi, W. (2015). Factors affecting performance of procurement function among public technical training institutions in Kisumu county, Kenya. *International Journal of Economics, Commerce and Management*, 3(5).
- Yamane, T. (1967). *Statistics: An Introductory Analysis* (2nd Ed.). New York: Harper and Row.