EFFECTS OF E-PROCUREMENT ON THE EFFICIENCY OF SUPPLY CHAIN MANAGEMENT IN FIVE STAR HOTELS IN NAIROBI CITY, KENYA

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ABSTRACT

In the hotel business, the flow of goods, services, and information should be designed to efficiently transform raw materials into finished products/services with values. Lodging Services regularly purchase a large quantity of supplies for which procurement systems play a crucial role in maintaining daily operations and quality. Today, a major goal of a hotel’s supply chain management is to efficiently apply information technology to its procurement systems (Tanvi & Clark, 2005). The study was aimed at exploring how cost effectiveness can influence efficiency in supply chain management, the transparency that is brought about in E-procurement and time effectiveness brought about by E-procurement in five star hotels in Nairobi City Country. The study endeavored to use descriptive research design since it deals with clearly defined problems. The study targeted five star hotels in Nairobi City County which are fifteen in number. Convenience sampling was used in the study since the study is targeting respondents that have the right information. Data was collected through the use of structured questionnaires which had open and close ended questions. The data was later analyzed using SPSS version 20 for the purposes of generating results in form of tables and graphs for report writing. The study concluded that through e-procurement the cost of procurement has been reduced significantly in terms of the manpower needed as well as the materials that were used in conventional procurement. Transparency has also been achieved since cases of fraud have been reduced as well as the ability to follow up electronically on procurement activities that have become easier to manage. The procurement time has also been efficiently managed since most of the official documents are electronically generated while at the same time storage and retrieval of information has become easier and faster. The study recommends that organizations that want to have a competitive edge should adopt e-procurement to make their supply chains faster and more efficient.

Key Words: E-Procurement, Supply Chain Management

INTRODUCTION

The liberalization of the worldwide economies has resulted in a global field for all business organizations. The worldwide market has created a new way that business organizations run; previously what was not envisioned is here with us, now the reality of business workings is fundamentally altered in a manner that requires new synergies to meet the emerging challenges consequently utilizing the existing opportunities to experience new profit growth avenues. The imperative need of efficiency and speed for every company has grown to make supply chains the latest competitive weapon (Shah, 2009).

Shah (2009) adds on further that supply chain management encloses every activity involving the transmutation of commodities from the crude materials stage to the end stage where the commodities and services are received by the customer. Supply chain management encompasses
planning, designing and controlling the stream of material, information and finance through the supply chain to present superior value to the final recipient in an effective and efficient mode.

The third revolution is the dell supply chain (1995-2000), with strides in information technology (IT) Dell computers permitted customers to customize their computers. Differing from Toyota supply chain, Dell never valued long term relationships with the suppliers but world class suppliers who are able to keep their technology and cost leadership in their particular fields (Shah, 2009). The worldwide supply chain management is preoccupied with diminishing cost on procurement and diminishing the risk related to purchasing. This will save time as well as facilitate the company alignment subsequently reduce frauds minimizing human capital and better management of loses on spending control. Worldwide supply chain encompasses a plethora of countries and it is accompanied by several difficulties to tackle such as money exchange rates which come with the territory (Leeman, 2010). The evolution of the e-procurement system began in the early 1980s through the implementation of the enterprise resource planning (ERP) and electronic resource planning (MRP) systems. This led to the introduction of the electronic data interchange (EDI) that established connections between manufacturers and suppliers. EDI enhanced new forms of organizations and effectively reduced coordination costs of most market driven businesses (Puschmann & Alt, 2005).

This technology has been touted as one of the most efficient ways of conducting global business and has enabled organizations to effectively compete in the global market. Many industries such as the retail and auto businesses, health care providers, universities etc. have adopted the EDI technology to transmit information such as shipping notices, product inquiries, invoices and material releases electronically. To use this technology one had to be linked to a server technology and have an application that can transmit and receive information in a specified format. The network used in this whole process was known as the Value Added Network (VAN) which required the setup of a standard processing system before the transfer of any information (Attaran, 2001). However, the coming of age of the internet has made things bearable for e-commerce businesses. It has totally eliminated the need of the traditional server technology since all you need is a Web browser. Information can be retrieved from an online source and orders can be sent through an e-commerce website and/or an e-mail. This new development has effectively reduced the time consumed in the supply chain process since orders are just a computer click away rather than following the tedious routines of making e-procurement orders manually.

E-procurement and supply chain management at the hotel industry

The hospitality industry being a service industry deals with a wide range of goods. This brings about the need to procure and purchase the right quantity and quality at the appropriate time and place. Hospitality companies are turning to E-business by moving procurement and distribution
processes online. It is one of the most important of B2B (business to business) functions (Ngonzi, 2000). The future of e-procurement is promising; the hospitality companies need to make this part of their strategic planning to obtain the benefits of this technology. Growth in hospitality e-procurement is clearly explosive in its potential, and our view is that hotel organizations will need to respond to this new market to remain competitive (Ngonzi, 2000). Tremendous opportunities can be realized through e-procurement. The opportunity to improve the supply chain will define the relationship between the buyers, sellers and competitors. Ngonzi (2000) explains that the implications for various segments of the hospitality can lead to established brands leveraging and reengineering their purchasing for improved efficiency and reduce over spending. These companies can also develop customized sites for their own purchasing from approved vendors. Employees would end up adhering to quality standards. It is prudent for hospitality companies to focus on this technology deployment to maintain competitive advantage, even in the uncertain economic climate.

STATEMENT OF THE PROBLEM

Procurement function is an imperative department in any organization. It contributes to the organizational efficiency and effectiveness. Companies continue to lose millions of shillings where e-business has not been implemented. Considering the changing business environment and the fast rate at which businesses around the world are adopting the use of technology to enhance productivity thus more profit, supply chain management has not been left out; software developers from around the globe have come up with all sorts of software that are customized to meet the growing needs and demands of procurement especially the supply chain. Previous and recent technological advancements have greatly influenced the rapid development of e-procurement systems. Since the late 1980s, IT costs have depreciated dramatically, a factor that enhanced the spread and use of technological devices and applications. This led many companies to change tactic on how to streamline their operations effectively and efficiently. Companies have experienced huge reductions in costs as the electronic systems have replaced the costly and commonly erratic human resource that has been widely used globally since time immemorial (Neef, 2001). Neef (2001) states that a huge factor that has propelled the acceptance of the systems is the ever increasing level of competition in the business environment; as many organizations fight to expand their market share in their respective geographic targets, many have been forced to upgrade their standards constantly to stay ahead of their competition. Despite its importance, a review of existing literature on the effect of e-procurement on the efficiency of supply chain management revealed that practically not much academic research has been conducted to investigate the application of e-procurement in the hospitality supply chain management in Kenya and specifically in Nairobi County. It is against the background that this study explored...
the effect of e-procurement on the efficiency of supply chain management in five star hotels in Nairobi City County.

**GENERAL OBJECTIVE**

The general objective of the study was to determine the effects of e-procurement on the efficiency of supply chain management among five star hotels in Nairobi City County, Kenya.

**SPECIFIC RESEARCH OBJECTIVES**

1. To establish how cost effectiveness influence efficiency of supply chain management in five star hotels in Nairobi County.
2. To determine how procurement transparency influence efficiency of supply chain management in five star hotels in Nairobi County.
3. To establish how time effectiveness influence efficiency of supply chain management in five star hotels in Nairobi county.

**LITERATURE REVIEW**

**The Diffusion of Innovation Theory**

This theory was developed by Rodgers in 1962 with intend to explain how over time, an idea or product gains momentum and is able to spread or diffuse in a given population or system. Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. An innovation, simply put, is “an idea perceived as new by the individual.” The four main elements in the diffusion of new ideas are: The innovation, Communication channels, Time and the social system. The process involved in this theory is; knowledge whereby the person becomes aware of an innovation and has some idea of how it functions; Persuasion whereby a person forms a favorable or unfavorable attitude toward the innovation; a decision is made by the person engaging in activities that lead to a choice to adopt or reject the innovation; Implementation whereby the person puts an innovation into use and finally; confirmation whereby a person evaluates the results of an innovation-decision already made.
The Theory of Rational Choice

Rational choice theory was pioneered by sociologist George Homas, who in 1961 laid the basic framework for exchange theory, which he grounded in assumptions drawn from behavioral psychology. According to this theory, individuals are motivated by their personal wants and goals and are driven by personal desires. Since it is not possible for individuals to attain all of the various things that they want, they must make choices related to both their goals and the means for attaining those goals. Individuals must anticipate the outcomes of alternative courses of action and calculate which action will be best for them. In the end, rational individuals choose the course of action that is likely to give them the greatest satisfaction. Rational choice theory does address behaviors that are selfless, altruistic, or philanthropic Crossman, (2000)

The Theory of Economic Geography

Economic geography is the study of the location, distribution and spatial organization of economic activities across the world. It represents a traditional subfield of the discipline of geography. Theoretical economic geography focuses on building theories about spatial arrangement and distribution of economic activities, for example; Regional economic geography examines the economic conditions of particular regions or countries of the world. It deals with economic regionalization as well as local economic development. Historical economic geography examines the history and development of spatial economic structure. Using historical data, it examines how centers of population and economic activity shift, what patterns of regional specialization and localization evolve over time and what factors explain these changes. Behavioral economic geography examines the cognitive processes underlying spatial reasoning, location decision making, and behavior of firms and individuals. (Philip.K, 2007). Economic geography will be significant to the study since it is based on the prelude of industrial location. Procurement is done today on a worldwide scale and this has made it necessary for organizations to find means of making the procurement as effective as possible. E-procurement is one of the means that has been adopted to provide linkages between buyers and sellers at a very cost effective and secure manner (Fingleton, 2007).

CONCEPTUAL FRAMEWORK

Mugenda and Mugenda (2003), defines a conceptual framework as a hypothesized model identifying the concepts under study and their relationships. It provides an outline of the preferred approach in the research and also outlines the relationships and the desired effects, forming independent and dependent variables respectively. In this study, the independent variables are cost efficiency, procurement transparency, and time effectiveness while the dependent variable is the efficiency of supply chain management in five star hotels in Nairobi County.
Cost effectiveness

There are cost implications that might either be success factors or challenges in the implementation of an e-procurement system; most of the time. E-procurement plays a major role in the cost reduction among businesses or organizations as they conduct procurement related activities. Procurement is among the most expensive items in the cost structure of an organization. A study done by Aberdeen Group in the year 2001 found out that a lot of time is wasted on non-value adding activities in manual procurement such as data entry, error correction in paper work, expediting delivery and finding solutions to quality problems. E-procurement has recently played a major role in the cutting of costs in the corporate environment. E-procurement still appears to be in its early stages of adoption especially in the hotel industry; five star hotels are known to be multi-geographical in nature thus their operations stretch across countries from one to another thus e-procurement has provided the alternative for them to conduct a smooth supply chain management while at the same time cutting on the costs involved. The use of e-procurement has been proven to enhance great cost reduction for the organizations involved. A manual procurement process involves the use of papers that are used to send the purchase orders among other things such as the delivery notes. These papers are bought by the organization. E-Procurement however, does not require these papers in order to be successful. This leads to the organization saving a lot of money as a result of not buying the papers. This money can thereafter be transferred to a different use where there may be need (Abramson, 2003).

The organization uses a lot of human capital on the people who are used to file and organize the papers used in procurement. However, with the introduction of the e-procurement, all this processes can just be done in a click of a mouse. This helps the organization to reduce the human capital after which the saved cash may be channeled into other essential areas for the organizations growth (Cunha, 2011). Costs are cut by the shortened procurement process that leads to a reduction in the supply chain hence leading to lowered costs when it comes to supply of goods and services. Costs for ordering are removed because ordering is done online and hence there is no printing of documents and wastage of time to go through the printed documents in preparation for the procurement process. The unending calls are reduced because procurement is done via an internet connection and hence telephone bills are reduced and brought to a very manageable level. E procurement has also led to increased contract compliance because when one is dealing with people he or she cannot see then there must be a serious contract and trust in order to have a smooth process. It reduces administrative costs as well as operational costs and this has enabled it to gain popularity since every organisation wants to save as much money as possible especially on administration. Administration costs can be many and can lead to an increase in errors if it involves several administrative officers handling the procurement process. E-procurement increases efficiency through the use of processed information that is transmitted faster and also leads to increased decision making when it comes to purchasing of goods. The
procurement process is coordinated smoothly and in a good manner and hence avoiding double purchasing of some products

E-procurement leads to a reduction of price for goods and services to customers. In this case, the customer within an organisation could be the finance department. This is because it eliminates the middle man. Middlemen affect the cost of products and services as they will always charge for every service they offer in order to make the customer access goods. With e-procurement, customers are able to access goods and services directly from the stores via an internet connection hence leading to a reduction of prices. Labour costs reduce as well and this significantly contributes towards cost reduction in e-procurement. E-procurement is paperless and hence organisations are able to save on paper hence this plays a major role in cost reduction. Customers will always be attracted to stores or organisations that sell products at a lower cost and organisations can use this as a selling tip in order to get more clients to their businesses.

**Procurement Transparency**

The paper based procurement process is often prone to errors in typing, either intentional or unintentional. With the use of the e-procurement process, all these errors can easily be noted by all the members of the organization and corrective action may be taken to avoid losses on either the supplier or the client’s side (Neef, 2001). The paper based procurement process may also face the challenge of theft or misplacement of the vital documents such as the purchase order and the goods received notes thereby may cause conflict between the supplier and the client. However, with the introduction of the e-procurement, there is no longer misplacement of the documents as all of them are stored online. There is also no risk of theft as it is secured by passwords and other forms of telecommunication security codes. This offers the security of the data and thus leads to reduced conflict between the supplier and the client (Morgan, 2004)

Also, the organization is able to share the data between different suppliers without the fear of losing it or getting a different version of it. Thus e-procurement has played a key role in the safety of the data (Heywood, 2002). Procurement fraud is the unlawful manipulation of the procurement process in order to acquire goods or services by obtaining an unfair advantage. It may also be defined as dishonestly getting an advantage, avoiding an obligation or enhancing a loss to the public property during the process of procurement by the contractors, the public servants or any stake holders in the procurement process (Neef, 2001). To prevent the risk of fraud in the procurement process, the organizations have opted to invest in the E-procurement that helps to embark on an end to end analysis of their purchasing process. This ensures transparency and efficiency of the entire process in the following ways (Evans, 2000)
Time Effectiveness

Manual procurement process is an extensively administrative process. It has been defined as a complex paper chase moving throughout the organization the introduction of the e-procurement relieves the staff of the administrative burden that comes with the manual procurement. This is because automating the keys leads to the saving of time and thus leads to the saving of the organization money (Heizer, 2014). The requisition officers are often the staff members who spend a great deal of time filling in the paper based forms, passing them through for authorization as well as following the top authorizers or the purchasing department for their signatures. This leads to the individual wasting a lot of valuable time of the organization that would have otherwise been channeled to doing more constructive work that may help in the growth of the organization. The introduction of the e-procurement has thus helped minimize all these time wastage thereby making the individuals more productive (Abramson, 2003).

Paper based procurement often has no single central database to enhance accessing of the reports from the procurement process. This often leads to the management spending more of their time monitoring the procurement process rather than spending it on other issues. The introduction of the e-procurement has enhanced the ability of all procurement data to be processed through a single central database that is automatically assimilated into the organizations system (Sharma, 2010). This thus allows for the anytime relevant analysis and management of the reports from the procurement process. It also gives the procurement professionals the information that they need to manage effectively. This ultimately reduces their administrative duties thus the management can channel their energy and minds to the proactive decision making programs argues Sreen, (2011).

Efficiency of Supply Chain Management

Supply chain management (SCM) is the management of the flow of goods. It includes the movement and storage of raw materials, work-in-processing inventory and finished goods from point of origin to the point of consumption. Interconnected or interlinked networks, channels and node businesses are involved in the provision of products and services required by end customers in a supply chain. Supply chain management has been defined as the “design, planning, execution, control and monitoring of supply chain activities with the objective of creating net value, building a competitive infrastructure, leveraging worldwide logistics, synchronizing supply with demand and measuring performance globally”. Christopher (1998) defines supply chain “as the network of organizations that are involved through upstream and downstream linkages in the different processes and activities that produce value in the form of products and services in the hand of the ultimate customer”. Ballou (2004) says that supply chain “refers to all those activities associated with the transformation and the flow of goods and services, including their attendant information flows, from the sources of raw materials to end users.” When it
comes to supply chain efficiency, information is king. The more you know the better you can manage the process and engineer improvements (Deborah, 2011).

Implementing a comprehensive management supply chain is not an easy task, but once it is put in place, every organization and person within the supply chain will greatly benefit. Gone are the days when companies would be successful by simply minding their own business and concentrating their efforts on themselves. Time are different, companies must ensure that each link is a supply chain is as strong as the one preceding it. When effective supply chain management has been implemented, profits increases, efficiency improves and customers are made happier and more likely to deal with a particular company in future (Sotiriz, 2000).

**EMPIRICAL REVIEW**

Many global companies have opted to adopt the e-procurement strategy after proving the benefits that come with implementing it; for instance, Hilton worldwide uses e-procurement in its purchases. Hilton is one of the largest hospitality companies internationally with millions of workers worldwide, and still growing. Before the introduction of the e-procurement, they used the paper catalog and phone communication to order the supplies that they required. When it comes to online procurement, Hilton Supply Management in the hospitality industry has the state-of-the-art e-procurement application platform. The online e-procurement system offers participating properties easy access to thousands of products and hundreds of suppliers. By using a consistent platform, the companies’ e-Procurement system simplifies the purchase process, enabling them to fully deploy the B2B (Business-to-Business) application across a portfolio of brand and ordering disciplines. It also provides properties with a significant increase in system functionality coupled with a solution that is scalable to each brand's specific requirements.

Another hotel company that opted for the e-procurement strategy is the Carlson Rezidor Hotel Group and Crimsonwing. They entered into a new partnership on e-procurement for the hosting, maintenance, support and development of award-winning e-procurement portal known as rezPIN (Rezidor Purchasing Information Net-work). Crimson wing partnered with Carlson Rezidor since 2012 to further develop rezPIN into one of the most advanced e-procurement platforms in the hotel industry; the rezPIN portal was launched in 2009 and has since then become one of the most compelling reasons for hotel owners to join the Carlson Rezidor Hotel Group. The group’s purchasing network allows hotel owners to utilize group wide deals, maximizing their buying power and hence drive substantial savings (Crimsonwing, 2013).


RESEARCH METHODOLOGY

Research Design

This study applied descriptive research to determine the effects of E-procurement on the efficiency of supply chain management in five star hotels in Nairobi City, Kenya. By description it means considering such basic questions as what, how, when and where about a given phenomenon. Descriptive research design was used because it deals with clearly defined problems with definite objectives (Kombo & Tromp, 2006).

Target Population

The target population consisted of employees in five star hotels in Nairobi City County.

Sampling Technique

A sample consisting of the procurement manager, the procurement officer and the store keeper were selected from each hotel using convenience sampling method to reduce the occurrence of undesired responses and because of ease of data collection, time available and the cost involved in data collection. The research used convenience sampling technique which is sampling based on what sample the researcher can have access to and have the right information (Kothari, 2004). Cases of subjects were therefore handpicked because they were informative and possessed the required characteristics. The target population was administered with their respective questionnaires.

Sampling size

To determine the sample size, n, for target procurement staff with a known population, N, the study adopted the formula of Israel (1992) as shown in equation 1 below.

**EQUATION 1**

\[
n = \frac{N}{1+N (e)^2}
\]

Where:

- \( n \) = optimum sample size,
- \( N \) = Total of the procurement staff in all 15 hotels.
- \( e \) = probability of error (i.e., the desired precision, e.g., 0.1 for 90% confidence level)
The procurement staff in all hotels is 161; implying \( n \) is 61 as shown in equation 2 below.

\[
EQUATION \ 2 \\
n = \frac{161}{1 + 45(0.1)^2} \\
n = 62
\]

**Data Collection Instruments**

In most cases, the end of the research papers is always accompanied by questionnaires at the very end. Different kinds of questionnaires are always used in the quantitative analysis that range from factual to opinion based as well as tick boxes. However, the questionnaires are always viewed as easier ways to collect and interpret data which might not always be the case. In order to get an effective questionnaire, it must be in a position to cover and answer all the fields of study as well as answer the questions raised by the research. The questionnaire must also be able to collect and generate data that would be easy to analyze within the shortest time possible. Generally, questionnaires are advantageous for they provide responses that are gathered in a more standardized form. The reason being, questionnaires are more to the point as compared to interviews that can move away from the topic and talk on other issues. Equally, collection of information by the use of a questionnaire is always easy and quick. Questionnaires can also collect information about a group of individuals for through answering the questions, one can understand the relationship in the groups. A single questionnaire can also serve to answer questions about a group who are put together under the same class. The validity of the questionnaire remains the same even if it is carried by the researcher or by a number of different individuals. Finally, the data collected by the use of questionnaires can be used to make comparisons between other researches.

**Pilot Test**

Pilot testing refers to a trial of small scale data through the admission of the results to a small number of individuals who can then be used to comment on the mechanics of the test. Through the individuals, it would be easy to identify the limitations on the processes used in the data collection and identify the weaknesses of the whole process. The pilot test also helps in ensuring that none of the questions within the questionnaire can negatively affect different individuals by making them to feel uncomfortable. Through the test, it would be easy to make estimations of the total number of days it would take to administer the test to a larger population. Questions should read smoothly and be easily understood. If the respondent appears confused or hesitant to answer, find out why. (Uwex.2014). In order to carry out a pilot test, individuals who are of the same characteristics as the real audience would be selected. That is to ensure that the results received would be identical or related to the final results. The individuals can then be given the
tests independently and at different intervals. During the process of testing, the individuals must be left to work independently without any aid from the supervisors. Finally, the final questionnaire can be made and administered in the field of research. Reliability is the ability of a research instrument to consistently measure characteristics of interest over time. It is the degree to which a research instrument yields consistent results or data after repeated trials. If a researcher administers a test to a subject twice and gets the same score on the second administration as the first test, then there is reliability of the instrument (Mugenda and Mugenda, 1999). Reliability is concerned with consistency, dependability or stability of a test (Nachmias and Nachmias, 1996). The researcher measured the reliability of the questionnaire to determine its consistency in testing what they were intended to measure.

Validity refers to the degree to which evidence and theory support the interpretation of test scores entailed by use of tests. The validity of instrument is the extent to which it measures what it is supposed to measure. According to Mugenda and Mugenda (1999), Validity is the accuracy and meaningfulness of inferences, which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represent the variables of the study. The research instrument was validated in terms of content and face validity. The content related technique measures the degree to which the questions items reflected the specific areas covered.

**Data Analysis**

Qualitative analysis was done through the deductive approach. The open ended questions in the questionnaire were grouped then similarities and differences were obtained. After administering the questionnaires, the researcher had the data converted into numerical codes for statistical analysis using the SPSS version 20. Statements on likert scale measurement were analysed on the five point scale whose average mean score were computed to obtain the overall measure on level of agreement. The results of the sample were then generalized to the study the role of e-procurement on the effectiveness of the supply chain management in 5 star hotels Nairobi, Kenya. The researcher used descriptive statistics to show distribution relationships between variables under study, proportions in terms of texts, percentages and tables.

**RESEARCH RESULTS**

**E-procurement and Cost efficiency**

The findings suggest agreement with all the points since all the responses tend to lean on agreement. The paperless means through which E-procurement is done saves the organization money. This negates Cunha, (2011) who argues that E-Procurement does not extensively require the printing of such documents thereby reducing greatly the cost of procurement. This always is
beneficial to the organization. E-procurement provides a competitive advantage for organizations that have adopted it compared to those that still use conventional methods had the highest means of 4.8 while the elimination of finances used by organizations to fund purchasing and selling negotiation meeting is saved through the use of E-procurement had a mean of 4.5. The cost of sourcing suppliers and getting the best quotations is reduced had a mean of 4.4 while procurement through the manual process is really cumbersome and taxing administratively had the least mean of 4.0.

69% of the respondents agreed with this sighting reasons such as the number of brokers being reduced also the system taking the place of tasks that were done by people. Heizer, (2014) argues that this modes of communication always cost the organization a lot. The introduction of the e-procurement has helped to minimize the cost as communication is done in a cheaper way through emails and internet via the social sites. The savings are then channeled to other parts of the organization that require funding. In the findings shown above 31% of the respondents sighted no giving reasons that the new system also needs the human resource to guide it on what is required and also that certain things cannot be done by the system such as certification of the quality of either goods or services.

**E-procurement and Transparency**

The findings relating to indication on the transparency brought about by e-procurement indicated that human errors are eliminated due to the fact that the system can easily detect, as Neef, (2001) stated that the paper based procurement process is often prone to errors in typing, either intentional or unintentional. With the use of the e-procurement process, all these errors can easily be noted by all the members of the organization and corrective action may be taken to avoid losses on either the supplier or the client’s side. The manual e-procurement process has room for middle men who might be involved in corruption related activities which is not the case for E-procurement and the E-procurement platforms have logs for every activity that is conducted thus it is easy to detect fraud which had the highest means of 4.8. E-procurement makes it easy for procurement related document to be accessed from a central place compared to paper work and the organization uses E-supply chain approach for communications and transactions with suppliers both had means of 4.5.

**E-procurement and Time Efficiency**

Findings relating to the suggestions on how best E-procurement has impacted on time efficiency in supply chain management indicated that all the responses are above the upper quartile of 75% which is an indication of agreement with the statements. Data entry and filling plus storage time is saved in E-procurement, through E-procurement, organizations do not need to visit the suppliers and have face to face meetings and E-procurement has allowed organizations to get
information about their suppliers and products online had highest means of 4.9. Through E-procurement, the lead time is reduced since a centralized data base exists with information in the various suppliers had a mean of 4.6 while Procurement documents such as delivery notes, invoices and receipts are generated automatically thus saves on time had the least mean of 4.5.

**DISCUSSION OF FINDINGS**

The study sought to determine the effects of E-procurement on the efficiency of supply chain management in five star hotels in Nairobi City County. Specifically the study sought to establish how cost effectiveness influences the efficiency of supply chain management, procurement transparency influences efficiency of supply chain management, as well as time effectiveness. The high response rate is an indication of the willingness of the sample population to be part of the study and as per the methodology, the objectives of the study are more affirmed with a high response rate since conclusion are made based on data collected from the respondents. The age of the respondents was an area of interest to the study considering that E-procurement is a new technology which tends to be appreciated by the younger generation as compared to the older generation who might have a negative attitude towards it. The academic qualification of the respondents was another area queried by the study since the higher the level of education, the better the experience and knowledge thus proper and appropriate response questions asked by the study.

On cost effectiveness in efficiency of supply chain management in five star hotels, the internet considered as one of the means that has made it possible for the technology to diffuse and be accepted by many organizations as a means of doing procurement. Organizations that have adopted e-procurement were suggested to have a competitive advantage over those that had not adopted the technology since their procurement will be done in a cost effective and efficient manner. That means more competitive rates offered by the suppliers and also price comparisons. The efficiency of supply chain is also boosted as suggested by software that is internet based since all transactions can be done at one place. Cost effectiveness has also resulted in the ability of organizations to get the right information on the products required and also the quality of products that they are offered by suppliers. All transactions are done on a centralized system the cost of meeting, negotiations face to face, printing quotations are all eliminated. Thus also save on human capital. On the procurement transparency on the efficiency of supply chain in five star hotels, majority of the respondents (92%) stated that the implementation of an e-procurement system has been able to bring down the costs that are associated with procurement. The use of an e-procurement platform being paperless saves on cost of paper and other related stationery and also cost is saved by the organization on meetings that would be organized with suppliers. The procurement through the manual process was considered taxing and burdensome administratively thus the respondents suggested to prefer e-procurement. Time was also stated to be saved when an e-procurement system was used and also the ability to track transactions was
considered easy in an e-procurement platform than when written in paper and stored in files. Fraud related activities have been reduced in the management of the supply chain since procurement information is stored with confidentiality and is only accessible to those that have a right to the information. Considering that every activity in an e-procurement system is recorded in a log file, fraud can be detected and also the person who committed the crime can be identified.

CONCLUSION

The adoption of e-procurement is indeed a phenomenon that has revolutionized the manner in which procurement is done by organizations as the study found out. The benefits that come with the technology outweigh the challenges thus its adoption in the five star hotels which are involved in handling huge procurements. The e-procurement system was seen to indeed add and streamline efficiency in the supply chain resulting in better management. Through e-procurement the cost of procurement has been reduced significantly in terms of the manpower needed as well as the materials that were used in conventional procurement. Transparency has also been achieved since cases of fraud have been reduced as well as the ability to follow up electronically on procurement activities that have become easier to manage. The procurement time has also been efficiently managed since most of the official documents are electronically generated while at the same time storage and retrieval of information has become easier and faster.

RECOMMENDATIONS

An e-procurement system should be adopted by organizations that want to enhance efficiency and transparency in their procurement process. The benefit of e-procurement in enhancing supply chain management makes it a current trend for organizations that want to have competitive advantage. The management being the key to either adoption or non-adoption of an e-procurement platform should push organizations in the right direction by investing resources into e-procurement.

REFERENCES


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