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Effect of Tendering Process on Performance of Supply Chain Functions in Machakos County, Kenya

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Abstract:

Despite the enactment of the Public Procurement and Disposal Act, 2015 and operation of various regulations to improve performance of the procurement function, public procurement in Kenya is marred by corruption, resulting to losses of public funds amounting to billions of shillings. Over 80 percent of corruption practices in Kenya occur in public procurement. Therefore, the study sought to establish effect of tendering process on performance of supply chain functions in Machakos County. The study adopted legitimacy theory and transaction cost theory. The study adopted descriptive research design. The target population of the study was 10 procurement heads, 20 accounting heads and 21 store managers in the County government of Machakos. Since the sample size was small, the researcher used census technique to incorporate all the targeted respondents. The study used questionnaires to collect primary data from the respondents. Quantitative data was analyzed by descriptive statistics which was presented through graphs, tables and charts. Data analysis was done using the SPSS Software version 24. Multiple regression analysis was used to determine independent and dependent variables relationship. From the findings, the study established that there exists a strong positive and significant relationship between tendering process and performance of supply chain functions in Machakos County. In the light of the foregoing findings, the study recommends that there should be a regular and continuous monitoring and assessment of procurement systems in public entities such as county government with regard to their compliance with the procedures, rules and regulations setup in the Public Procurement Act.

Keywords: Tendering process, performance, supply chain functions

1. Introduction

Public procurement is the acquisition (through buying or purchasing) of goods and services by government or public organizations. Arrowsmith (2016) contends that the concept of public procurement can be referred to as procurement planning, contract placement and contract administration. Procurement framework has been used as a significant apparatus for accomplishing financial, social, and different destinations (Arrow, 2016). The open division's procurement framework is broadly defined as the purchasing, hiring, or acquiring of goods, development works, and administrations via other legally obligatory ways (Kipchilat, 2016). It is a major government function that organizes the largest home display in many countries. If properly managed, the procurement system may contribute to a country's financial development by increasing its economy and proficiency.

Procurement, as a global activity, seeks to accomplish a number of goals. Economy, efficiency, fairness (non-discrimination among prospective suppliers), responsibility, and openness are just a few of them. Savings in buying transaction costs as a consequence of less paperwork, fewer errors, and a more effective purchasing process are some of the advantages of implementing modern procurement (Eyaa & Oluka, 2016). Green procurement, ethical procurement, such as avoiding labor abuses in the supply chain, and social impact procurement, which aims to create economic possibilities for local companies and targeted employee groups, continue to be successfully blended in North American nations. In Asia, nations like China, Thailand, and Malaysia are gradually embracing SPP, following the regional giants such as Japan and the Republic of Korea. A growing number of nations in Latin America are creating, adopting, and implementing SPP policies (United Nations, 2015).

The procurement process in the Nigerian construction sector is characterized by a lack of fundamental understanding of electronic procurement and the absence of basic equipment required for the procedure's use. Other issues influencing electronic procurement implementation include inconsistent power supply, financial consequences of setting up electronic procurement infrastructure, and low telecoms infrastructure rank (Oyediran & Akintola's, 2016).

The Kenyan government's public spending may be used to determine the size of the Kenyan government's procurement. Kenya's public procurement systems have experienced significant changes. From being an unregulated device in the 1960s to being regulated by Treasury Circulars in the 1970s, 1980s, and 1990s, the Public Procurement and Disposal Act (PPDA) of 2005 and the Procurement Regulations as amended in 2006 introduced recommendations that brought about sanity and general approaches for public procurement and disposal of goods and unserviceable elements through kingdom agencies and public entities (Mwiriki, 2017).

The Governmental Purchase and Disposal Act of 2015 was enacted to provide procurement and disposal plans for unserviceable, obsolete, or excess shops and equipment via public organizations. The PPDA of 2015 aimed to provide consistency and uniformity to public procurement while also improving efficiency, transparency, and accountability, as well as price for cash. It also aimed to eliminate corruption and promote fair competition, among other things. As a result, the Act was not only intended to guarantee that public procurement optimizes the public good, but also that market forces are permitted to operate effectively throughout the procurement process (PPDA, 2015).

Procurement challenges experienced by the county government of Machakos contravene the key principles underpinning public procurement, which include value for money, ethical standards, competition, transparency and accountability. Thus, the county extensively violates the general procurement rules provided in legislation. The causes of public procurement challenges experienced revolved around inadequate procurement planning, lack of pre-qualification of suppliers, failure to follow due process, lack of adequate numbers of qualified procurement professionals and poor inventory management, (Mutua, 2016). Consequently, the effects of the procurement challenges experienced include offences of financial misconduct, low absorption of resources, delays in project implementation, wasteful spending and unauthorized spending. Owing to the fact that national policy objectives on devolution reforms are not being fully met, county government need to take into account various procurement considerations. These include development of procurement plans; pre-qualification of suppliers; adherence to due process and development of staff capacity; and inventory management.

1.1. Statement of the Problem

Sound public procurement policies and practice are among the essential elements of good governance. Sound public procurement policies and practices are among the essential elements of good governance (World Bank, 2018). An ideal procurement system should also focus on effectiveness, where procuring entities should meet the commercial, regulatory and socio-economic goals of government in a manner that is appropriate to the procurement requirement. Just like other public institutions, the county governments in Kenya have been marred with corruption allegations. Procurement challenges experienced by counties revolved around the key principles underpinning public procurement which are: value for money, ethical standards, competition, transparency and accountability, thus extensively contravening the provisions of procurement legislation.

Over the years Machakos County has had a number of procurement issues. A report by the Controller of Budget on Public Procurement in Kenya's Counties indicates various procurement issues in the County. When the Machakos County Executive paid an officer cash of Ksh100,000.00 for the purchase of Teleprompter vide, no quotations were attached to verify whether the procurement of the asset was competitively done. There was also no requisition from the user department to ascertain the need for the purchase. In 2017, the County procured goods and services totalling to Ksh14,062,627.00. The report indicate that the procurement of these goods and services lacked the requisite documentation, such as requisitions, prequalification registers, quotation registers, quotations, tender documents, signed contracts, inspection and acceptance reports, and market surveys. Therefore, the study sought to assess the effect of tendering process on performance of supply chain functions in Machakos County.

2. Literature Review

2.1. Theoretical Review

2.1.1. Legitimacy Theory

The legitimacy theory was developed by Deegan in 2002. According to the theory, the organization has a responsibility to inform stakeholders about its operations (Wilmshurst & Frost, 2000). Legitimacy is the belief that an organization's actions are legitimate in the established system of conduct in the society in which it operates (Suchman, 2013). In the context of government procurement, there are problems such as corruption that may jeopardize the legitimacy of the process.

According to the legitimacy theory, government officers' legitimizing implementation strategies are based on the interpretation of the local authority or department in question, and different government officers are likely to have different ideas of what is expected of them from the public and whether the department, agency, or local authority is viewed by society as meeting those expectations (Deegan, 2002). According to the legitimacy theory, officials engage in the disclosure practice in order to establish a positive reputation among stakeholders and the general public. As a result, legitimacy theory contributes to a better understanding of government procurement processes. The theory backs up the first goal by demonstrating the need of procurement officers providing all necessary information throughout the bidding process, which will have a substantial and beneficial impact on supply chain function performance.

2.1.2. Transaction Cost Theory

Coase established the transaction cost hypothesis in 1937. Short-term contracts are unsuitable, according to Coase, because of the costs of gathering information and the extra expenses of negotiating contracts. The result is long-term contracts in which the contractee's compensation is set after he or she has complied with the rules, but only to the extent that the rules are followed. Market pricing regulate interactions among market companies; nevertheless, operational choices are decided on a different basis than profit maximization under market conditions (Williamson, 2015). According to Grover and Malhotra (2003), transaction cost theory has four applications in organizational supply chain management. They are: notice issue, effort, and advantage. The ability to establish and sustain relationships with solid suppliers is crucial. This aids in the resolution of issues that may emerge in existing business relationships with suppliers that participate in opportunistic behavior. This theory backs up the second study goal, which is to figure out how procurement strategy affects procurement performance in Machakos County.

2.2. Empirical Review

Tendering refers to the actions of submitting information and price requests to suppliers and getting responses in procurement to improve business involvement (McConnell, 2015). Tendering is the procedure through which governments and financial organizations request bids for major projects that must be completed within a certain timeframe. Tendering is a function that costs a lot of money to a company, therefore it needs to be done properly to optimize effectiveness and reduce expenses. The access and submission stages are combined in the procurement phase. This union is the outcome of advertising during the noticing phase of calls for tenders and contract notifications. Informing or noticing is a procurement step that involves collecting and disseminating buying information to internal and external parties through mail, as well as utilizing internet technologies and on-line notification systems to do so. This helps state companies improve their procurement performance by increasing the efficiency and efficacy of their tendering processes (Kamotho, 2014).

According to Gordon (2016), the bidding process's goal may be both broad and specialized. The competitive and procedural systematic process of choosing the best suppliers for the lowest price is a traditional definition. In their research on variables influencing tendering process, Kibera and Waruingi (2015) discovered that ethical behaviors, training, ICT usage, and record keeping are the main elements that influence bidding process. With this mindset, suppliers should offer better services in order to improve the bidding process' performance by better presenting these services by having a reputable supplier, excellent pricing, high quality, and fast delivery of products. Most consumers are more concerned with quality than quantity, which is why SMEs should seek for the most cost-effective and dependable source to provide them with the high-quality products and services that their customers want.

In Kajiado County, Kisurkat (2016) studied the impact of tendering on organizational performance. The study used a descriptive research approach. The study's sample was chosen using simple random sampling. A questionnaire was used to gather data. According to the results, tendering is often utilized, and many organizations follow the processes outlined in the legislation. Many people also felt that educating workers on tendering processes would help them perform better. A higher percentage ascribed their department's success to the bidding method they used. This means that organizations, that follow the act's tendering processes, enhance their department's performance.

Njoroge (2016) wanted to see how tendering affected the performance of the Nairobi city county administration. There were 750 people in the target group. A stratified random selection method was used to choose 75 respondents from the three departments for the research. The findings of the correlation study revealed that tendering procedures had a positive and significant connection with performance in Nairobi City at a 95% confidence range. According to the research, the Nairobi City County should focus on adopting and implementing different elements of bidding in order to enhance its operations.

Chesire (2015) wanted to see how e-procurement affected supply chain management effectiveness in Elgeyo Marakwet County. To choose 40 respondents, the research utilized a stratified sample method and purposive sampling. Data was gathered in both qualitative and quantitative ways. The study's findings revealed that E-invoicing has a significant impact on a company's operations; the ability to reduce payment time, improve data security, and provide numerous environmental benefits has made E-invoicing more applicable in the county's businesses; cost economics has been streamlined, with the cost of infrastructure per transaction decreasing as transaction volume increases.

Kuloba Kibet and Ayuma (2017) conducted research at Moi Teaching and Referral Hospital on the impact of tendering processes on organizational performance. The total number of people that took part in this research was 3600, with a sample size of 384. We used stratified and basic random sampling methods. The primary data collecting tools were questionnaires. Descriptive statistics were used to examine the data, which was then presented in frequency tables and percentages. Tendering was not linked to performance, according to the findings of the research. In order to improve performance, the research suggests that procurement rules, that promote tendering, should be widely implemented.

2.3. Conceptual Framework

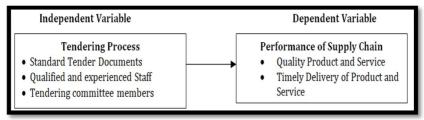


Figure 1: Conceptual Framework

3. Research Methodology

3.1. Research Design

This study adopted a cross-sectional research design. The rationale of adopting this design is premised on the assertion that cross-sectional studies provide a clear snapshot of the outcome and the characteristics associated with it, at a specific point in time (Hall, 2008). The present study in line with the selected research design was conducted over a specific period of time and involved randomly picked respondents from Machakos County.

3.2. Target Population

Target population describes all the members of a population that have common characteristics (Kothari, 2004). The unit of observation was procurement, store and accounting department in the County government of Machakos while the unit of analysis was department heads in the County. Therefore, the study population was 10 procurement heads, 20 accounting heads and 21 store managers in the County government of Machakos.

3.3. Census Techniques

The study used census. According to Palys (2008), census sampling involves selection of the entire population. Census was used to collect data from the 10 procurement heads, 20 accounting heads and 21 store managers in Machakos County Government. The respondents were 51 in total.

3.4. Data Collection Instruments

The study used primary data, which was collected by use of structured questionnaires. The questionnaires encompassed closed ended questions. The structured questions were used in an effort to facilitate an easier analysis as they are in immediate usable form (Greener, 2008). Kothari (2004) indicates that a questionnaire is a cost efficient method to collecting information, particularly from a huge group of respondents. It also facilitates anonymity. According to Hannes, Lockwood, and Pearson, (2010), questionnaire method of data collection is adequate because the impersonal and standardized formats of a questionnaire is uniform and assists in obtaining data objectively; respondents anonymity and confidentiality is assured and they are able to fill them at their own convenient time.

3.5. Data Collection Procedure

Prior to the data collection, a letter was obtained from Jomo Kenyatta University of Agriculture and Technology to authorize the actual research that was carried out at the county government of Machakos. The letter was used to accompany the questionnaires for data collection. The researcher sought a permit from the National Commission for Science, Technology and Innovation (NACOSTI). Primary data was collected from the respective departments of the county government of Machakos.

3.6. Pilot Test

Questionnaires were pre-tested at Nakuru County Government to ensure they are effective and relevant. Pilot- test provides opportunity to assess the clarity of the items on the instrument and revise those items found to be inadequate in measuring the variables before the main study (Cooper & Schinder, 2011). Mugenda and Mugenda, (2012) urge that 10% of the target population is adequate for pilot testing depending on the sample size. This study used 10% (5) of the sample size for pilot-testing and the respondents to be involved in pilot-testing did not participate in the final study.

3.6.1. Validity

Validity testing is done in order to ensure that the data collection tool is able to facilitate collection of the intended data (Kimberlin & Winterstein, 2008). This study sought to determine the content and construct validity of the research questionnaire by consulting the assigned university supervisor. The supervisor's opinion was deemed sufficient in determining the instrument's content validity.

3.6.2. Reliability

Reliability is a measure of consistency of the research instrument. A reliable instrument is as such one that facilitates collection of similar data when administered on respondents across similar study populations. Given that the data collection instrument was structured on a 5-point Likert scale, the Cronbach's alpha coefficient was used to test the

reliability of the research instrument. The process of reliability testing involved coding and entering of the data collected during the pilot study with the aid of the SPSS. The entered data was then analyzed to establish the results of the Cronbach's alpha coefficient.

3.7. Data Analysis

Questionnaires were edited before the responses are processed, this was necessary so as to ensure consistency and completeness. Data analysis was important because it tests validity and consistency with regards to the statement problem. Quantitative data was analysed by descriptive statistics which was presented through graphs, tables and charts, and this was attained through mean, mode and standard deviation. This analysis determines the presence of concepts, words or themes within texts and quantifies it in an objective way. Data analysis was done using the Statistical Package for Social Sciences (SPSS) Software version 24. Correlation analysis was used to determine independent and dependent variables relationship (Whitlow, 2015).

4. Results and Discussions

4.1. Duration of Service

The researcher was interested in establishing the duration of service of the respondents who have been working in their organization. Table 1 shows the findings of the study.

4.2. Response Rate

Response rate equals the number of people with whom questionnaires were properly completed divided by the total number of people in the entire sample (Fowler, 2004). The study, thus, administered 51 questionnaires for data collection. However, 50 questionnaires were properly filled and returned. This represented 98 percent response rate.

Response	Number of Respondents	Percentage (%)
Expected Responses	50	100
Received Responses	49	98
Non-Response	1	2

Table 1: Response Rate

Duration of Service	Frequency	Percentage (%)
Below 1 Year	9	18
2-5 Years	27	54
Above 5 Years	14	28
Total	50	100

Table 2: Duration of Service Source: Research Data (2022)

From the study, 18% of the respondents stated they had worked in their current work station for less than 1 year, 54% of the respondents stated they had worked in their current work station for 2-5 years, 28% of the respondents stated they had worked in their current work station for more than 10 years. This implies that majority of the respondents had been working in their current work station for 2-5 years. Employee experience can be defined as a set of perceptions that employees have about their experiences at work in response to their interactions with the organization. A positive employee experience gives workers a feeling that they are a part of something special and meaningful and that their contributions matter to the organization.

Level of Education	Frequency	Percentage (%)
Diploma	4	8
Undergraduate Degree	26	52
Postgraduate Degree	20	40
Total	50	100

Table 2: Highest Level of Education Attained by Respondents

After the analysis, 8% of the respondents stated they had attained diploma level education, 52% of the respondents stated they had attained undergraduate degree level of education, while 40% of the respondents had attained postgraduate degree level of education. Therefore, majority of the respondents stated they had attained undergraduate degree education. This shows that most of the employees had enough education level to answer on the issue under study. Education level refers to the academic credentials or degrees an individual has obtained. Employees, who are more educated, tend to have more skills and consequently affect their performance.

4.3. Influence of Tendering Process on Performance of Supply Chain Functions

The first objective of the study was to determine the influence of tendering process on performance of supply chain functions in Machakos County. The findings are presented in Table 4.

Tendering Process	SA	Α	N	D	SD	Mean	Std
The organization emphasizes on competitive		47	17	10	0	3.887	0.907
and fairness in tendering process							
In an effort of ensuring transparency in the	37	45	13	5	0	4.113	0.870
tendering process, the county government							
has adopted ICT in the tendering process							
The county government advertises all	55	42	3	0	0	4.516	0.565
tenders according to procurement							
regulations							
In an effort to ensure competitiveness, the	57	37	6	0	0	4.500	0.621
organization tend to take long in the							
tendering process							
The tendering committee members make	39	44	11	6	0	4.145	0.866
informed decisions regarding tendering							
methods to be used							
Adherence to tendering procedure ensures							
there is value for money	55	33	7	5	0	4.387	0.869

Table 4: Tendering Process on Performance of Supply Chain Functions

From the findings, majority of the respondents (73%) agreed with a mean of 3.887 and the standard deviation of 0.907 that the organization emphasizes on competitive and fairness in tendering process. Further, majority of the respondents (82%) agreed with a mean of 4.113 and the standard deviation of 0.870 that in an effort of ensuring transparency in the tendering process the county government has adopted ICT in the tendering process.

In addition, majority of the respondents (97%) agreed with a mean of 4.516 and the standard deviation of 0.565 that the county government advertises all tenders according to procurement regulations. In a further study, majority of the respondents (94%) of the respondents agreed with of mean 4.500 and the standard deviation of 0.621 that in an effort to ensure competitiveness, the organization tends to take long in the tendering process. Moreover, majority of the respondents (83%) agreed with a mean of 4.145 and the standard deviation of 0.866 that the tendering committee members make informed decisions regarding tendering methods to be used. Further, majority of the respondents (88%) agreed with a mean 4.387 and a standard deviation of 0.869 that adherence to tendering procedure ensures there is value for money. Informing or noticing is a procurement phase which entails gathering and distributing purchasing information both from and to internal and external parties using mails and can also involve internet technology facilitated by on-line notification systems. This contributes to efficiency and effectiveness of the tender process in state corporations leading to enhanced procurement performance (Kamotho, 2014).

4.4. Performance of Supply Chain Functions

6

The researcher was also interested in establishing the performance of supply chain functions in Machakos County. The findings are shown in table 5.

Performance of Supply Chain Functions	SA	Α	N	D	SD	N	Mean	Std
Product and services	45	47	3	5	0	50	4.177	0.912
procured meet the specified quality								
The organization gets value for the money	40	51	5	4	0	50	3.984	1.032
of products and service procured								
The county government is able to balance	40	57	2	1	0	50	4.145	0.921
stock levels								
Products and services are delivered within	68	23	5	4	0	50	4.563	0.608
the stipulated timelines								
The organization has an adequate pool of	46	50	3	1	0	50	4.181	0.513
suppliers for products and services								
The organization enjoys a good	40	42	9	3	6	50	3.873	1.037
relationship with its suppliers								
There is a close collaboration between	52	38	8	0	2	50	4.28	0.534
stakeholders along supply chain network								

Table 5: Performance of Supply Chain Functions

From the findings, majority of the respondents (93%) agreed with a mean of 4.177 and the standard deviation of 0.912 that product and services procured meet the specified quality. The findings also revealed that 91% of the respondents agreed with a mean of 3.984 and the standard deviation of 1.032 that the organization gets value for the money of products and service procured. In addition, 97% of the respondents agreed with a mean of 4.145 and the standard deviation of 0.921 that the county government is able to balance stock levels. Furthermore, majority of the respondents (91%) agreed with a mean of 4.563 and the standard deviation of 0.608 that products and services are delivered within the stipulated timelines. In addition, majority of the respondents (96%) agreed with a mean of 4.181 and

the standard deviation of 0.513 that the organization has an adequate pool of suppliers for products and services. In addition, majority of the respondents (82%) agreed with a mean of 3.873 and the standard deviation of 1.037 that the organization enjoys a good relationship with its suppliers. Moreover, majority of the respondents (91%) agreed with a mean of 4.28 and the standard deviation of 0.534 that there is a close collaboration between stakeholders along supply chain network. The findings agree with Ramaa, Rangaswamy & Subramanya (2018) who argue that performance of supply chain functions is measured in terms of quantifying the efficiency and effectiveness of action. Effectiveness is the extent to which a customer's requirements are met and efficiency measures how economically a firm's resources are utilized while providing a pre-satisfied level of customer satisfaction

4.5. Assumption of Regression Model

In order to justify the use of the regression model, pre-estimation tests were conducted. The pre-estimation tests conducted in this case were test using multi-collinearity test. This was performed to avoid spurious regression results from being obtained.

4.6. Inferential Analysis and Discussion

The researcher undertook correlation analysis to establish the nature and strength of the relationships between the independent and the dependent variables of the study.

4.6.1. Correlation between Tendering Process on Performance of Supply Chain functions

The study conducted a correlation analysis between tendering process on performance of supply chain functions in Machakos County.

		Tendering Process
Performance of Supply Chain	Pearson Correlation	.374**
Functions	Sig. (2-tailed)	.001
	N	50

Table 6: Correlation between Tendering Process and Performance of Supply Chain Functions

**. Correlation Is Significant at the 0.05 Level (2-Tailed)

The study established that there exists a moderate positive and significant relationship (r = 0.374, P=0.001) between tendering process on performance of supply chain functions in Machakos County. This implies that tendering process plays a big role in enhancing the performance of supply chain functions in Machakos County. The findings agrees with Waruguru (2015) who concluded that public administration on tendering process leads to accountability during the tendering process and hence positive performance of public institutions.

4.6.2. Regression Model Summary

The study conducted a regression analysis to find out the strength of the relationship between independent and dependent variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate				
1	.898a	.806	.799	.28594				
	a. Predictors: (Constant), Tendering Process							
	b. Dependent Variable: Performance of supply chain functions.							

Table 7: Regression Model Summary

The findings show that performance of supply chain functions in Machakos County is 80.6% as explained by the independent variables under this study, while 19.4% is the variation due to other factors which have not been covered in this study. The study agrees with Mokogi, Mairura & Ombui (2015) who found out that procurement practices affect performance of commercial state owned enterprises in Nairobi County.

4.6.3. ANOVA of the Regression Model

Analysis of Variance was used to determine the significance of the regression model.

	Model	Sum of Squares	Df	Mean Square	F	Sig.			
1	Regression	28.830	4	7.208	46.805	.000b			
	Residual	6.950	45	.154					
	Total	35.780	49						
	a. Predictors: (Constant), Tendering Process								
	b. Dependent Variable: Performance of supply chain functions.								

Table 8: Analysis of Variance

The findings shows the F statistic = 46.805 inferring that the model is statistically significant. The findings agree with Chemoiywo (2016) who found out that procurement regulatory practices affect performance of supply chain functions.

4.6.4. Multiple Regression Coefficients

The study also conducted a regression analysis to establish the regression coefficients connecting the independent and dependent variables.

Model			andardized efficients	Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
	(Constant)	.593	.147		4.035	.000
	Tendering Process	.098	.040	.125	2.482	.015

Table 9: Regression Coefficients

Dependent Variable: Performance of supply chain functions.

The equation below illustrates the findings of the multiple regression coefficients:

 $Y = \beta_0 + \beta_1 X_1 +$ Equation 4.1

The findings indicated that all the predictor variables in the study have a positive relationship with performance of supply chain functions in Machakos County. Thus, $Y = 0.593 + 0.098X_1$

The value of performance of supply chain functions in Machakos County without the influence of the predictor variables is 0.593. This explains that, at any given time, performance of supply chain functions in Machakos County will be 0.593. The results also illustrate that a unit change in tendering process would result to 0.098 times change in performance of supply chain functions in Machakos County.

4.6.5. Hypothesis Testing

The study hypothesis stated tendering process has no statistical significant influence on performance of supply chain functions in Machakos County. In respect to this hypothesis, the study noted that the p value was 0.015 and since p value is < 0.05, the study concluded that there was a statistically significant relationship between tendering process and performance of supply chain functions. This led to the rejection of the null hypothesis.

5. Summary, Conclusions and Recommendations

5.1. Conclusions of the Study

From the findings the researcher concluded that organization emphasizes on competitive and fairness in tendering process. Further, the researcher concluded that in an effort of ensuring transparency in the tendering process, the county government has adopted ICT in the tendering process. The researcher also concluded that the county government advertises all tenders according to procurement regulations. From the findings, the study established that there exists a strong positive and significant relationship between procurement planning and performance of supply chain functions in Machakos County.

5.2. Recommendations of the Study

In the light of the foregoing findings, the study recommends that there should be a regular and continuous monitoring and assessment of procurement systems in public entities such as county government with regard to their compliance with the procedures, rules and regulations setup in the Public Procurement Act must be strictly enforced. Public procurement is a strategic level institutional activity which is greatly enhanced by procurement planning. Delays in the procurement process can be curtailed by giving procurement planning the needed attention by management of entities. Procurement practitioners must take cognizance of the amount of time and resources required so that they can begin early enough and allow sufficient time to complete the procurement process.

6. References

- i. Arrow, P. (2016). A Conceptual Framework for Assessing the Efficacy of the Public Procurement Law in Uganda. Paper Presented at the ORSEA Conference in Nairobi.
- ii. Arrowsmith, M. (2016). E-procurement and automatic identification: enhancing supply chain management in the healthcare industry. *International Journal of Electronic Healthcare*, 1(2), 245-68.
- iii. Chemoiywo, K. (2016). Authority for the supervision of Public Contracts, department of the coordination of European Union Policies.
- iv. Chesire, O. (2015). Public Procurement and EU Tendering Directives Explaining Non-Compliance, International Journal of Public Sector Management, Vol. 19(7), 702 714.
- v. Eyaa, J. & Oluka, T. (2016). Explaining non-compliance in public procurement in Uganda. *International Journal of Business and Social Science*, 35-44.
- vi. Gordon, T. (2016). Hameri from supply chain to demand chain: the role of lead time reduction in improving demand chain performance', *Journal of Operations Management*, 21(3), 613-27.

- vii. Hall, Y. (2008). Supply chain management in the US and Taiwan: an empirical study", Omega, 36 (5), 565-79.
- viii. Kamotho, R. (2014). Determining and applying sustainable supplier key performance indicators. Supply Chain Management: *An International Journal*, 19(3), 275 291
- ix. Kibera, V., & Waruingi, B. (2015). A Review of Methods Supporting Supplier Selection; *European Journal of Purchasing & Supply Chain Management* 7 (2), 75-89.
- x. Kipchilat, F. (2016). Public expenditure, international specialization and agglomeration. *European Economic Review*, 48(4), 851-881.
- xi. Kisurkat, K. (2016). A framework of sustainable supply chain management: moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, 38(5), 360-387.
- **xii.** Kuloba, L., Kibet, F., & Ayuma, G. (2017). Application of Inventory Manufacturing Practices. A Survey in Large Manufacturing Firms in Kenya. *Unpublished MBA Project University of Nairobi*.
- xiii. McConnell, U. (2015). Mainstreaming the Procurement Function into the Public Expenditure Policy and Effectiveness Dialogue. (OECD/DAC). World Bank Round Table, Paris.
- xiv. Metoh, N (2014). Challenges of implementing procurement policies in state corporations in Kenya. *European Journal of Business and Management*, 6(3), 56-61
- xv. Mohamed, R. (2015). Sustainable procurement in the public sector: an international comparative study. *International Journal of Operations & Production Management*, 31(4), 452-476.
- xvi. Mutua, V. (2016). Factors affecting procurement planning in county governments in Kenya; A case study of Nairobi City County'. *International Journal of Economics, Commerce & management.* 8(5), 60-87
- xvii. Mwiriki, P. (2017). Procurement processes and performance: Efficiency and effectiveness of the procurement function. Retrieved April, 3(2011), 1-22.
- xviii. Oyediran, R. & Akintola's, K. (2016). Internal factors affecting procurement process of supplies in the public sector; a survey of Kenya government ministries. In 5th International Public Procurement Conference was held on August 17th.
- xix. United Nations, (2015). A fuzzy model for supplier selection in quantity discount environments', *Expert Systems with Applications*, 36(10), 12179–12187
- xx. Waruguru, V. (2015). Effect of Staff Training on level of Compliance to Public Procurement System in Parastatals in Kenya. *International Journal of Economics, Commerce and Management*, 3(6), 613-626.
- xxi. Whitlow, L. (2015). Factors affecting procurement planning in county governments in Kenya: A case study of Nairobi City County'. *International Journal of Economics, Commerce and Management*, 2(11).
- xxii. World Bank Report (2018). Guidelines: Procurement under IBRD Loans and IDA Credits, World Bank, Washington, D.C