INTERNATIONAL JOURNAL OF SOCIAL Sciences and Information Technology
ISSN 2412-0294 www.ijssit.com
http://www.ijssit.com

EFFECT OF ENTERPRISE RESOURCE PLANNING ON PERFORMANCE OF PUBLIC ENTITIES: A CASE STUDY OF JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY, KENYA

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Abstract

The purpose of the study was to assess the effect of Enterprises Resources Planning Systems on performance of Public Entities: a case study of Jomo Kenyatta University of Agriculture And Technology. Its specific objectives are to find out the role of Buyer-Supplier Relationships, Inventory management, information system and Total Quality Management on performance of public entities. The target population of respondents was of (120) employees with a sample size of (68) employees that represented the entire population. The researcher used stratified random sampling and questionnaires as instruments for data collection because it was easier for the researcher to congregate large information which was required for analysis. The study used descriptive research design where a sample size of 68 employees was selected. Questionnaires containing both closed-ended and open-ended questions were administered to the respondents by the researcher. All the units of analysis were comprehensively studied and whole population taken into account. Multiple linear regressions were used to determine the effect of enterprises resources planning systems on performance of public entities. The findings of the study revealed that the research variables; Buyer-Supplier Relationship, Inventory Management, Information systems and Total Quality Management play a significant role on performance of public entities. The study recommends that, Universities (JKUAT) should strengthen its system therefore there is need to understand the effect of buyer-supplier relationship. Those employees should be encouraged to use the ERP and adoption of the same will greatly improve thus ensuring utilization of the information systems. The systems in particular should be concerned with trying to integrate and co-ordinate the various internal functional areas in order to break down those functional boundaries and ensure decisions for areas like marketing, operations and financial decisions are all made using the same data. The top management should provide the necessary resources in terms of leadership, financial support and provision of expertise in order for ERP to be successful in organizations operations as well as being involved in the operations of the systems even during trainings so as to ensure that they provide leadership motivating employees and ensuring that all requirements necessary are adhered to because a lot of cost is incurred as this will all be geared to ensuring total quality management.

Keywords: *Buyer-supplier relationship, Inventory management, Information systems, Total Quality Management*

INTRODUCTION

In the current fast paced world business environment, performance cannot be sustained through manual efforts alone. Technology is a key enabler of business performance that improves both efficiency and effectiveness. In order to ensure more efficient governance and to provide better services to citizens, public administrations and agencies have invested in Enterprise Resource Planning (ERP) systems as the basic technological infrastructure (Raymond et al., 2005).

In Kenya, Information and Communication Technology (ICT) is considered as the main driver of economic growth over the last decade. Since initiation in 2000, the ICT sector has outperformed other sectors of the economy recording an average of 20 percent annual growth and thus making transport and communication the second largest sectors in Kenya. The sector has a great potential for upward performance (Njau, 2010). Lack of timely and accurate information is a significant barrier to competitiveness in micro, small and medium-sized enterprises (MSMEs), which are currently prime engines of growth in most of the developing countries.

Enterprise Resource Planning (ERP) system is viewed as a useful tool in enterprise process integration. It has enhanced automated transactions, efficiency of operational decision making, productivity and development of customer service. ERP system usage in public organizations is gaining acceptance. The most of features of the recent trends in public enterprises are related since the goal of public enterprises are mainly based on 'cost minimization' rather than 'profit maximization' (Yong Mok et al., 2001).

ERP has minimized the arduous job of supporting inflexible systems that often result in the increase in overhead costs, data redundancy, inaccuracy and inefficiencies (O'Leary, 2000). Generally, ERP is a computer system that informs managers about happenings in real-time within a corporation and its global connections (Jacobs et al., 2000). ERP increases visibility in procurement process, spend and procurement analysis, supplier performance analysis, supplier payables analysis and employees expense analysis. Through a full end to end process an organization can reduce costs, enhance profitability, and increase customer satisfaction and gain competitive advantage. ERP is essential for holistic view of procurement process and thereby identifying opportunities for consolidation and cost reduction (Thomas and Jajodia, 2004).

Due to the increasing complexity of business world and more demanding markets, ERP is considered to be a type of Information System adequate for today's business organizations. An ERP system makes it possible for a user to gain total control of all the processes in a company. An ERP system is comes with several modules each of which handles different functionalities that correspond to different processes involved in business organizations. ERP system modules differ from one system to the other depending on the type of business which the company involved in (Beynon and Davies, 2002). The greatest advantage of an ERP system is integration of different modules that interact with each other thereby giving the system great flexibility and structure. Instead of having small independent systems that control and support different departments of a company each separately, an ERP system can be used to integrate functions of all these systems into one. The data stored in one independent system cannot be directly reached by another, whereas using an ERP system, for example, data concerning an order stored in one module can be viewed from different modules instead of storing the same data inside the different modules. This is because an ERP system has a centralized database of the organization's data (Beynon and Davies, 2002).

STATEMENT OF THE PROBLEM

Initial focus of many ERP vendors as they developed various products was manufacturing companies. Nevertheless, ERP systems are progressively being implemented in the public sector (Thomas et al., 2004). Scheer et al., (2000) reported that at least half of all ERP implementation projects are judged to be failures. Martin (1998) presented another study which pointed out that up to 90% of all ERP implementation projects usually go over budget, or end up late and about half of them fail to achieve the desired goals. Numerous theories and explanations have emerged over the years to try to clarify why so many ERP projects have failed. Many scholars and entrepreneurs concur that the poor handling of the critical success factors (CSF) which is associated with implementing enterprise wide systems result in the high rate of failure. These CSF are widely documented in ERP literature with some disparities.

ERP implementation rate of success is quite low since only 33% of those implemented become successful (Chen, 2011). According to (M. J. Wafula, A.Kibe, B. Kiula Mwirigi and C.Wambugu, 2015-06-20),on the publication, computer usage in institutions of higher learning, said, Upon intrusion, the information lost by Jomo Kenyatta University of Agriculture and Technology would be more than 50%. This means that should there be a problem then, most of the University's operations would be halted due to the loss. In May 2009, Jomo Kenyatta University acquired a financial Management System(Sage Accpac 5.5A) from Sabis Consulting UK at a cost of Kshs. 15 million to help improve its Financial, Procurement and Inventory operations as well as improve its reporting to Management for best decision making.

Kenyan universities started implementing ERP systems to replace their legacy systems. This integrated information solutions give higher education institutions competitive advantages, and that institutions, which are unlikely to switch to integrated information solutions, will find it difficult to retain their market share of students hence students will, sooner or later demand services, offered by other institutions (Ahmad, 2009; Murphy, 2004). This has therefore opened a research opportunity for the researcher to look at the effect of Enterprises Resources Planning systems on performance of public entities.

OBJECTIVES OF THE STUDY

The general objective of the study was to examine the effect of Enterprises Resources Planning systems on performance in public corporations; and was guided by the following specific objectives;

i) To examine the effect of buyer-supplier relationship on performance at Jomo Kenyatta University of Agriculture and Technology.

ii) To identify the effect of inventory management on performance at Jomo Kenyatta University of Agriculture and Technology.

iii) To examine the effect of information systems on performance at Jomo Kenyatta University of Agriculture and Technology.

iv) To examine the effect of total quality management on performance at Jomo Kenyatta University of Agriculture and Technology

RESEARCH QUESTIONS

i) How does ERP affect buyer-supplier relationship on performance at Jomo Kenyatta University of Agriculture and Technology?

ii) How does ERP affect inventory management performance at Jomo Kenyatta University of Agriculture and Technology?

iii) How does ERP affect information systems performance at Jomo Kenyatta University of Agriculture and Technology?

iv) How does ERP affect total quality management performance at Jomo Kenyatta University of Agriculture and Technology?

LITERATURE REVIEW

The following theories guided the research:

Resource-based theory

The resource-based view stipulates that in strategic management the fundamental sources and drivers to firms' competitive advantage and superior performance are mainly associated with the attributes of their resources and capabilities which are valuable and costly-to-copy (Sosya Dergisi, 2010). Building on the assumptions that strategic resources are heterogeneously distributed across firms and that these differences are stable overtime, (Barney, 2006) examines the link between firm resources and sustained competitive advantage. Four empirical indicators of the potential of firm resources to generate sustained competitive advantage can be value, rareness, inimitability, and non-substitutability. Firm's resources refer to all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable it to conceive and implement strategies that improve its efficiency and effectiveness (Barney, 2006).

Stock level calculation theories

The strategy and business model requires a specific service level and inventory management strategy. Once these strategies are set, different kind of methods are used to calculate the correct amount of stock for each item and the corresponding order-time interval. The step of ordering new items is important for good stock control. This is because ordering items too early could lead to overstocking thereby incurring unnecessarily costs, on the other hand ordering too late may cause a certain item to become out of stock and may cause missed sales. The point at which an item is ordered is therefore the most crucial in ensuring a good balancing between customer satisfaction and excess inventory levels (Wild, 2002).

The Contingency theory

The contingency theory is a class of behavioral theory that claims that there is no best way to organize a corporation, lead a company, or to make decisions. A combination of organizational leadership and decision making style can be effective in some situations while it may not be successful in other situations. This view suggests that appropriate managerial action depends on the particular parameters of the situation. This therefore indicates that instead of looking for universal principles that would be applicable all situations, the contingency theory attempts to identify contingency principles that prescribe actions to take in accordance with the characteristics of the situation at hand. Thus, the structural contingency theory tradition has always contained ideas about dynamics and these are formulated in the SARFIT theory. The organization may attain not full fit, but quasi-fit, that is, a structure that only partially fits the contingencies (Donaldson, 2001).

CONCEPTUAL FRAMEWORK

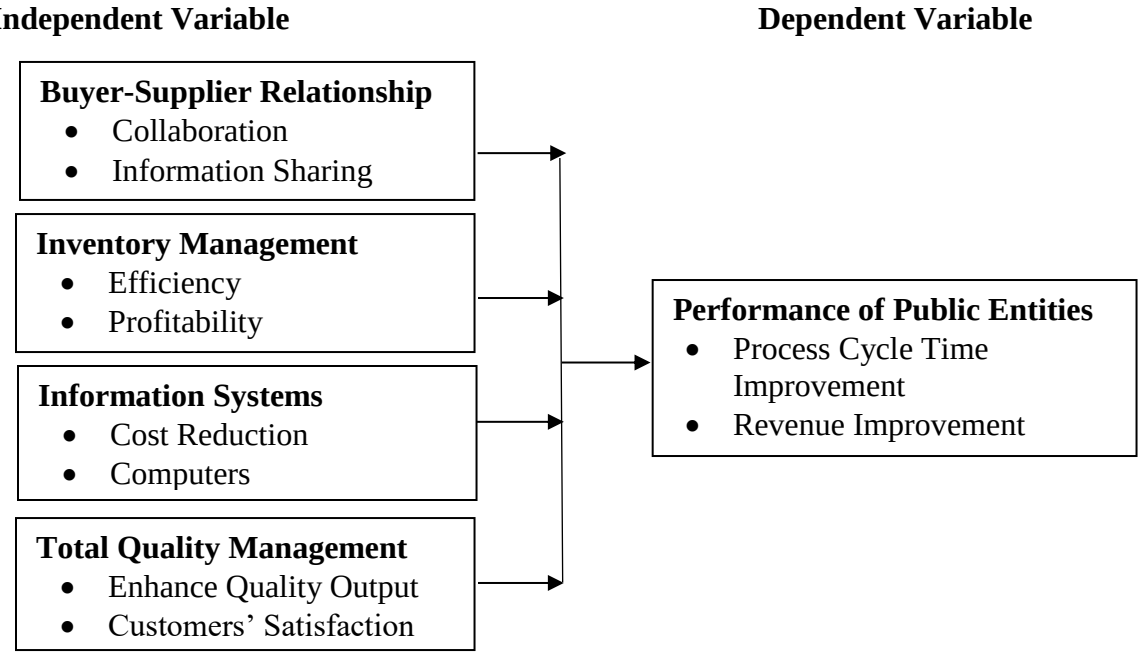

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

A descriptive design was appropriate and appropriate for the study because it involves a means of collecting and analyzing data in order to answer research questions (Mugenda & Mugenda, 2003). The target population included one hundred and twenty (120) respondents how are staff of Jomo Kenyatta University of Agriculture and Technology from Stores department, Information Technology (IT) department, Procurement department, and Finance department. The total number of sampling frame was of (120) employees that were drawn from three departments which include Stores department (29), Information Technology (IT) department (21), procurement department (45) and finance department (25). A questionnaire was used as the data collection instrument for the study and it developed through the guidance of the study's objectives and research questions. To further determining the relationship between independent and dependent, the study used a multiple linear regression model:

Linear regression model

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 3X4 + \varepsilon$$

Where:

Y = Performance of Public Entities

$\beta 0$ = Constant Term

$\beta 1$ = Beta coefficients

X1 = Buyer-supplier Relationship

X2 = Inventory Management

X3 = Information Systems

X4 = Total Quality Management

ε = Error term

RESULTS AND DISCUSSIONS

The number of questionnaires that were administered to JKUAT staff was 68. A total of 64 questionnaires were properly filled and returned. This represented an overall successful response rate of 94.12%.

Situation before implementation of enterprises resources planning systems

Table 1: Analysis on situation before implementation of the Systems

	Mean	Std. Deviation
There was incorrect data entry and erroneous dates that inconvenienced many operations.	1.58	.638
There was poor inventory management that led in efficiency.	1.91	.660
There was a tedious process and work in preparing a report.	1.67	.473
The manual system of doing work was effort and time consuming.	1.83	.808
There was manual invoice entry	1.70	.609
There had to be communication for approvals which was done personally or by telephone	1.70	.460
There was no information sharing and availability between the different departments in the institution.	1.72	.678
The purchase orders were done manually.	2.08	.719
There was too much duplication and redundancy	1.36	.484
It gave room for inability to forecast or predict future sales volumes	2.42	.498
It was difficult to identify product location	1.83	.551

From the findings, respondents strongly agreed that lack of ERP gave room for inability to forecast or predict future sales volumes and the purchase orders were done manually as indicated by a mean 2.42 and 2.08 respectively. From the findings, before implementation of the system there was poor inventory management that led in efficiency, the manual system of doing work was effort and time consuming and it was difficult to identify product location, there was no information sharing and availability between the different departments in the institution, there was manual invoice entry and there had to be communication for approvals which was done personally or by telephone, there was a tedious process and work in preparing a report, there was incorrect data entry and erroneous dates that inconvenienced many operations and too much duplication and redundancy as indicated by a mean of 1.91, 1.83, 1.72, 1.70, 1.67, 1.58 and 1.36 respectively.

Situation after implementation of enterprises resources planning systems

Table 2: Analysis on situation after implementation of the Systems

	Mean	Std. Deviation
The automated data entry with ERP systems saves time and effort.	1.53	.563
Data is available in a timely manner and it is convenient	1.78	.519
There is full control on quality, quantity and cost of inventory	1.44	.500
There is ensured accuracy and speedy report as results are displayed in a timely manner	1.75	.873
It ensures improved decision making by manager and users	1.80	.568
The system ensures automated uploading of invoices directly to the system	1.56	.500
It gives room for automated multilevel approvals through the system	1.75	.563
Information flows freely across the different departments and can be shared or accessed in a timely manner	1.77	.729
Purchase orders are generated through the system thus increasing generation efficiency	1.42	.612
The system sends notifications and alerts regarding delayed events	2.17	.380
It helps in almost accurately forecasting for future sales volume	1.38	.488
There is ability to track products through the warehouse and ease to identify the bottlenecks during the process.	2.03	.734

From the findings, respondents strongly agreed that after the implementation of the ERP system, it was possible to sends notifications and alerts regarding delayed events and there was the ability to track products through the warehouse and ease to identify the bottlenecks during the process as indicated by a mean of 2.17 and 2.03 respectively. From the findings, implementation of the system ensured improved decision making by manager and users, data was available in a timely manner and it is convenient, information flowed freely across the different departments and can be shared or accessed in a timely manner, it gave room for automated multilevel approvals through the system and there was accuracy and speedy report as results were displayed in a timely manner, the system ensured automated uploading of invoices directly to the system, the automated data entry with ERP systems saved time and effort, there was full control on quality, quantity and cost of inventory, purchase orders were generated through the system thus increasing generation efficiency and it helped in almost accurately forecasting for future sales volume as indicated by a mean 1.80, 1.78, 1.77, 1.75, 1.56, 1.53, 1.44, 1.42 and 1.38 respectively. This implied that ERP system has greatly affected the operations and performance of public entities.

Summary statistics for Buyer-Supplier Relationship

Table 3: Buyer-Supplier Relationship

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
There is collaboration between the buyer and the supplier which shortens the cycle time.	42.20%	37.50%	20.30%	0.00%	0.00%	1.78	.766
Proper collaboration ensures revenue improvement.	15.60%	59.40%	25.00%	0.00%	0.00%	2.09	.635
Information sharing helps in process cycle time improvement.	20.30%	50.00%	29.70%	0.00%	0.00%	2.09	.706
Information sharing between the buyer and the supplier helps in revenue improvement.	26.60%	62.50%	10.90%	0.00%	0.00%	1.84	.597
Average						**1.95**	**.676**

The first objective of the study was to investigate the effect of buyer-supplier relationship in enterprises resources planning systems on performance of JKUAT. The respondents were asked to respond on statements on buyer-supplier relationship. The responses were rated on a five likert scale as presented in Table 3. Majority of 79.70% (42.20%+37.50%) of the respondents agreed with the statement that there is collaboration between the buyer and the supplier which shortens the cycle time, 75.00% agreed with the statement that proper collaboration ensures revenue improvement, 70.30% of the respondents agreed that information sharing helps in process cycle time improvement while 89.10% of the respondents agreed that information sharing between the buyer and the supplier helps in revenue improvement.

On a five point scale, the average mean of the responses was 1.95 which mean that majority of the respondents were agreeing with most of the statements; however the answers were varied as shown by a standard deviation of 0.676.

Kannan and Tan (2006) asserts that at an operational level, the benefit to a buyer of developing close relationships with key suppliers comes in the form of improved quality or delivery service, reduced cost, or some combination thereof. At a strategic level, it should lead to sustainable improvements in product quality and innovation, enhanced competitiveness, and increased market share. ERP helps in automating tasks and making the processes swifter and more streamlined for both parties. Furthermore Hjelmborg, (2006) states that buyer-supplier relationship plays an important role in an organization's ability to respond to dynamic and unpredictable change thus it's one of the quickest ways for firms to boost their bottom line in a competitive economy thus improved organizational performance.

Summary statistics for Inventory Management

Table 4: Inventory Management

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
There is efficiency in the organization which helps in process Cycle Time Improvement.	46.90%	40.60%	12.50%	0.00%	0.00%	1.66	.695
Efficiency helps in revenue Improvement.	21.90%	64.10%	14.10%	0.00%	0.00%	1.92	.599
There is a short Process Cycle Time which improves on profitability.	31.30%	46.90%	21.90%	0.00%	0.00%	1.91	.729
Profitability does not help in revenue improvement.	0.00%	0.00%	26.60%	51.60%	21.90%	3.95	.700
Average						**2.36**	**.681**

The second objective of the study was to investigate the effect of inventory management in enterprises resources planning systems on performance of JKUAT. The respondents were asked to respond on statements on inventory management. The results are presented in Table 4 show that 87.50% (46.90%+40.60%) of the respondents agreed with the statement that there is efficiency in the organization which helps in process cycle time improvement, 86.00% agreed with the statement that efficiency helps in revenue improvement, 78.20% of the respondents agreed that there is a short process cycle time which improves on profitability while 73.50% of the respondents disagreed with the statement that profitability does not help in revenue improvement.

Using a five point scale likert mean, the overall mean of the responses was 2.36 which indicates that majority of the respondents agreed to the statement of the questionnaire. Additionally, the standard deviation of 0.681 indicates that the responses were varied. The results herein imply that ERP affects inventory management performance at JKUAT.

Fawcett et al., (2007) asserts that Capital invested in stocks is thus, from a company-perspective, a 'useless' waste of money. Cost reductions are required by the market in order to keep offering competitive products and services; reducing the working capital costs using more efficient inventory management is one way to achieve this goal. Consequently the biggest benefits can thus be gained by reducing these costs (using ERP according to expectations). Working capital invested in stocks could also have been a very useful resource when it could have been used otherwise (Wild, 2002).

Summary statistics for Information Systems

Table 5: Information Systems

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
Cost Reduction increases process cycle time improvement.	0.00%	31.30%	25.00%	25.00%	18.70%	3.31	1.111
There is cost reduction hence revenue improvement in the organization.	31.30%	50.00%	18.70%	0.00%	0.00%	1.88	.701
Use of computers enhances process cycle time improvement.	42.20%	35.90%	21.90%	0.00%	0.00%	1.80	.780
The use of computers helps in revenue improvement.	39.10%	46.90%	14.10%	0.00%	0.00%	1.75	.690
Average						**2.19**	**.821**

The third objective of the study was to investigate the effect of information systems in enterprises resources planning systems on performance of JKUAT. The results are presented in table 5 show 43.70% (25.00%+18.70%) of the respondents disagreed that cost reduction increases process cycle time improvement. Further results found that there is cost reduction hence revenue improvement in the organization as indicated by 81.30% of the respondents. Results also showed that 78.10% of the respondents agreed that Use of computers enhances process cycle time improvement. In addition, results show that 86.00% of the respondents agreed that the use of computers helps in revenue improvement. These results imply that ERP affects information systems performance at JKUAT.

The average likert scale of the responses is 2.19 which indicates that majority of the respondents agreed to the statements. The standard deviation was 0.821 which indicates that the responses were varied.

Cognate to the results, (Umble et al., 2003) argues that one ERP application is (in theory) able to replace dozens of legacy systems which cost a lot to maintain because of the different expertise required. For managers who have to deal with numerous legacy information systems and duplicate, incompatible information, these standardized ERP software package solutions could provide the perfect solution to their problems if these promises are indeed met. In additionally Gunasekaran, 2002), ERP uses Internet technologies to integrate the flow of information from internal business functions as well as information from customers and suppliers. The key principle behind the system involves entering the data from a series of modular applications only once. Once stored, the data automatically triggers the update of all related information within the system. The systems can support virtually all areas of an organization, across business units, departmental functions and plants. This helps in revenue improvement as well as saves on time and reduces the paper work ensuring proper organizational performance.

Summary statistics for Total Quality Management

Table 6: Total Quality Management

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
There is enhanced quality output thus process cycle time improvement.	42.20%	48.40%	9.40%	0.00%	0.00%	1.67	.644
Enhanced quality output helps in revenue improvement.	28.10%	53.10%	18.80%	0.00%	0.00%	1.91	.684
Customers' satisfaction enhances process cycle time improvement.	9.40%	57.80%	32.80%	0.00%	0.00%	2.23	.611
There is customers' satisfaction and as a result revenue improvement.	42.20%	53.10%	4.70%	0.00%	0.00%	1.63	.577
Average						**1.86**	**.629**

The fourth objective of the study was to investigate the effect of total quality management in enterprises resources planning systems on performance of JKUAT.Results in table 6 show that 90.60% (42.20%+48.40%) of the respondents agreed that there is enhanced quality output thus process cycle time improvement, 81.20% of the respondents agreed that enhanced quality output helps in revenue improvement, 67.20% of the respondents agreed that customers' satisfaction enhances process cycle time improvement while 95.30% of the respondents indicated that there is customers' satisfaction and as a result revenue improvement.

On an average likert scale the responses had an overall mean of 1.86 which indicated that the respondents agreed to the majority of the questions asked. The standard deviation of 0.629 indicates that the responses were varied. These results imply that ERP affects total quality management performance at JKUAT.

In conformity with the findings, (Lee, 2002) TQM is considered as one of the important strategic instrument that helps organizations to achieve optimal performance. In addition, TQM core essentials are to encourage business practice to increase customers' satisfaction, productivity, reduce cost, and enhance quality output. Gregory, V. L. 2000, agrees that TQM is achieved through an integrated effort among personnel at all levels to increase customer satisfaction by continuously improving performance. TQM focuses on process improvement, customer and supplier involvement, teamwork, and training and education in an effort to achieve customer satisfaction, cost effectiveness, and defect-free work. TQM provides the culture and climate essential for innovation and for technology advancement.

REGRESSION ANALYSIS

The purpose of the regression analysis was to get the relationship between the variables and come up with predictions model.

Model Summary

Table 7: Regression model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.904	.817	.804	.14428	.802

From the model summary, there is a strong positive correlation between the variables of the study as shown by the 90.4% while 81.7% of variations in the dependent variable can be explained by changes in the independent variables hence, the remaining 19.3% is representative of other factors not accounted for in the study.

Regression Coefficients

Table 8: Regression Coefficients Matrix

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	1.665	.065		25.657	.000
X1	Buyer-Supplier Relationship	.334	.112	.650	2.965	.004
X2	Inventory Management	.065	.070	.155	.930	.356
X3	Information Systems	-.113	.112	-.248	-1.007	.318
X4	Total Quality Management	.207	.101	.364	2.053	.044

The following equation was derived from the regression coefficients in the matrix.

$Y = 1.67+0.65X_1+0.16X_2+-0.25X_3+0.36X_4$

CONCLUSIONS

The output from the findings indicates that there is a significant positive relationship between the components of ERP namely buyer-supplier relationship, inventory management, information systems and total quality management with the performance of public entities. Prior to ERP systems implementation, most of the organizational activities were done manually and there was poor inventory management, purchase orders were done manually, manual invoice entry, there was too much duplication, telephone communications for approvals, tedious process and work in preparing a report, no information sharing and availability between departments and in ability to forecast therefore, the use of ERP systems technologies in organizational operations is aimed at realizing faster and more efficient operations in the institution hence reducing costs incurred and increase productivity through improved operations and thereby enhancing organizational performance and ensuring productivity in JKUAT.

Based on the findings of the study concluded that ERP systems had ensured buyer-supplier relationship in operation and also total quality management was used to perform certain duties in the organization thus

affecting the performance of the entity. The study however found that the inventory management by the ERP system was to a great extent helpful to the organization and needs to be looked into keenly to ensure its efficiency while on information system; the implement cost of the ERP system was too expensive with the least company spending a cost range into millions of dollars but it had reduced cost and also time used to perform certain duties in the organization thus increasing revenue generation.

The study concluded that ERP enables organizations to break down traditional organization's granaries and thus increase the profits of the organization significantly as revenue is increased. They have replaced them with a tightly integrated horizontal structure whereby the strategy, culture of the organization, process and technology are tightly aligned. By using integration technologies to integrate management of document activities, human resource intervention is only necessary in activity control so as to ensure total quality management.

Recommendations of the Study

The study findings make the following recommendations; public entities need to incorporate all the ERP components into the system. This will enable them to improve the overall performance of the entities. The public entities need to find out ways of encouraging employees to make use of the ERP systems. If employees are encouraged to use the ERP, adoption of the same will greatly improve thus ensuring utilization of the information systems.

It is therefore recommended that Enterprise resources planning (ERP) systems in particular should be concerned with trying to integrate and co-ordinate the various internal functional areas in order to break down those functional boundaries and ensure decisions for areas like marketing, operations and financial decisions are all made using the same data. Customer Relationship Management systems can also be used to co-ordinate the supply chain by ensuring better sharing of information. On the other hand inventory management has to be looked into closely in order to avoid cases of in efficiency in the organization.

The study recommends that the top management should provide the necessary resources in terms of leadership, financial support and provision of expertise in order for ERP to be successful in organizations operations. The systems have to be monitor and evaluate from time to time in order to determine the success and areas to improve on after the assessments in order to ensure the expected performance for public entities. In regard to the effect of Enterprise Resource Planning on performance of public entities the study recommends that the organizations should embrace technological changes as they change within the environment that the organization exists. This has the effect of increasing the profitability of the organization.

It is of great importance to look into how the relationship between the buyer and supplier is handled via ERP. Proper training development should systematically be offered and other requisite support to ensure success in their endeavors. The study also recommends that the top management should be involved in the operations of the systems even during trainings so as to ensure that they provide leadership motivating employees and ensuring that all requirements necessary are adhered to because a lot of cost is incurred as this will all be geared to ensuring total quality management.

REFERENCES

Bayazit, O. (2003). Total quality management (TQM) practices in Turkish manufacturing organizations. The TQM magazine, 15(5), 345-350.

Beard, J. W., & Sumner, M. (2004).Seeking strategic advantage in the post-net era: viewing ERP systems from the resource-based perspective. The Journal of Strategic Information Systems, 13(2), 129-150.

Beheshti, H. M. (2006). What managers should know about ERP/ERP II.Management Research News, 29(4), 184-193.

Beynon-Davies, P. (2002). Information systems: An introduction to informatics in organizations. Palgrave Macmillan.

Buffam, W. J. (2000). E-business and IS a solution: an architectural approach to business problems and opportunities. Addison-Wesley Longman Publishing Co., Inc...

Christensen, E., Curbera, F., Meredith, G., &Weerawarana, S. (2001). Web services description language (WSDL) 1.1.

Clemmons, S., & Simon, S. J. (2001). Control and coordination in global ERP configuration. Business Process Management Journal, 7(3), 205-215.

Cooper, C. (2008). Tourism: Principles and practice. Pearson education.

Cooper, D. R. Schindler. (2006). Business research methods.

Cozby, P. C. (2001). Asking people about themselves: survey research. Methods in Behavioral Research, 7th edition, Mountain View, CA: Mayfield Publishing Company, 103-124.

De Charms, R. (2013). Personal causation: The internal affective determinants of behavior. Routledge.

DeTienne, D. R., & Chandler, G. N. (2004). Opportunity identification and its role in the entrepreneurial classroom: A pedagogical approach and empirical test. Academy of Management Learning & Education, 3(3), 242-257.

Donaldson, L. (2001). The contingency theory of organizations. Sage.

Gupta, P., & Kumar, P. R. (2000). The capacity of wireless networks. IEEE Transactions on information theory, 46(2), 388-404.

Kelle, P., &Akbulut, A. (2005). The role of ERP tools in supply chain information sharing, cooperation, and cost optimization. International Journal of Production Economics, 93, 41-52.

Kothari, C. R. (2004). Research methodology: Methods and techniques. New Age International.

Miller, D., & Friesen, P. H. (1986). Porter's (1980) generic strategies and performance: An empirical examination with American data Part I: Testing Porter. Organization studies, 7(1), 37-55.

Moskal, B. M., &Leydens, J. A. (2000).Scoring rubric development: Validity and reliability. Practical assessment, research & evaluation, 7(10), 71-81.

Mugenda, O. Mugenda. A.(2003). Research methods: quantitative and qualitative approaches.

O'Leary, D. E. (2000). Enterprise resource planning systems: systems, life cycle, electronic commerce, and risk. Cambridge university press.

Orodho, J. A. (2009). Elements of education and social science research methods. Nairobi/Maseno, 126-133.

Ploos van Amstel, W., & van Goor, A. R. (2006). Werken met supply chain management.

Pyke, D. F., Johnson, M. E., & Desmond, P. (2001).E-fulfillment. Supply Chain Management Review, 27.

Scheer, A. W., &Nüttgens, M. (2000). ARIS architecture and reference models for business process management. In Business Process Management (pp. 376-389).Springer Berlin Heidelberg.

Shin, D., Kalinowski, J. G., & El-Enein, G. A. (1998). Critical implementation issues in total quality management. SAM Advanced Management Journal,63(1), 10.

Shtub, A. (1999). Enterprise resource planning (ERP): the dynamics of operations management (Vol. 1). Springer Science & Business Media.

Thomas, G. A., &Jajodia, S. (2004). Commercial-off-the-shelf enterprise resource planning software implementations in the public sector: practical approaches for improving project success. The Journal of Government Financial Management, 53(2), 12.

Tsai, B. S. (2003). Information landscaping: information mapping, charting, querying and reporting techniques for total quality knowledge management. Information processing & management, 39(4), 639-664.

Umble, E. J., Haft, R. R., &Umble, M. M. (2003). Enterprise resource planning: Implementation procedures and critical success factors. European journal of operational research, 146(2), 241-257.