

**INFLUENCE OF INFORMATION TECHNOLOGY
PRACTICES IN PROCUREMENT ON ORGANIZATION
PERFORMANCE IN PUBLIC INSTITUTIONS IN KENYA
A CASE OF JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

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Abstract

This study sought to assess the information technology practices in procurement that influence organizational performance in Jomo Kenyatta University of Agriculture and Technology (JKUAT). This study used a descriptive survey design. The target population was 41 procurement officers and managers of all 8 campuses of JKUAT. Primary data was collected using a structured questionnaire administered to 36 procurement officers in JKUAT at Juja campus. Questionnaires were administered through drop-and-pick-later method to give respondents ample time to respond to the questions. Face-to-face interviews were conducted with the key informants using interview guide. Descriptive statistics and inferential statistics were used to analyze quantitative data. Information technology in procurement was established to positively and significantly influence organizational performance. The study concluded that information technology in procurement is a significant contributor to organizational performance in improving service delivery, efficiency, effectiveness, continuous Quality improvement, reduction in purchase price and transparency. This study recommends that JKUAT should prioritize information technology in procurement to improve its organizational performance. The government should emphasize adoption of information technology in procurement by public sector organizations.

Keywords: Information technology, Procurement, Organizational performance, Kenya

INTRODUCTION

Public sector organizations around the world are experiencing an unprecedented pace of change and as a result, they are rapidly re-evaluating their operating models and market strategies not just to withstand these market forces, but also capitalize on them. Procurement has a significant role to play in helping the public sector achieve its objectives and prepare for the uncertainty ahead. This will require procurement to focus on driving costs down. But the opportunity also exists for the function to add value in a much more strategic way (Leenders et al., 2008).

Procurement has the potential to significantly impact national economies as well as the competitive position of individual organizations. Oyuke and Shale (2014) stated that organizations must maximize the use of procurement in every aspect of the business, linking across all members of the supply chain, increasing the speed of information transfer, and reducing non-value adding tasks. Procurement comprises the actions taken by the purchasing organization to integrate supply chain in order to reduce costs and time and increase productivity. Procurement practices are therefore a set of activities undertaken by an organization to promote effective management of its supply chain (Sollish and Semanik, 2012).

Background

The Organization for Economic Co-operation and Development (OECD), Development Assistance Committee (DAC) (2006) estimated the volume of global public sector procurement at 8 percent (\$3.2 trillion) of the worldwide GDP of \$40 trillion. Pegnato (2003) estimated United States federal procurement at around \$200 billion per annum, and Coggburn (2003) put the combined procurement for state and local governments at more than \$1 trillion. Given the huge global public sector procurement budget, its performance is critical to not only performance of public sector organizations but also to economies around the world.

Public procurement in developing countries is said to account for up to 25 percent of their GDP (Arrowsmith, 2010). In the Middle East and Africa in general, central government purchases range from 9 to 13 percent (Gul, 2010). This indicates that public procurement plays a vital role in a country (Odhiambo & Kamau, 2003). The Government of Kenya has sought to rationalize procurement in public institutions through various instruments. The answer to the prevailing shortcoming in the procurement of goods and services in the public sector was seen to lie in enacting an Act of Parliament to govern the whole public process. This was realized in October, 2005; paving the way for the Minister of Finance to gazette the Public Procurement and Disposal Regulations, 2006 through Legal Notice No. 174 of 29th December, 2006 which was effected in 2007 (RoK, 2007).

Public Procurement and Disposal Act of 2005 was meant to address the challenges identified but experience suggests that the results have not entirely been as expected. The Public Procurement Act is important in the way the procurement processes are managed, and has sought to minimize cases of interference from players outside the concerned committees while at the same time discouraging fraudulent practices through debarment, transfer of procurements to other procuring entities and introduction of deterrent penalties. Article 227 of the Constitution of Kenya, 2010 has established a new framework to guide the public procurement and disposal process, which looks into ensuring that the Government Owned entities are agile enough to respond to opportunities in the market to grow value for the Kenyan public (RoK, 2010).

Emerging information and communication technology (ICT) can play an important role in public finance management by promoting greater comprehensiveness and transparency of information across government institutions. As a result, the introduction of Integrated Financial Management Systems (IFMIS) has been promoted as a core component of public financial reforms in many developing countries such as Kenya (IFMIS Department, 2015). Most of the procurement processes in Kenya public sector are still manual with the internet only being used for e-mails and web browsing. The factors for slow adoption include limited legislation, poor infrastructure, lack of awareness and top management support, integration with internal systems or solutions, lack of technical standards, lack of cooperation on the part of suppliers, and costs associated with adapting web-enabled purchasing system (Malela, 2010).

Statement of the Problem

State corporations' operations in Kenya have become inefficient and non-profitable requiring the Government to shoulder major procurement burdens (State Corporations Advisory Committee, 2013). In a study carried out on Parastatal governance problems in Kenya, the following characteristics emerged: inefficiency in operations, huge financial losses and the provision of poor products and services (Atieno, 2009). This was attributed to poor governance, poor public sector financial management, bureaucratic wastage and pilferage in the management of Parastatals, all of which subsequently lead to heavy budgetary burden to the public. The Public Procurement and Disposal Act 2005 provide a standardized framework for the procurement of goods and services across all public sector entities.

The attainment of Kenya vision 2030 is highly dependent on prudent strategic procurement and as such JKUAT should be on high alert to curb the massive wastages experienced by government agencies which are likely to retard economic growth and achievement of vision 2030. It is against this backdrop that this study was undertaken to

investigate the effect of information technology practices in procurement on organizational performance in Kenya.

Objective of the Study

To find out the influence of information technology on organizational performance at JKUAT.

Significance of the Study

The findings of this study will be of value to policy makers, research institutions and Public Procurement Authority. This study is relevant to the government of Kenya. Kenya, like other developing economies requires prudent management of public resources in order to spur investments and growth. The extent to which these objectives can be realized on a sustainable basis is dependent on the degree of efficiency with which critical factors of production are made available and combined with each other to produce desired results. Public procurement is an important function that allocates resources in the economy. Its efficiency is therefore critical hence the need to understand procurement practices affecting organizational performance.

The findings of this study will be of value to Public Universities. The issue of procurement is critical in the efficiency of any organization. This study will provide useful insights on the procurement practices affecting organization performance in a public university hence it can be generalized to represent other Public Universities in Kenya. Its findings will therefore go a long way in improving procurement practices and organizational performance of Public Universities in Kenya.

The findings of this study will be beneficial to Public Procurement Oversight Authority in terms of capacity building in public sector organizations. They will assist in policy making and implementation for public procurement. They will create capacity building in public sector organizations hence enhancing service delivery.

Scope of the Study

This study focused on the effect of information technology on the organizational performance of JKUAT. It is important to understand the procurement practices affecting JKUAT organization performance as it will help in streamlining the procurement function as well as improving the performance of the organization as a whole. The focus on information technology is informed by its significant role that it plays in procurement. It was hypothesized that information technology may have a significant influence on organizational performance.

Limitations

The researcher experienced challenges in data collection. Many respondents were skeptical of the information sought by the questionnaire that touched on their positions. The researcher however assured them that the data sought would be used exclusively for academic purposes. This study covered a single case of public sector organizations (JKUAT) hence generalization of its findings to represent other public sector organizations should be done with caution.

THEORETICAL FRAMEWORK

This study was guided by two theories. These include transaction cost economics theory and Technology, Organization, and Environment Theory.

Transaction Cost Theory

This theory views firms as organizations comprising of people with different views and objectives. It assumes that the market in determining the allocation of resources. This means the organization and structure of the firm determine price and production, with the unit of analysis being the transaction. The theory suggests that managers are opportunists and arrange firms' transactions to their interest (Williamson, 1996).

The main body of existing empirical work does not specifically or directly calculate transaction costs, but uses statistical methods in order to obtain the answers to their research questions. Such indirect operationalization methods define transaction costs or the research question directly as dependent variable. They define transaction dimensions, or even other sub-categories of them, as independent. All of these direct and indirect calculations of transaction costs are of ex post character, which represents another point of critique of TCT (Dyer, 1996).

In a study done by Nootboom (1999), he stressed that a transaction is part of an exchange process, with a history of events taking place before and after that moment at which an agreement is reached and property or user rights are transferred. The production of goods involved, or the actual transfer and delivery may well take place after some time. The time factor thus plays an important role in the transaction process. Transaction costs will rise with increasing uncertainty about possible deviations between expectations and realization of these expectations, because of turbulence and demand uncertainty, technology, competition or the policy environment.

Technology, Organization, and Environment Theory

Tornatzky and Fleischer developed Technology, Organization, and Environment theory in 1990 (Tornatzky & Fleischer, 1990). TOE theory identifies three aspects that influence the

process by which an organization adopts and implements a technological innovation: technological context, organizational context, and environmental context. Technological context describes both the internal and external technologies relevant to the firm. This includes current practices and equipment internal to the firm, as well as the set of available technologies external to the firm. Organizational context refers to descriptive measures about the organization such as scope, size, and managerial structure. Environmental context is the arena in which a firm conducts its business, its industry, competitors, and dealings with the government (Hsuet *al.*, 2006).

TOE provides a useful analytical framework that can be used for studying the adoption and assimilation of different types of IT innovations such as ICT integration in procurement. The TOE has a solid theoretical basis, consistent empirical support and the potential of application to IT innovations domain, though specific factors identified within the three contexts may vary across different studies as suggested by Hsuet *al.* (2006).

REVIEW OF VARIABLES

Information Technology Practices

Information technology enhances efficiency and effectiveness of the procurement process. An efficient procurement process in the public sector organizations will result in improved performance in public sector organizations (Dobler, 2002). At the public sector level, technology enhances infinite and non-restricted access to government information and increases market transparency and economic incorporation based on complementarities (Carayannis & Popescu, 2005). Procurement technologies grasp a virtual market, open to capable suppliers (and goods) according to not mainly restrictive selection criteria, in which public administrations can choose goods and services offered by several suppliers (Petrie, 2001). The whole process is digital, using digital signature in order to guarantee transactions lawfully. Among the main advantages that a public administration can get through a system like this there are: costs and process cutting, possible broadening of suppliers base, easy access to preferred goods (pre-defined quality standards), information intelligibility and ease of comparison among goods and purchases logging and ensuing expenditure monitoring. The road to executing successful ICT in developing countries public procurement management is paved with difficulties, such as resistance from the bureaucracies involved; lack of decision making from the top; lack of motivation; weak human capital; corruption and fraud; and, in the case of conflict-ridden countries, the instability and violence that damage any efficient long-term work (Dobler, 2002). Moreover, ICT systems are knotty, expensive, and difficult to manage and maintain.

Organizational Performance

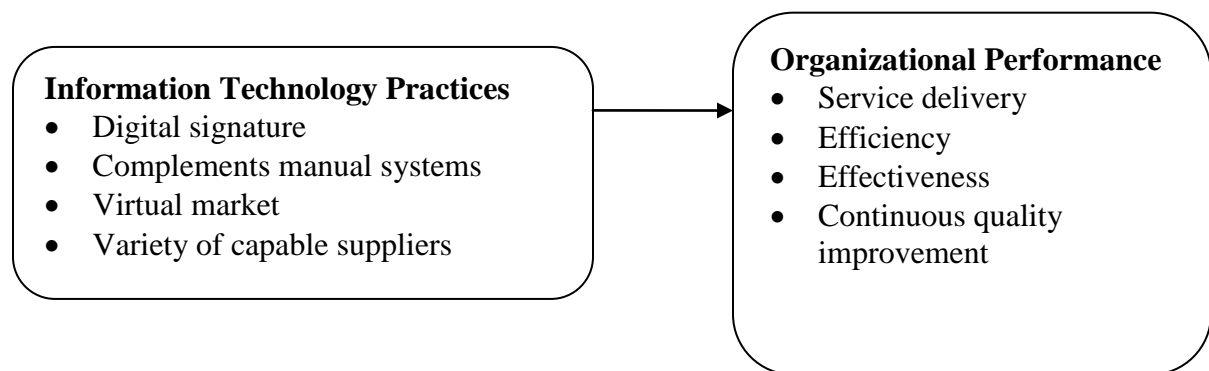
Organizational performance refers to the effectiveness of tools designed to carry out the firm's purchasing and corresponding corporate strategies. Burt and Doyle (2003) identified a number of strategic objectives of the e-purchasing function. These objectives were continuous quality improvement, total inventory management, time-based competition, technology access and control, and risk reduction.

Organizational performance varies according to various elements of the organization, including strategy, structure, environment, organizational learning, and resource (Cho et al. 2007). Accordingly, different measurements have been adopted by different researchers for measuring performance. Jiang and Qureshi (2006) measure performance as operational performance, which include cost efficiency, profitability and productivity. Morash et al. (1996) classified their measurement based on demand-oriented capabilities (that is delivery reliability, responsiveness to target market, and post-sale customer service) and supply-oriented capabilities (that is geographical coverage and reduction in total distribution cost).

Conceptual Framework

This study conceptualized that information technology is expected to affect the dependent variable which in this case was organizational performance. The relationship of these variables is summarized in conceptual framework figure 1.

Figure 1: Conceptual Framework



EMPIRICAL REVIEW

The potentials of procurement strategy in enhancing organizational performance have already been proven in a number of studies (Aberdeen Group, 2011). According to these studies, procurement strategy enables companies to decentralize operational procurement processes and centralize strategic procurement processes as a result of the higher supply chain transparency provided by procurement systems. An organization's procurement function is

subdivided into strategic and operational processes since activities and priorities in these two areas are entirely different (Kaufmann, 2009). Supplier management, the pooling of purchase requisitions and procurement-oriented product development are tasks that are typically assigned to strategic procurement. Strategic procurement often have to deal with administrative routine work as well, such as individual transactions, converting purchase requests into purchase orders or ensuring the correct allocation of invoices received. Strategic aspects are frequently neglected in the process, with the buyer having little influence over the choice of suppliers and the purchased products (Sollish & Semanik, 2012).

Johnston (2005) argued that costs have to be managed well to achieve the organization's performance goals. There are several key success factors, related to both the competency of the service provided by an intermediary and to the organizations own internal capabilities. One key success factor relating to inventory management is technical capability of the system (Johnston, 2005). Johnston (2005) specified technical service quality in terms of system cost (security, reliability, easy to use, accessibility) and service quality (such as responsiveness of service). In addition, trust in the service provider is another major success factor for strategic procurement adoption (Rotchanakitumnuai & Speece, 2009).

Organizational record management systems and information flow also have a major influence on the organizational performance (Croom & Brandon-Jones, 2007). Organizational record management is an important driver for increasing internal process improvement, enhancing learning and innovation including the knowledge of purchasing personnel, their computer skill and resources. Record Management support is key influence organizational performance (Rotchanakitumnuai & Speece, 2004). Positive management support for e-procurement can ensure system adoption success. Training is the best support to enable personnel to use the records more efficiently. Croom & Brandon-Jones (2007) found that record management is one key success factor of strategic procurement implementation. Record management makes the procurement process more transparent and helps organizations achieve good governance impacts (Hui *et al.*, 2011).

Research Gaps

The reviewed literature have acknowledged the importance of information technology in procurement but over emphasized on its technical capability (Johnston, 2005) to improve organizational performance. Koech and Namusonge (2015) observed that procurement regulation compliance, procurement procedures, professionalism and transparency affected procurement performance at the National Treasury. However, they did not look at the information technology practices in procurement influencing overall organizational performance.

Wahu, Namusonge, Mungai and Chilion (2015) found that procurement performance contributes to the overall performance of an organization through cost savings, improved quality and reduced lead times which lead to internal customer satisfaction. However, the authors did not address the specific procurement practices such as information technology that influence the overall performance of an organization.

Previous studies have not shown how information technology in procurement can affect organizational performance. Previous studies have been preoccupied with supplier selection (Sollish & Semanik, 2012), records management (Croom & Brandon-Jones, 2007), good governance (Hui *et al.*, 2011) and cost reduction (Johnston, 2005). This study therefore sought to bridge this gap by studying the information technology practices in procurement affecting organizational performance at JKUAT.

RESEARCH METHODOLOGY

Research Design

This study used a descriptive survey design. This research design was preferred due to its ability to combine quantitative and qualitative methods. The design enabled the researcher obtain information from a large population using a standardized instrument of data collection and is recommended by Kothari (2004) and Mugenda & Mugenda (2003). It was therefore suitable for this study.

Target Population

Target population is the entire group of individuals or items under consideration in any field of inquiry and has a common attribute (Mugenda & Mugenda, 2003). The target population for this study was procurement officers and managers of all campuses of Jomo Kenyatta University of Agriculture and Technology. Jomo Kenyatta University of Agriculture and Technology has 8 campuses in Kenya. The target population was 41 procurement officers and managers (JKUAT Principal Procurment Officer, 2015). Most of the procurement officers and managers are based at JKUAT Juja Campus.

Sampling

Procurement officers and managers at JKUAT Juja Campus were selected as sample. This study therefore had 36 respondents.

Table 1: Target Population and Sampling

Cadre of Staff	Target Population	Juja Campus
Chief procurement officer grade 15	1	1
Principal procurement officer grade 14	1	1
Assistant procurement/ store officer II grade 9	1	1
Assistant procurement/ store officer II grade 8	8	3
Procurement/ store assistant I grade 7	7	7
Procurement/ store assistant II grade 6	2	2
Senior procurement/store clerk grade 5	15	15
Procurement/store clerk grade 4	3	3
Procurement/store clerk grade 3	2	2
Procurement/store clerk grade 2	1	1
Total	41	36

Data Collection Methods

Primary and secondary data were collected for this study. Primary data was collected using a structured questionnaire administered to procurement officers in all JKUAT campuses. The questionnaire had three sections. The first section entailed general information of the respondents while the second section sought information on information technology respectively. The third section sought information on the organizational performance of JKUAT. Key informant interviews were conducted among five procurement managers at JKUAT main campus at Juja. Face-to-face interviews were conducted with the five key informants.

Data Collection Procedures

Questionnaires were administered through drop-and-pick-later method to give respondents ample time to respond to the questions. This method ensured a high response rate and accuracy as the respondents did not feel under pressure to fill the questionnaires but did so at their convenience. The questionnaires were therefore self-administered since procurement officers are literate and understand fully the phenomenon under investigation.

Data Analysis and Presentation

Both quantitative and qualitative methods were therefore used. Descriptive statistics and inferential statistics were used to analyze quantitative data. Descriptive statistics included mean scores, frequencies and percentages. Inferential statistics involved correlation analysis using Pearson Coefficient and multiple linear regression analysis using the following model:

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

Where Y is organizational performance

X_1 = Information Technology

β_1 is the coefficient of corresponding variable

ϵ is the error term

Qualitative data were analyzed using content analysis. Responses from interviews were categorized based on emerging themes. This categorization helped the researcher in making conclusions as the qualitative information was used to support or supplement quantitative data.

EMPIRICAL RESULTS AND DISCUSSION

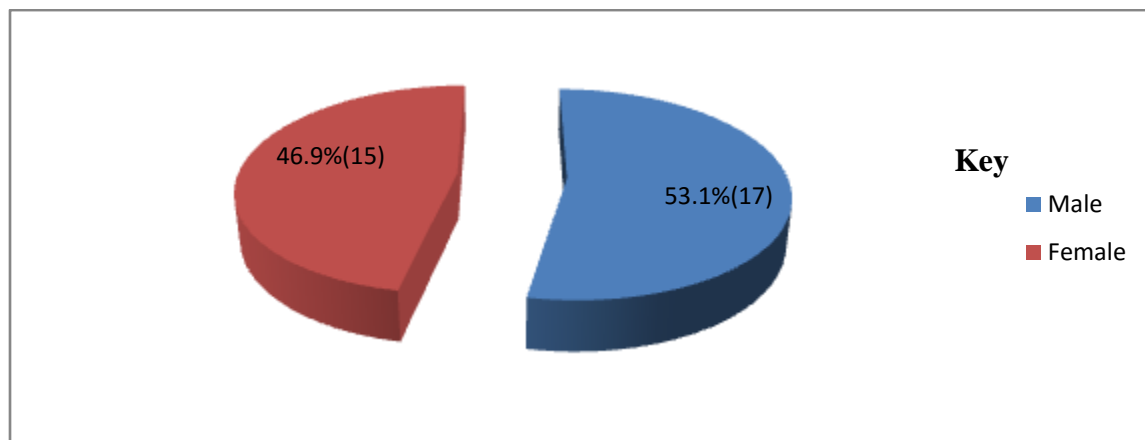
Response Rate

This study targeted 36 procurement officers and managers at JKUAT Juja Campus. After administering the questionnaires, the researcher got 32 questionnaires filled by procurement officers and managers. This translates into 88.9% response rate which was considered adequate for analysis and making conclusions. Babbie (2002) argued that a response rate above 50% is adequate for analysis and making conclusions.

General Information

Respondents were asked to indicate their gender. Results show that majority of the respondents were male (53.1%) as compared to 46.9% of the respondents who are female. Figure 2 shows these results.

Figure 2: Respondents' Distribution by Gender



The researcher asked respondents to indicate their position at JKUAT. The results in table 2 show that majority of the respondents were procurement officers (71.9%) while procurement managers were 18.8%. Only 9.4% of the respondents indicated their position as other.

Table 2: Respondents' Distribution by Position

Position	Frequency	Percent
Procurement manager	6	18.8
Procurement officer	23	71.9
Other	3	9.4
Total	32	100.0

Respondents were asked to indicate the duration that they have worked at JKUAT. The results in table 3 show that 43.8% of the respondents had worked at JKUAT for 4-7 years while 25% of the respondents had worked in the organization for 3 years and below. Respondents who indicated that they had worked for JKUAT for 8-11 years were 18.8% while those who had worked for 12 years and above were 12.4%.

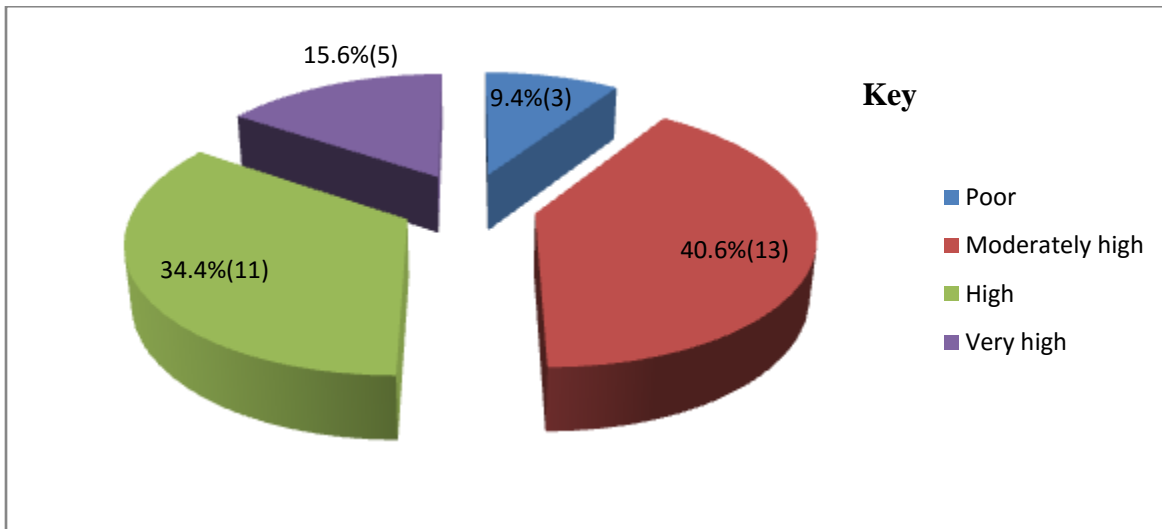
Table 3: Respondents' Distribution by Duration Worked at JKUAT

Age	Frequency	Percent
"3 years and below"	8	25.0
'4-7 years'	14	43.8
'8-11 years'	6	18.8
'12 years and above'	4	12.5
Total	32	100.0

Information Technology Practices

The researcher asked respondents to rate information technology in procurement at JKUAT. The results in figure 3 show that 40.6% of the respondents rated information technology in procurement at JKUAT as moderately high. In addition, 34.4% and 15.6% rated the same as high and very high respectively. Only 9.4% of the respondents rated information technology in procurement at JKUAT as poor. One of the key informants by the name James (not real name) described information technology at JKUAT as “excellent”. James said that “the use of SAGE system is critical in procuring goods and services and managing inventory”. Jecinta (not real name) described the use of SAGE and ACCPAC in the organization as “the best”. The key informants emphasized that information technology has reduced manpower, improved efficiency and enabled easy retrieval of records. According to the key informants, information technology has also improved security in procurement system minimizing chances of fraud.

Figure 3: Information Technology in Procurement at JKUAT



Four statements regarding information technology in procurement were presented to the respondents and they were asked to indicate their agreement or disagreement with those statements. The results in table 4 show that respondents agreed that information technology has opened an opportunity for JKUAT to deal with a variety of capable suppliers ($M=3.53$). This is in agreement with Dobler (2002) that information technology opens an opportunity to enhance efficiency and effectiveness of the procurement process that will result in improved performance. According to the study findings, respondents disagreed that there is use of digital signature for lawful transactions ($M=2.66$) and information systems in procurement complements manual systems ($M=3.47$).

The results contrast findings by Carayannis and Popescu (2005) that technology enhances infinite and non-restricted access to information and increases market transparency and economic incorporation based on complementarities. Respondents also disagreed with the statement that information technology has given JKUAT a virtual market where goods and services can be assessed and compared ($M=3.00$). The findings differed with those of Petrie (2001) who argued that procurement technologies grasp a virtual market, open to capable reliable suppliers in which an organization can choose goods and services offered by several suppliers.

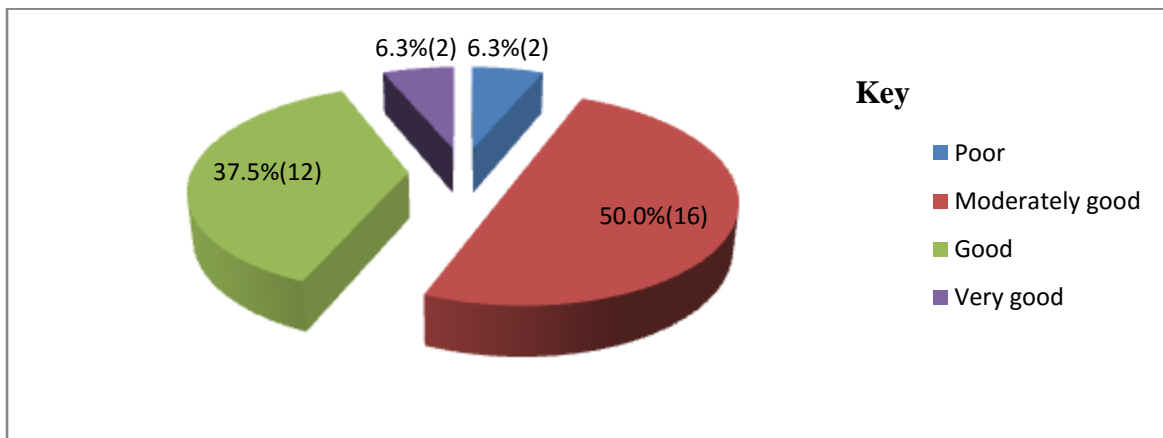
Table 4: Information Technology in Procurement

	Strongly disagree	Disagree	Neutral	Agree	Strongly disagree	disagree	Minimum	Maximum	Mean	Std.	Deviation
There is use of digital signature for lawful transactions	15.6%	21.9%	43.8%	18.8%	0%	1	4	2.66	.971		
Information systems in procurement complements manual systems	3.1%	15.6%	34.4%	25%	21.9%	1	5	3.47	1.107		
Information technology has given JKUAT a virtual market where goods and services can be assessed and compared	9.4%	21.9%	37.5%	21.9%	9.4%	1	5	3.00	1.107		
Information technology has opened an opportunity for JKUAT to deal with a variety of capable suppliers	3.1%	12.5%	21.9%	53.1%	9.4%	1	5	3.53	.950		

Organizational Performance

Respondents were asked to rate the organizational performance of JKUAT. Figure 4 show that half (50%) of the respondents rated JKUAT organizational performance as moderately good. The results also show that 37.5% and 6.3% rated JKUAT performance as good and very good respectively. Only 6.3% of the respondents rated JKUAT performance as poor.

Figure 4: Organizational Performance



Respondents were asked to indicate their agreement or disagreement with statements regarding JKUAT organizational performance. The results in table 5 show that respondents agreed with the statements that there is continuous quality improvement (M=3.62) and

procurement has enabled technology access and control (M=3.53). The findings agree with Burt and Doyle's (2003) description strategic objectives of efficient purchasing function such as quality improvement, total inventory management, time-based competition, technology access and control, and risk reduction. The respondents however were not sure whether tools designed to carry out the organization's purchasing and corresponding corporate strategies are effective (M=3.47) and whether there is time-based competition at JKUAT (M=3.44).

Table 5: Organizational Performance

	Strongly disagree	Disagree	Neutral	Agree	Strongly disagree	Minimum	Maximum	Mean	Std. Deviation
Tools designed to carry out the organization's purchasing and corresponding corporate strategies are effective	0%	9.4%	50%	25%	15.6%	2	5	3.47	.879
There is continuous quality improvement	0%	6.3%	37.5%	43.8%	12.5%	2	5	3.62	.793
There is time-based competition at JKUAT	0%	9.4%	50%	28.1%	12.5%	2	5	3.44	.840
Procurement has enabled technology access and control	0%	6.3%	46.9%	34.4%	12.5%	2	5	3.53	.803

Pearson Coefficient Results

Pearson coefficient analysis results show that information technology ($r=.655$, $p=0.000$) in procurement was found to be positively correlated to organizational performance. This shows that improvement information technology in procurement will positively impact on organizational performance.

Table 6: Pearson Coefficient Results

		Inventory Management
	Pearson Correlation	.655**
Organizational performance	Sig. (2-tailed)	.000
	N	32

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis Results

The results of a linear regression analysis presented in table 8 show that 82.7% ($R^2=0.827$) of variation in organizational performance at JKUAT could be explained by information technology in procurement.

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827 ^a	.683	.632	.44585

a. Predictors: (Constant), Information technology

Analysis of variance (ANOVA) was used to test whether the regression analysis model used was fit or the relationship of the variables just occurred by chance. Significance of F ratio is used to determine whether model used was fit or not. If the F ratio is statistically significant, the model used is considered fit and vice versa. In this case the F ratio ($F=13.477$, $p=0.000$) was found to be statistically significant hence the model used for analysis was fit. These results are presented in table 8.

Table 8: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	10.716	4	2.679	13.477	.000 ^b
1	Residual	4.970	25	.199		
	Total	15.685	29			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Information technology

The coefficients in the table shows the contribution of each of independent variables to the change in the dependent variable. Table 9 shows that a unit change in information technology in procurement would result to 0.633 change in organizational performance. These results show that information technology in procurement has an impact on organizational performance. Besides, the relationship between information technology and organizational performance is statistically significant. The implication of these findings is that improvement on information technology in procurement would significantly affect organizational performance.

Table 9: Coefficients

Model	Unstandardized Coefficients		Standardized	t	Sig.	
	B	Std. Error	Coefficients Beta			
1	(Constant)	1.122	.499		2.249	.034
	Information technology	.633	.148	.757	4.280	.000

a. Dependent Variable: Organizational performance

The estimated linear regression model was $Y = \alpha + \beta_1 X_1 + \varepsilon$ where Y is organizational performance; X_1 = Information Technology; β_1 is the coefficient of corresponding variable and ε is the error term.

CONCLUSION

This study sought to assess the procurement practices influencing organizational performance in Jomo Kenyatta University of Agriculture and Technology. It was guided by the objective to find out the influence of information technology on organizational performance at JKUAT. Information technology in procurement was established to positively influence organizational performance. This relationship was statistically significant. These findings are congruent with those of Petrie (2001), Croom (2005), Ellram (2002) and Carayannis and Popescu (2005). They advocated use of technology in procurement as it enhances infinite and non-restricted access to information and increases market transparency.

The study concluded that information technology in procurement is a significant contributor to organizational performance in improving service delivery, efficiency, effectiveness, continuous Quality improvement, reduction in purchase price and transparency, therefore public sector organizations should be encouraged to adopt information technology practices in procurement. This conclusion is supported by empirical results of this study and Carayannis and Popescu (2005) who advocated use of technology in procurement. Information technology in procurement enhances infinite and non-restricted access to information and increases market transparency and economic incorporation based on complementarities.

RECOMMENDATIONS

This study recommends that JKUAT should prioritize information technology practices in procurement to improve its organizational performance. The possibility of this procurement practice can be realized through the use of integrated Information Technology systems throughout the organization as well as its external partners (suppliers and service providers).

Organizations should maintain a sustainable and working IT strategy for both the Users (employees) and suppliers to enhance efficiency in performance.

It is important for public sector organizations to adopt information technology practices in procurement to improve procurement performance and by extension in their organizational performance. Public Procurement Oversight Authority should initiate integrated information Technology systems and build the capacity of the users in public sector organizations to enable information technology practices in procurement. This capacity building in public sector organizations will enhance service delivery, reduced purchase price, enhance efficiency and transparency.

The use of Information technology practices in Public sector organization enable organization to be on the alert to curb the massive wastages experienced by government agencies and will lead to increase accountability and transparency. The government should emphasize adoption of information technology practices in procurement by public organizations. This can be done through guidelines, circulars, rules and regulations regarding procurement. The government should also ensure that policy making and implementation has factored in adoption of information technology practices for public procurement.

AREAS FOR FURTHER RESEARCH

This study recommends that future scholars should extend this study to government ministries and the civil service in general so as to be in a position to generalize findings to represent the entire public service sector. Further study should compare procurement practices affecting organizational performance in the public and private sector.

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