

EFFECT OF E-PROCUREMENT IMPLEMENTATION ON PERFORMANCE OF
HOSPITALITY TRAINING INTITUTION IN KENYA: CASE OF KENYA UTALII
COLLEGE.

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Abstract

Since the arrival of internet as a supply management tool in the mid-1990s enterprises have tried to gain the benefit e-procurement can deliver: cost reduction, process streamlining, improved contract compliance, increased spend under management, and more. However many challenges stood in the way and only in the recent years have leading enterprises taken full advantage of the value of e-procurement systems. The Kenya government considers ICT a key pillar in the success of vision 2030 which aims to transform the country into industrialized nation by 2030. The overall objective of this study was to examine the effect of e procurement implementation on performance of hospitality institution case of Kenya Utalii College. The study adopted research questions. A descriptive research design was used in this study. The target population was all staff of Kenya Utalii College drawn from list from Human Resource department. Simple random techniques will be used to draw sample of 61 respondents. Data was collected using questionnaires. Data was analyzed by use of statistical package for social sciences (SPSS). The data was presented by percentage frequency tables, bar chart, and pie chart for ease of understanding. The study found out that: Cost Saving, Buyer- Supplier Integration, Cycle Time reduction and information flow all affected implementation of performance at the Kenya Utalii College to a large extent. The study recommends cost saving should be the observed to enable expansion. The study also recommends that procurement

staff should possess sets of skills appropriate in procurement activities. Finally the study recommends that Kenya Utalii College should review their organization to establish the adequacy or otherwise of the resources including skill levels dedicated to the procurement activity. Kenya Utalii College should review their organization to establish the adequacy or otherwise of the resources including skill levels dedicated to the procurement activity.

Keyword: *Supply Management, E-procurement, Cycle Time Reduction, Hospitality and Performance*

Introduction

Electronic Procurement (e-procurement) is an ever-growing means of conducting business in many industries around the world and is projected to reach \$3 trillion in transactions this year, up from \$75 billion in 2012 (Croom, 2012). E-Procurement refers to the use of Internet-based (integrated) information and communication technologies (ICT) to carry out individual or all stages of the procurement process including search, sourcing, negotiation, ordering, receipt, and post-purchase review (Croom & Brandon-Jones, 2004). In order for organizations to be competitive and stay updated, there is need to have a paradigm shift in the way procurement is carried out so as to solve numerous procurement problems evident in the business world especially in developing economies which include increased corruption, high costs of doing businesses, a lot of non value adding paper work procedures, long time elapse to respond to tenders and non competitiveness (Chartered Institute of Purchasing and Supplies, 2011)

According to Transparency International (TI) report of 2006 says, e-procurement in Malaysia had reduced corruption by 5.9% compared to earlier figures of 3.7%. In Surabaya, Indonesia, e-procurement for small contracts has meant a 50% in a state budget and for big contracts 23%. Although in this country, there is bit of manual systems in use. The benefits of e-procurement in Surabaya as stated by Transparency International (2006) are: increased efficiency, enhanced transparency, better risk management, higher levels of integrity, significantly better access to government procurement for small and medium size enterprises, corruption avoidance and cost saving on average up to 20% as compared to traditional procurement.

One of the fundamental missions of strategic procurement function research as propositioned by Wiggins, (1997), is to investigate and explain the contribution of the procurement strategy in achieving the corporate strategy hence the concept of competitive advantage or competitive edge amongst organizations in the same industry. Ehmke, (2008) defines a competitive edge as an advantage gained by a business entity over its competitors by offering customers greater value, either through lower prices or by providing additional benefits and service that justify similar or possibly higher, prices.

Statement of the Problem

Successful e- procurement implementation in purchasing of goods and services in a firm result in saving up to 30% and reduction in transaction cost up to 25%.UNCTD,(2003). E-Procurement can radically improve the delivery of public services if implemented and integrated into other financial systems. Its many benefits include, but not limited to reduced invoicing and ordering errors, lower transaction costs, shorter order cycle times, lower prices, better communication, order tracking and transparency of procedures (De Boer *et al*,2002).A study by Ashis & Amit (2007) show that companies can track purchases being made by all departments and ensure compliance to the standards with the use of e procurement. The Kenya government considers ICT a key pillar in the success of vision 2030 which aims to transform the country into industrialized nation by 2030. To this end a fully-fledged ICT Board has been set up by the Government to spearhead the ICT revolution in the country which is a positive signal for e-procurement (Njuguna, 2009).

Technology has been and continues to be integral part in increasing efficiency and service delivery in every organization (Njuguna, 2009).Kenya Utalii College is not left out in need for efficiency and customer satisfaction. The value of embracing e- procurement are enormous however the organization adoption rate is low and at different level of maturity (Muti, 2013).Kenya Utalii College still suffer from poor communication, delay in order processing, errors, weak error tracking, transparency and ethical issues and long tendering process (Ogachi,2011), such that even as they use the e procurement, they still continue with paper and manual procurement making it double work and even more expensive in term of cost and time.

The implementation has been going on but the expected outcome including cost saving, buyer supplier's integration, cycle time reduction and improved information flow are yet to be realized. In a study by Kinyanjui and Omolo (2006) on usage, obstacles and policies on e-procurement show that only 33% of state corporations have implemented e- procurement as a strategy to improving Procurement performance which correctly is supported by Mauti, (2013) who observed that 96% of large manufacturing firm in Nairobi Kenya have adopted e procurement but at different level of maturity. Omai, (2013)while looking at the determinant of e- procurement on supply chain performance in tea sector evaluated information sharing, partnership relation, supplier integration and supplier appraisal. The study did not evaluate the cycle time reduction and cost saving which need to be evaluated. It is not yet not clear whether implementation of e procurement has impacted on performance of hospitality training institutions and this study therefore will bridge this gap by examining the effect of e-

procurement implementation on performance of a hospitality training institution in Kenya: a case of Kenya Utalii College.

Literature Review

Procurement and Organization performance

E-procurement enhances inter-organizational coordination, resulting in transaction cost savings and competitive sourcing opportunities for the buyer firm Subramaniam & Shaw (2002). Against the backdrop of demand and supply-side economics, e-procurement is able to support increased and more complex coordination. Unstructured and complex purchases involve a higher level of coordination and require more human interaction, within the organization as well as with business partners .Neilson et al. (2000) state that instead of bureaucratic, hierarchical structure, organizations should form more flexible, decentralized team and alliance based networks that allow employees to react to market shifts. According to Knudsen ,(2003) an organizations that seek to enhance market efficiencies cites six forms of e-procurement; e-sourcing which include is the discovering and accessing supplier through internet and web technology , e-tendering which is the request of information and price from supplier and receiving feedback, e-informing - use of internet technologies for gathering and distributing procurement related information , e-reverse auctions - using internet technologies bidders usually bid down the price of their offers against those of other bidders until no further down-ward bids are received , e-auction for disposals - using internet technologies for on-line auctions of items for disposal , e-MRO a mechanism for ordering indirect items from an on-line catalogue and web-based enterprise resource planning in addition to to-collaboration - collaborative procurement related planning and design.

According to Slack et al., (2001), every part of an organization contributes to external customer satisfaction by satisfying its own internal customers. This entails that whatever the effects of E-procurement on the procurement department will inevitably affect other departments because they rely on procurement to bring in materials at the right time, price, quality and from the right source which are used to produce goods for the end customer. Recognizing the importance of the internal customer is not new and is very important if poor internal service level exists then the final service to the external customers will be diminished (O’Riordan, Humphreys, 2003). The procurement activity cuts across both the internal and external services of an organization. (Croom, & Johnston,2003) concluded in their research that internal customer satisfaction is central to the success of e-procurement effectiveness and is a significant determinant of the costs to be gained from its adoption.

Cost Saving and Organization performance

According to Croom & Johnson ,(2003) , e-procurement enables: supporting managers' budgetary control, offers robust process performance, greater transparency and accessibility across the whole process for all stakeholders, improving systems reliability, ensuring compliance to process, and improving management information reinforced user compliance. The fields of purchasing and supply management according to Cousins, *etal*, (2008), are enjoying growing popularity and importance to organizations in a variety of different industries due to increased competition, improved time-to-market and cost reductions which cause firms to adjust their supply structures in order to cope with the strategic pressures. Davila *et al.*,(2003) indicated that purchasing costs has always been recognized as one of the most significant purposes in e procurement since the average manufacturing firm spends about half its sales revenue on activities related to the purchase of materials. Christopher & Gattorna, (2005) indicated that cost reductions in the e procurement domain allow the firm to pursue price competition strategies in downstream markets and sustain growth. In procurement, the OM literature identified two main sources of costs: purchase prices and transactions cost Kopczak & Johnson,(2003). Purchase prices can be reduced when a firm has a superior capacity to manage the upstream vertical market relations with both current and potential suppliers Wagner &Johnson,(2004).In a study by Aberdeen,(2005) identified that a firm embracing e-procurement strategy gain 5–20% reductions in material costs, typical transaction-cost based explanation suggests that a buyer may increase negotiating capability by finding new supply sources, reducing the opacity of the market, and realizing savings in purchase costs .De Boer *et al.*,(2002) found that e procurement not only lead to cost reduction of purchasing activities which include ordering, expediting, and requisitioning but also cost of strategic activities which include spend analysis, transaction analysis, market analysis, planning, and developing purchasing policies.

Buyer-Supplier integration and organization performance.

Companies that embrace the essence of relationship with suppliers in areas of transaction eventually, create a room for win-win situation approach in their primary activities. According to Humphreys *et al.*, (2004) firms that embrace e advantage from long-term relationships rather procurement strategy achieve competitive than merely short-term. This attribute enables companies in question to leap benefits from each other since every company works for the best of each other hence this ensures a high degree of supply performance Lysons (2000). Recent literature suggests that, the integration of activities from procurement to the final customer is rapidly becoming the key element of strategic supply chain management (Lejeune

&Yakova, 2005). The ability to integrate procurement activity with other business processes has been recognized as a pre-condition for improving the quality of final products as well as reacting to market changes (Venkateshet *al.*, 1985; Fiala, 2005) The process integration capability is primarily related to a robust exchange of information with suppliers and with other departments, such as marketing and operations (Cachon & Fisher, 2000). At the same time, closer integration with other functions, such as production and marketing, allows the firm to buy the right materials, and guarantees that the entering flows of materials are consistent with product specifications (Wu *et al.*, 2006; Kehoe & Boughton, 2001).

Cycle time reduction

The capability to integrate procurement into other business processes is leveraged by the ability to manage the cycle time. This reduces lead times and time-to-market, and facilitates the creation of a first mover advantage (Baum and Wally, 2003). Strong inter-functional coordination within the firm is crucial to reduce product life cycles (Presutti, 2003; Hult *et al.*, 2004), and to increase sales revenue as a result of improved availability of goods (Ireland & Bruce, 2000). E-procurement improve performance for each of the five rights of purchasing which are sourcing items as Procuring goods and service at the Right price ,delivered at the Right time, are of the Right quality, of the Right quantity from the Right source In many organizations the requisition-to-delivery time can be counted in days or sometimes weeks, making the proper procurement process simply unfeasible for anything which needs to be ordered quickly. A research by the Aberdeen, (2005) identified that the benefits that accrue to a firm from an e-procurement strategy is a reduction in sourcing cycle times by 25–30% and time-to-market cycles by 10–15%.that help the supplying firm boost revenue through more market share born of the competitive advantage that comes from reducing time-to-market.

Delays are often caused when paper-based requisitions have to be authorized manually by one or more people and where budgets and commitments have to be checked in advance of the order going out. Brown *et al.*, (2005) indicated that e-procurement systems with in-built workflow streamline the process and avoid the common bottlenecks in the process. It enables a requisition to be automatically checked against pre-configured settings and electronically authorized. Speed is the competitive background of the present and future

According to Michael Porter, international competition is now a game of progress rather than a game of resources. International competition is a race and improve Brown *et al.*,(2005). The need to speed up operation pervades entire competition in everything they do from receiving orders to making and delivering products Brown *et al.*,(2005. Focusing on cycle time reduction

in all operations according to (Davila *et al.*, 2003; Lin & Hsieh 2000; Radovilsky & Hegde, 2004) e procurement helps cut costs and increases quality throughout the firms. The total cycle time (TCT) concept is based on the recognition, throughout the entire value chain, that time is an important strategic weapon. George, (2002), has shown that firms are realigning their competition priorities from to improved customer response time by focusing on delivery speed and reliability. In the 1990s, Ruch predicted that competitive priorities would shift to time from cost, productivity and quality.

Information flow

Njiraini & Moyi, (2006) argue that most MSEs rarely participate in government purchasing in Peru due to lack of information about the market and therefore forcing the government expedites the dragging reforms in order to promote information flow on public purchasing contracts to enable fair competition among suppliers. Ensuring the quality of shared information has become a critical issue of effective Supply Chain Management Cagianò *et al.*, (2003), supported that internet or internet tool can facilitate information sharing and more collaboratively with their partners. Eng (2004) also said that e-marketplace provides a shared internet-based infrastructure that enables participant organizations to communicate with one another effortlessly. And Presutti (2003) proposed that in the e-design stage, buyer and seller share information in real time to build specifications that add value to the resulting product. That communication helps to minimize design complexities and avoids building in unnecessary costs into the specification.

According to Eurochambres, (2004), e procurement enhance transactional transparency and archival transparency. Transaction transparency ensures that we can follow and verify all the transactions in the process of procuring. E -procurement can centralize data in order to improve audit and analysis Gupta, Jha & Gupta, (2009). The transactions are verified, recorded and completed over a network that is accessible to the buyer and the seller, and both parties can verify what has taken place. . By recording all procurement bids, choices and evaluations – and e procurement make this possible – the procurement process can be independently verified and reviewed by other parties – both public and private – to look for indications that a procurement process that should be a rational, economic decision is not affected by other factors such as bribery

For decades, businesses of all sizes have been searching for ways to cut paperwork, reduce costs and to increase efficiency of their procurement systems. Techniques ranging from forecasting, material resources planning (MRP), to electronic data exchange (EDI) have been evolved with the use of the ever-changing information systems (IS) and information technology (IT) Girishankar, (2000). The state-of-the-art IS/IT allows a company to link its

internal inventory management to all parties in its supply chain. For some companies, such applications of IS/IT help them gain enormous competitive advantages.

Research Methodology

A descriptive research design was used in this study. Stratified random sampling was used to select 61 respondents from the institution. Primary data was collected using a questionnaire. Once the questionnaires are received they were coded and edited for completeness and consistency. Data was analyzed by using statistical package for social science (SPSS). Performance in Hospitality training institutions was regressed against four variables of the role of e-service delivery namely records management, cost reduction, supplier relationship level and order cycle time management of the procurement process.

Data Analysis and Interpretation

Regression Analysis

In addition, the researcher conducted a linear multiple regression analysis so as to test the relationship among variables (independent) on e-procurement performance. The researcher applied the statistical package for social sciences (SPSS) to code, enter and compute the measurements of the multiple regressions for the study

Coefficient of determination

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (procurement performance of Kenya Utalii College) that is explained by all the four independent variables (cost saving, buyer supplier integration, cycle time reduction, information flow)

The independent variables that were studied, explain only 0.729 on the dependent variable (e-procurement performance among Kenya Utalii College) as represented by the R² which forms a 72.9%. This therefore means that other factors not studied in this research contribute 0.291 which is (1-R²) Therefore, further research should be conducted to investigate the other factors (29.1%) that affect the e-procurement performance among Kenya Utalii College.

Table 4. 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics
					Sig. F Change

1	.854(a)	.729	.348	.625	.018
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Analysis of Variance (ANOVA)

In trying to test the significant of the model, the study used ANOVA. From table 4.7 the significance value is 0.018 which is less than 0.05 thus the model is statistically significant in predicting cost saving, buyer supplier integration, cycle time reduction, information flow on enhancing e-procurement performance of Kenya Utalii College in Kenya. The F critical at 5% level of significance was 2.758. Since F calculated (value = 3.653) is greater than the F critical, this shows that the overall model was significant.

Table 4. 2: Analysis of Variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.705	4	1.426	3.653	.018
	Residual	9.762	60	.390		
	Total	15.467	64			

Multiple Regression

As per the SPSS generated as shown in table 4.11, the equation,

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

become:
 $Y = 0.576 + 0.010X_1 + 0.104X_2 + 0.265X_3 + 0.044X_4 + \varepsilon$ Where Y is the dependent variable (procurement performance), X_1 is the cost saving, X_2 buyer supplier integration X_3 is cycle time reduction, X_4 is the, information flow. According to the regression equation established, taking all factors into account (cost saving, buyer supplier integration, cycle time reduction, information flow) as constant at zero, the procurement performance will be 0.576. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in cost saving will lead to a 0.010 increase in the procurement performance; a unit increase in buyer supplier integration will lead to a 0.104 increase in the procurement performance; a unit increase in cycle time reduction will lead to a 0.265 increase in procurement performance and a unit increase in information flow will lead to a 0.044 increase in procurement performance. This infers that cycle time reduction contribute more to the procurement performance in Kenya Utalii College in Kenya.

At 5% level of significance and 95% level of confidence; cost saving showed a 0.08 level of significant; buyer supplier integration showed a 0.039 level of significant; cycle time reduction showed a 0.001 level of significant and information flow showed a 0.005 level of significant.

The significance value is 0.018 which is less than 0.05 thus the model is statistically significant in predicting how cost saving, buyer supplier integration, cycle time reduction, information flow affect procurement performance of Kenya Utalii College. The F critical at 5% level of significance was 2.758. Since F calculated is greater than the F critical (value = 3.653), this shows that the overall model was significant.

Table 4. 3: Multiple Regressions

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.576	1.880		2.530	.018
	cost saving,	.010	.170	.337	.233	.008
	buyer supplier integration	.104	.296	.022	.115	.039
	cycle time reduction	.265	.134	.640	3.775	.001
	information flow	.044	.413	.205	1.047	.005

Summary of findings,

Cost Saving

According to the findings, respondents agree to a large extent that Transaction cost affect procurement performance as shown by a mean of 4.47; that respondents agree to a large extent that Transaction cost affect procurement performance as shown by a mean of 3.87; that respondents agree to a large extent that Labour cost affect procurement performance as shown by a mean of 3.73; respondents agree to a large extent that Stockholding cost affect

procurement performance as shown by a mean of 4.27; that respondents agree to a large extent that Purchase prices in buying goods/products and goods affect procurement performance as shown by a mean of 4.40.

Buyer- Supplier Integration.

The study found out that respondents agree to a very large extent that Trade relationship affects the procurement of Kenya Utalii College as shown by a mean of 4.67, that respondents agree to a large extent that maverick spending affects the procurement of Kenya Utalii College in Kenya as shown by a mean of 4.40 that respondents agreed to a large extent that collaboration in designs affects the procurement of Kenya Utalii College in Kenya as shown by a mean of 4.33.

Further respondent indicated that the study also found out that respondents agreed to a large extent that development and training affects procurement of Kenya Utalii College in Kenya as shown by a mean of 4.47, that the respondents agreed to a large extent that lean suppliers base affects the procurement of Kenya Utalii College in Kenya as shown by a mean of 4.33.

Cycle Time.

The study found out that respondents agreed to a large extent that the Supplier delivery time affects procurement performance as shown by a mean of 4.20. The study showed that the respondents agreed to a large extent that Response time to order affects procurement performance as shown by a mean of 4.07. The respondents agreed to a large extent that organization bureaucracy affects procurement performance as shown by a mean of 4.07. The respondents agreed to a large extent that In-built workflow affects procurement performance as shown by a mean of 4.13 and the respondents agreed to a large extent that Competition to market affects procurement performance as shown by a mean of 4.20.

Information Flow

The study found out that respondents agreed to a very large extent that the accountability affects procurement performance as shown by a mean of 4.87. The respondents agreed to a very large extent that Internal audits trail affects procurement performance as shown by a mean of 4.53. The respondents agreed to a very large extent that Internal audits trail affects procurement performance as shown by a mean of 4.67. The respondents agreed to a large extent that Regulations and compliance affects procurement performance as shown by a mean of 4.27 and the respondents agreed to a very large extent that inventory management affects procurement performance as shown by a mean of 4.6.

Conclusions

The study concluded that Transaction cost, processing errors, Labour cost, Stockholding cost and Purchase prices in buying goods/products and goods affect procurement performance to a large extent. The study concluded that Kenya Utalii College can employ effective cost management on e-procurement for long term and the ability to expand and maintain a large and loyal customer base by implementing the use of technological innovations and ICT.

The study concluded that respondents agree to a very large extent that Trade relationship, maverick spending, and collaboration in designs and development and training affect the procurement of Kenya Utalii College. The study concluded that respondents agreed to a large extent that Supplier delivery time, Response time to order, bureaucracy, In-built workflow, In-built workflow affects procurement performance. The study revealed that respondents agreed to a very large extent that the accountability affects procurement performance. The respondents agreed to a very large extent that internal audits affect procurement performance. The respondents agreed to a very large extent that Transaction transparency affect procurement performance. The respondents agreed to a large extent that regulations and compliance affects procurement performance and the respondents agreed to a very large extent that inventory management affects procurement performance.

Recommendations

The study recommends cost saving should be the observed to enable expansion. It should also provide the customer with real-time information on promising dates and product availability through interfaces with the company's production and distribution operations.

The study recommends that procurement staff should possess sets of skills appropriate in procurement activities. Kenya Utalii College must ensure that suitable candidates are employed on the basis of merit and placed in their relevant qualifications, skills, and experience with their roles and responsibilities clearly defined to avoid role conflicts with other professions and departments. Strategies must also be put in place to retain them. For an entity to derive the full benefit of the procurement reform, procurement function must be placed in strategic management level.

Kenya Utalii College should review their organization to establish the adequacy or otherwise of the resources including skill levels dedicated to the procurement activity. This work should identify both the base requirements essential to satisfy the issues in governance and separately that required to move the procurement operation towards improved performance, superior performance and Best Value.

The study recommended that e-procurement should be adopted as the standard within the Kenya Utalii College. All new installations of procurement functional systems should be a part of e-Procurement system (ePS). In addition, given the criticality of this dependency to savings, the complexity and challenge of systems installation and the scarce and fragile nature of available skills, an e-Procurement system installation Task Force should be established under the leadership of the council's Executive's Procurement Directorate. This Task Force should be assigned as required to provide additional support and skills to the project teams at the individual organization level. The study recommends that Kenya Utalii College should invest on information sharing, organization development, organization systems, channel relationships and supplier relationship competencies to influence the procurement performance process.

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