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# ROLE OF SUPPLIER EVALUATION ON PROCUREMENT PERFORMANCE IN STATE CORPORATION IN KENYA: A CASE OF GEOTHERMAL DEVELOPMENT COMPANY

<sup>1</sup>Esther Wainoi Ndiga, <sup>2</sup>Dr. Noor Shalle Ismail, Phd

<sup>1</sup>Msc. Student, Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya <sup>2</sup>Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya

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#### **ABSTRACT**

Selecting and maintaining competent suppliers is very essential in procurement. However, many factors affect a firm's ability to choose the right supplier. Little has been done to establish the role of supplier evaluation on procurement performance in state corporation particularly Geothermal Development Company. This study was undertaken with the main objective being to establish the role of supplier evaluation on procurement performance in State Corporation in Kenya: a case study of Geothermal Development Company. The study was quided by two variables; supplier's finances and quality management. A structured questionnaire was used to collect information on the role of supplier evaluation on procurement performance in GDC. The research was carried out through a descriptive research survey design. In this study the researcher used stratified random sampling where 30% of the target population was representative of the entire population to be studied. The data from the collected questionnaires was coded and entered into the computer using statistical packages for social sciences (SPSS version 21) for analysis. The study findings revealed that suppliers' finances and quality management had a significant positive role on procurement performance in Geothermal Development Company. Based on the study findings, the study concluded that suppliers' finances and quality management played a role on procurement performance in State Corporations in Kenya. Recommendations of the study included; assessment of supplier financial capability, return on assets, the profitability and the relationship between supplier's gross and net profits and turnover of the supplier during supplier evaluation in the organization as a measure to improve the procurement performance and integration of quality management techniques in the firm's supply chain.

Key Words: Suppliers Finances, Quality Management, Supplier Evaluation

#### **INTRODUCTION**

Supplier evaluation is a significant process for any organization because on average, products that are purchased account for between forty and sixty percent of sales of end products (Chartered Institute of Procurement and Supply). This directly influence the quality and cost of purchased products; a small gain in cost due to supplier selection has significant benefits for organizations. Supplier evaluation is one of the activities executed by procurement staff and one whose effective execution determines the success or failure in the performance. procurement Purchases suppliers account for more than half of total costs for most companies and in some industries, such as electronics, telecommunications, construction, and automotive, this portion is normally substantially higher (Gadde & Håkansson, 2001).

Suppliers are important to buying firms not only in financial terms. To an increasing extent they provide customers with new technology. Supplier performance thus considerably impacts on the efficiency and effectiveness of the customer firm and is of vital importance. To make sure that the performance of vendors is adequate multitude of supplier evaluation programs have been developed. Some of these programs deal mainly with efforts of securing that suppliers function in accordance with expectations in the short run, while others focus on the long-term development of suppliers and its connection to performance.

In a survey of 350 Fortune-500 companies Krause and Ellram (1997) found that performance evaluation was deemed a vital part of supplier development programs. Even those companies that had no formalized development program regarded supplier evaluation very important. According to Carr and Pearson (1999) conducted a study of 739 firms in a cross industry analysis and observed that firms with a strategic approach to purchasing were

more involved in supplier evaluation than other firms. It was shown also that this strategic approach had a positive impact on buyer seller relationships and, finally, supplier evaluation systems had a positive effect on the buying firm's financial performance. This chapter covers background of the study, statement of the problem, general objective, specific objectives, research questions and scope of the study.

According to Handfield (2009), one reason for supplier selection is that of product development process, meaning that as the product development cycle reduces suppliers are also required to reduce the delivery cycle or else competent ones will be sought for and those that do not meet the criteria set by firms are supposed to be weeded out (Trevelen, 1987). Dwyer (1993) is in agreement with Trevelen (1987), he argues that the goal of supplier evaluation is to secure valued resources and technologies of the selected suppliers in situations that preclude the option of vertical integration due to resource limitations and managerial constraints. Apart from being able to harness the strengths and skills of suppliers to their advantage firms that conduct supplier evaluation also benefit from improved quality and process performance and continuous cost reductions (Newman, 1988). The benefits of supplier evaluation are expressed in various ways. For example, Carr and Pearson (1999) represent one common view when arguing that supplier evaluation" provides the buying firm with a better understanding of which suppliers are performing well.

Supplier evaluation is a field that continues to attract significant focus in supply chain management literature with effective evaluation and selection of suppliers considered to be one of the critical roles of procurement officers (Narasimhan, 2001). A number of parameters exist for the evaluation and selection of suppliers which

include: quality, price, and on-time delivery (Ning Pi, 2005). According to Lysons (2008) suppliers can be appraised on eight areas, namely: finance, production capacity, human resource, quality, performance, environmental and ethical considerations, and organizational structure. The appraisal criteria is summarized by Carter as the 'seven Cs' which represent: competency, capacity, commitment, control systems, cash resources and financial stability, cost commensurate with quality and service and consistency (CIPS, 2012). The performance of suppliers substantially impacts on the efficiency and effectiveness of the buying firm and is of great importance (Fredriksson, 2011).

The government of Kenya has a procurement and disposal act (2005) which aims to establish procedures for procurement and the disposal of unserviceable, obsolete or surplus stores and equipment by public entities to maximize economy and efficiency, promote competition and ensure that competitors are treated fairly, promote the integrity and fairness of those procedures, increase transparency and accountability in procedures and to increase public confidence in those procedures and facilitate the promotion of local industry and economic development, private companies have borrowed a leaf from this policy and are coming up with their own to support fair and competitive supplier engagement.

Supplier evaluation is a management activity whose primary aim is acquiring information to analyze and to manage supplier relationships and supply situations Li et (2006). The process entails the simultaneous consideration of a number of critical supplier performance features that include price, delivery lead-times, and quality. The importance of supplier evaluation is evident from its impact on firm performance and more specifically on final product attributes such as cost, design, manufacturability, quality, and so forth (Sarkis &

Talluri, 2002). The organization (buyer) is in a much better position to evaluate an existing supplier, based on his past performance than is the case with a new supplier. The techniques and methods of this evaluation usually tend to concentrate on performance in regards to different factors like quality, quantity, timing, service, and price.

# State corporations in Kenya and Geothermal Development Company (GDC)

The Kenya government forms state corporations to meet both commercial and social goals. They exist for various reasons including: to correct market failure, to exploit social and political objectives, provide education, health, redistribute income or develop marginal areas. At independence in 1963 parastatals were retooled by sessional paper no. 10 of 1965 into vehicles for the indigenization of the economy. Thus majority of parastatals that exist today were established in the 1960s and 1970s. By 1995 there were 240 parastatals. The main economic activities of parastatals are manufacturing and mining, finance, distribution, transport electricity and other services (swamy, 1994). State Corporations in Kenya have been experiencing a myriad of problems, including corruption, nepotism, and mismanagement (Daily Nation, March 12, 2003).

State Corporations are organizations where the government owns more than 50 percent of the share capital, thereby making it the single largest shareholder. According to the Report of the Presidential Taskforce on Parastatal Reforms (2013), a State Corporation shall be an entity howsoever incorporated that is solely or majority owned by the government or its agents for commercial purposes. The taskforce report cautions that a commercial function is one governed by a competitive profit driven market and can be performed commercially although Parastatals can also serve strategic socio-

economic purposes as my be defined by the President from time to time.

The Geothermal Development Company (GDC) is a 100% state-owned company, formed by the Government of Kenya as a Special Purpose Vehicle to fast track the development of geothermal resources in the country and a vehicle to accelerate the development of geothermal energy. The company was incorporated in 2008 and has made significant strides in building the necessary infrastructure and models that will spur growth in the geothermal sector. GDC is powering Kenya to a golden age as of end of October 2015, GDC had 409 MW of steam at the Olkaria geothermal field, out of which about 320 MW has been converted into electricity and fed into the national grid. Further, GDC has mined 13 MW of steam at the Menengai Geothermal field and contracted three independent power producers to put up power plants of 35MW each (Business Excellence, 2014).

#### **Statement of the Problem**

Traditionally, the basic supplier selection tool has been the competitive bid and suppliers have been selected on the basis of the competitively of their offer. However, there are more and more situations in which competitive bidding is not sufficient: this is the case whenever close relations have to be established with suppliers. Buyers must then proceed to a comprehensive evaluation of their potential suppliers and need to assess their overall capabilities as much as their ability to fulfill specific needs. In order to satisfy the emerging demand for a reservoir or panel of dependable suppliers, accessible at all time as specific needs arise, the supplier selection process must comprise two distinct activities. First is a continuous activity of supplier qualification in which suppliers are evaluated on the basis of their capabilities and secondly is a discrete activity of supplier selection triggered by specific needs and in which suppliers

are evaluated on the basis of their offer and capabilities. It is important to bear in mind that generally speaking the construction of a panel of qualified suppliers entails significant expenses that might be justified only for critical purchase segments (Aseka, 2010).

Several studies have been undertaken on supplier selection and evaluation. Among the studies, Završnik (1998) studied how important the selection and evaluation of suppliers is in the management of purchasing and established that purchasing management has a significant bearing on the profitability and performance of organizations and their overall competitiveness. According to Agaba and Shipman (2006), negative procurement practices are manifested in wrong computation of costs by evaluation teams, shoddy commodities and goods, poor performance of construction works, failure to complete performance of contracts on time or not at all.

In a study that was done by Schiele (2007) established that extensive supplier audits significantly influence a firms performance level. Effective procurement promises to cut operational costs all across the supply chain, but it also raises the expectations of buyers posing a challenge for buyer satisfaction and supply chain performance. Weber, Current, and Benton (1991) in their study showed that assessment of a supplier's willingness and ability to share information significantly affects performance. However, less has been done in developing countries as these studies were majorly done in the developed countries. There is clear evidence of prolonged inefficiency, financial mismanagement, waste and malpractices among these, lack of procurement ethics in many Kenyan and parastatals (Aseka, corporations 2010). Government demands high procurement performance, efficiency and reduced cost in respect of supply and service cost to be reduced and one of the ways is supplier evaluation and this explains

why it is paramount for the Parastatals to undertake vigorously supplier evaluation.

A number of studies have been done in the area of procurement in Kenyan context. Ondieki (2000) for instance in his study recommended manufacturing firms should borrow a leaf from those that have successful proactive procurement functions in place. However, the study did not show the benefits firms stand to gain by adopting proactive procurement practices. Kakwezi and Sony (2010) illustrated that procurement planning is an ingredient to service delivery, but the study focused on service delivery ignoring other measures of procurement like financial gains from cost reduction. On the other hand Nantage (2011) asserts that strategic procurement management has a direct impact on the financial performance of financial Banks.

However, despite there being numerous studies done in the developed countries, limited research has been done on the role of supplier evaluation on procurement performance in state corporations of Kenya. The previous studies by Nantage (2011), Kakwezi and Sony (2010) on supplier evaluation did not consider the variables discussed in this study include supplier which finances, quality management, supplier relationship management, organization policy and procurement performance. These studies also focused on the service industry while this study addresses the role of supplier evaluation in Kenya in a manufacturing industry context. Therefore this study was undertaken to fill this extant research gaps by establishing the role of supplier evaluation on procurement performance in State Corporation in Kenya, a case of Geothermal Development Company.

#### **Objectives of the Study**

The overall objective of this study was to establish the role of supplier evaluation on procurement performance in State Corporation in Kenya, a case of Geothermal Development Company. The specific objectives were:

- To determine the role of supplier finances on procurement performance in Geothermal Development Company.
- To find out the role of quality management on procurement performance in Geothermal Development Company.

#### LITERATURE REVIEW

#### **Theoretical framework**

## Transaction Cost Economics Theory and Resource Based View

In transaction of cost economics (TCE), the focus of the firm is to minimize the sum of transaction costs production costs (Williamson, Transaction costs affect the firms' decisions on how they organize their activities, whether to move towards vertical integration (hierarchy) or to prefer market exchange. Thus, According to TCE, the decision of whether to collaborate or not should be based on the efficiency of governance. Transaction cost economics theory identifies and explains the conditions suitable for a firm to manage an economic exchange internally, and the conditions under which it should manage an economic exchange externally. Heide and John (1990) argue that transaction cost analysis is useful in studies of relationships, because it provides insights into the circumstances that cause the development of a closer relationship between the buyers and suppliers. Heide and John (1990) base their theoretical argument on Williamson's (1979) studies stating that the establishment of a closer relationship corresponds to a shift away from market-based exchange toward bilateral governance.

Resource based view(RBV) and transaction cost economics (TCE) are important to the study of

supplier management, as superior performance achieved in supply chain activities relative to competitors, would explain how these activities can be supported by suppliers and how supplier selection/evaluation/development can contribute to the supply chain core competences (Blomqvist, Kyläheiko, & Virolainen, 2002). Applying TCE underlies the aspects of efficiency and cost focus. Especially, it defines the boundaries of a firm. RBV refers to the firm's internal value creation through its resources and capabilities. Value can be created from supplier relationship management through learning mechanisms, routines and experience. RBV applies the aspects of external and internal social relations, power distribution and the level of dependency on external counterparts. It aims at the optimization of the continuity of the business and the autonomy of affirm. As a summary, it can be said that these theories support the purpose of supplier management, diffusion of supplier information between business units, minimization of transaction costs, value creation through internal capabilities and resources, and reducing the risks of supply dependence and availability. In this study TCE and RBV theories were used to assess how finances and supplier relationship supplier management affects procurement performance of Geothermal Development Company.

#### **Deming Cycle Model**

Deming is best known as a pioneer of the quality management approach and for introducing statistical process control techniques manufacturing to the Japanese, who used them with great success. Deming (1982) believed that a key source of production quality lay in having clearly defined, repeatable processes. And so the PDCA Cycle as an approach to change and problem solving is very much at the heart of Deming's quality-driven philosophy. The four phases in the Plan-Do-Check-Act Cycle involve: Plan: Identifying and analyzing the problem. This can be done by

using quality management tools like Cause and Effect Diagrams so as the root cause is identified. Do: Developing and testing a potential solution. This phase involves several activities: 1) Generate possible solutions. 2) Select the best of these solutions; perhaps using techniques like Impact Analysis to scrutinize 3) implement a pilot proposal on a small scale basis, with a small group, or in a limited geographical area, or using some other trial design appropriate to the nature of your problem, product or initiative. The phrase Plan Do Check Act or PDCA is easy to remember where do means to try or to test. Check: Measuring how effective the test solution was, and analyzing whether it could be improved in any way. Depending on the success of the pilot, the number of areas for improvement that has been identified, and the scope of the whole the cycle should initiative, be repeated incorporating the additional improvements. Act: Implementing the improved solution However, use of the PDCA Cycle doesn't necessarily stop there. The PDCA or Deming Wheel should be continuously repeated from the Plan Phase (Step 1) so as to identify further areas for improvement as part of a continuous improvement initiative(Evans & James, 2007). The study thus used this theory to find out whether quality management affects performance procurement of Geothermal Development Company.

#### **Supplier Finances** Liquidity ratios Working capital Procurement Gross profit performance margin Improved **Quality Management** quality Cost Quality assurance reduction systems Implementation of TQM Procedures for inspection

**Conceptual Framework** 

#### Independent variable Dependent variable

#### Figure 1: Conceptual Framework

## **Supplier Finances**

Supplier's financial condition need to be evaluated at the earliest stages of supplier appraisal. Some purchasers view the processes as a pre-screening exercise that a supplier must pass before a detailed evaluation process can begin (Handfield, 2008). According to the Chartered Institute of Purchasing and Supplies (2012) financial status and stability are measured by factors such as profitability, cash flows management, assets owned, debts owed among other factors.

The financial criterion is important since selection of a supplier with poor financial conditions presents a number of dangers to the purchaser. To start with, is the danger that the supplier will go out of business. Then suppliers with poor financial health will not have resources to invest in plant, equipment, or research necessary for long-term performance improvements. Thirdly, the supplier may become so financially dependent on purchaser. Lastly, financial weakness seems to be an indication of underlying problems (Handfield, 2008). Buyers prefer suppliers to be reasonably profitable because they are interested in continuity and on-time delivery. A supplier with cash-flow problems will have difficulty paying their bills, and consequently in obtaining materials, their delivery times and possibly product quality will probably suffer. The financial stability will equally reflect on the ability of suppliers to meet the current contract with the purchaser and to ensure a secure future flow of supplies. The financial records may also indicate the risk of delivery or quality problems and more disruptions to supply and more complex legal issues if a supplier becomes insolvent. A supplier that is financially unstable poses three nightmares to the buyer. A buyer may need to insist on quality but the supplier is forced to cut on costs; a buyer may have

a claim against the supplier but he may not have sufficient working capital; to meet it and a buyer may wish to insist on speed delivery but supplier cannot pay overtime (Lysons, 2008).

In addition to financial stability of the supplier, a buyer should equally look at a supplier's price and cost factors. Evaluating a supplier's cost structure needs a deep understanding of a supplier's total costs, including: direct labor costs, indirect labor costs, material costs, manufacturing costs and the general overhead costs. Understanding cost structure of the supplier will help a buyer determine how efficiently a supplier can produce an item and at the same time provide means for identification of areas of costs improvement (Handfield, 2008).

#### **Quality Management**

The British Standards definition of quality is "the totality of features and characteristics of a product of a product or service that bear on its ability to satisfy given need (CIPS, 2012). A buyer needs to assess and ensure that a supplier has robust systems and procedures in place for monitoring and managing its outputs. The systems for the detection and correction of defects are called quality control while those for prevention of defects are known as quality assurance and a buyer needs to check whether the supplier has these in place (Lysons, 2008).

According to Handfield (2008) an important part of evaluation processes touches on a supplier's quality management systems and philosophy. According to Lysons (2008) firms appraising quality of suppliers will find themselves looking at the following issues: procedures for inspection and testing of purchased materials, accreditation with national and international quality standards bodies such company standards, Association of Trade Standards, International standards organization (ISO) and British Standards Institution (BSI) (Lysons, 2008). The success of the buying organization is highly dependent on how well the suppliers perform. It is

also important that the supplier and the buyer have the same idea of what satisfactory quality is (Gallego, 2011).

Globalization of market economies has urged corporations in all sectors to concentrate on maintaining a sustainable competitive edge, which is directly, related to the upkeep of quality both in terms of services as well productivity. An effective model of such a vision of success is Total Quality Management (TQM), which is a management approach for an organization, centred on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society (ISO). It is the coordination of efforts directed at improving customer satisfaction, increasing employee participation, strengthening supplier partnerships, and facilitating an organisational atmosphere of continuous quality improvement (Ramasamy, 2012).

According to Oakland (1995), TQM is an approach to improving the competitiveness, effectiveness and flexibility of the whole organisation. It is essentially a way of planning, organising and understanding each activity, and depends on each individual at each level. TQM requires that the company maintain this quality standard in all aspects of its business. This requires ensuring that things are done right the first time and that defects and waste are eliminated from operations. According to Dale (2003), changing the life-long behaviour, customs, practices and prejudices of an organization is not easy (Ngatia & Chirchir, 2013).

Organisations committed to quality will strive continually to improve the quality of their goods or services, and they are committed to change, but in many cases they were intended to be stable and unchanging. Good reasons must exist either inside or outside the organisation to precipitate the process of change and get managers to recognize that they need to improve their business. Business

competition on a national and global scale is becoming fierce and excellence is the value required by the company to survive and grow in this competitive arena. According to Omachonu and Ross (1994), quality becomes an important solution to the objectives of business firms in achieving competitive advantage since all the strategies targeting the fulfilment of competitive advantage involve quality considerations in a manufacturing environment. It has also shown the same attributes in administrative and service industries. The roots of Total Quality Management (TQM) can be traced back to early 1920s when statistical theory was first applied to product quality control. This concept was further developed in Japan in the 40s led by Americans, such as Deming, Juran and Feigenbaum. The focus widened from quality of products to quality of all issues within an organisation hence the start of TQM.

TQM is firmly established today thanks in large part to the pioneering work of W. Deming. Deming's influence that is clearly evident in this list: Do it right the first time to eliminate cost rework; Listen to, and learn from, customers and employees; Make continuous improvement an everyday matter; Build teamwork, trust and mutual respect. (Juran, 1989). The overall objective of TQM is to ensure continuous improvement in the organization's people, systems, processes and environment so as to achieve improved customer service increased profits through efficiency and effectiveness in the entire organization (Ngatia & Chirchir, 2013).

Since implementation of TQM is associated with benefits to both the organization and its clients, it is regarded a double sided competitiveness tool. Implementation of TQM is an elaborate process that takes time and resources. It is a process that must be initiated and managed by the top management. The top management must make

available all critical resources required as well as the organizational structure and culture required. The process must focus on finding out, meeting and exceeding customer needs and expectations through total involvement of everyone in the organization and through continuous improvement. This process requires exceptional skills and team work that call for continuous employees training and development (Oluwatoyin, 2008). Malcolm Baldrige National Quality Award (MBNQA) as discussed by Wali and Boujelbene (2011) developed six criteria practices that can be used to measure TQM. These are leadership, strategy and planning, customer focus, information and analysis, people management, and process management.

It is important to note that any organization can implement TQM irrespective of the size or operations. However, the success of the implementation process depends on how well the organization understands the process and the strategies adopted. One guiding principle in implementation of TQM is that the process must be organization wide; everyone and every function in the organization must be involved in the process with the management taking a leading role (Ngatia & Chirchir, 2013).

The commitment to TQM originates at the chief executive level in a business and is promoted in all human activities. The accomplishment of quality is thus achieved by personal involvement and accountability, devoted to continuous improvement process, with measurable levels of performance by all concerned. It involves every department, function and process in a business and the active commitment of all employees to meeting customer needs. In this regard the customers' of each employee are separately and individually identified (Pike & Barnes, 1996). With TQM, the whole organization works together to guarantee,

and systematically improve, product quality (Ngatia & Chirchir, 2013).

The aim is to make product of perfect quality with zero defects (Ngware, 2006). Quality management is not derived from a single idea or person. It is a collection of ideas, and has been called by various names and acronyms: TQM, total quality management; CQI, continuous quality improvement; SQC, statistical quality control; TQC, total quality control, etc. However each of these ideas encompasses the underlying idea of productivity initiatives that increase profit by improving the product. It is important to note that there are factors that may inhibit successful implementation of TQM. Arshida and Agil (2012) refer to them as barriers of TQM implementation. These factors include; lack of top management commitment which is associated with lack of critical resources and poor leadership leading to poor employee empowerment and motivation, poor or weak organizational vision and plan statement that dilutes employee's efforts in quality programs. Another important factor is Government influence that is associated with bureaucracy and slow systems. Lack of favorable quality policy or low Government support of quality programs makes it a challenge to adopt and implement quality initiatives.

#### **Procurement Performance**

According to Walker and Rowlinson (2008), the measurement of procurement performance is the first step in being able to understand the weaknesses and strengths of a given system and put into place corrective actions. Developing an effective method for measuring the performance of procurement requires certain indicators to make evaluation possible. The indicators of procurement performance include efficiency in the procurement process measured in terms of the cost of

transactions and time. Another indicator is transparency and openness of the procurement system with regards to fairness of participants. The workforce professionalism is also another indicator of procurement performance; a well trained and equipped workforce can enhance the performance of the process of procurement.

There should be a method for evaluating the performance of procurement especially within the public sector as they use taxpayer money for their operations. According to Musau (2015), the performance in procurement by State Corporations influenced Kenya heavily by implementation of inventory optimization, especially where e-procurement systems are used. The evaluation of procurement performance takes into consideration of both the strategic and operational dimensions of the procurement function. From the operational dimension. procurement performance relates to the costs of purchasing, product and/ or service quality, delivery and flexibility in procurement (Nair, Jayaram & Das, 2015). On the other side, the strategic dimension of procurement performance considers innovation in the purchasing process. In both cases, the measures that underlie the dimensions are multiple and range from cost and quality of the inputs/outputs, cost of purchasing activities, percentage of Just-in-time suppliers, inventory turns, procurement cycle times and on-time deliveries (Lysons & Farrington, 2006). Other indicators of procurement performance range from ability to respond quickly to changes in schedules and ability to access and utilize new technologies (Project Management Institute, 2004). Poor procurement performance on its part contributes to rising inefficiency as well as costs and competitiveness of the procurement function. According to Barsemoi, Mwangagi and Asienyo (2014), poor procurement performance contributes to decrease in profitability in the private sector hence is a major hindrance to the realization of organizational growth as it leads to delays in delivery, low quality goods and services and increase in defects. In both private and public sectors, poor procurement performance results from inability to embrace e-procurement, use traditional procurement procedures and poor coordination of procurement activities between the requisitioning departments and the procurement department.

### **Empirical Review**

Supplier evaluation can be defined to the process of evaluating and approving potential suppliers by quantitative assessment. According to Gordon (2008), supplier evaluation refers to the practice of approving and evaluating potential suppliers using quantitative methods to make sure that the best classes of suppliers are made available to supply products and services to an organization. Hald and Ellegaard (2011) define supplier evaluation as "the process of quantifying the efficiency and effectiveness of supplier action." This means that supplier evaluation is a process of quantifying the abilities of the supplier and the buying institution conducts evaluation to stimulate the behaviour of the supplier. Possible changes in behaviour range from implementation of green practices, improving social responsibility, improving quality, improving efficiency to lower costs, among others Supplier evaluation is also a process applied to current suppliers in order to measure and monitor their performance for the purposes of reducing costs, mitigating risk and driving continuous improvement.

Procurement performance is the state in which a firm is able to carry out its sourcing activities successfully. In his study, Schiele (2007) established that extensive supplier audits significantly influence a firms' performance level. The results showed a highly significant relationship between purchasing's maturity level and cost-reduction results.

Somewhat counter-intuitively, larger saving potential was identified in more developed firms. According to the study, if an organization's maturity is too low, the introduction of best practices, such as an innovative cost-reduction method, may fail.

A survey on public procurement in Kenya by the OECD (2007) found that overall; the performance of public procurement was 66% when using the BLI sub indicators. The results established that Kenya's regulatory and administrative framework was overly strong, compared to other aspects including transparency and integrity, management capacity and institutional framework, and market practices and procurement operations. While Kenya had a score above the threshold of 1.5 out of 3, there is still much room for improvement, especially on market practices and procurement operations.

State Corporations are organizations where the government owns more than 50 percent of the share capital, thereby making it the single largest shareholder. According to the Report of the Presidential Taskforce on Parastatal Reforms (2013), a State Corporation shall be an entity howsoever incorporated that is solely or majority owned by the government or its agents for commercial purposes. The taskforce report cautions that a commercial function is one governed by a competitive profit driven market and can be performed commercially although Parastatals can also serve strategic socioeconomic purposes as may be defined by the President from time to time.

The PPDA of 2005 stipulates the guidelines to be followed by public institutions in the procurement process. In their individual, capacities, organizations develop procedures and regulations to be followed in the acquisition of materials. An effective and efficient procurement process ensures that materials are sourced and availed when required without delays. It checks against the costs of stock-

outs and ensures that materials are acquired competitively and at reasonable costs. There exist glaring disparities on the overall execution of the procurement process between the private sector and public sector institutions (Johnson, Leenders, & Flynn, 2011). Kipkemboichemjor (2015) research on supplier evaluation criteria and procurement performance on Parastatals in Kenya .The study emphasized that the supplier criteria used to source for supplier by Kenya Parastatals will determine the procurement performance of a firm. Among the factors that were considered include, the quality of products/service, the price of products/service and the organizational culture of the firm.

Aseka (2010) did a study on supplier selection criteria and performance of manufacturing firms listed in the Nairobi Stock Exchange. The study found a positive relation between effective supplier selection and organization performance. It illustrated that, firms considered quantitative factors such as the suppliers' technical expertise, commitment to quality and ability to meet delivery due dates in supplier selection than qualitative factors such as suppliers' willingness to share confidential information.

In their study, Mwikali and Kavale (2012) seeking to identify the factors affecting supplier evaluation illustrated that; cost, technical capability, quality assessment, organizational profile, service levels, supplier profile and risk factors are the major factors affecting selection of suppliers. Their study concluded that a cost criterion is a key factor affecting supplier selection for it dictates among many elements, the profit margins. Technical capability, quality of materials and the profile of the supplier are also closely considered.

In a study conducted by Masiko (2013), strategic procurement practices contributed to increased

performance of procurement in Commercial Banks. The practices mainly included; clear identification and setting measurable objectives, development of strategies and tactics, supplier relationship management plan, measurement plan, category management and spend management plans and technology utilization. Procurement is increasingly becoming one of the critical and strategic functions of every organization with the potential to contribute positively to the success of operations leading to reliable service delivery and competitiveness. Strategic procurement indeed sets in motion the entire acquisition/ procurement process of all the purchases by the commercial banks. The study illustrated that organizations need to consider the environmental friendliness of the supplier, employee capabilities of the supplier and price factors which are significantly influencing performance of the procurement. Other factors including financial stability, quality issues, and supplier's organizational production culture, capacity of the supplier and preference and reservation were found to have no significant effect on performance.

According to Barsemoi, Mwangagi and Asienyo (2014), some of the factors that contribute towards procurement performance in Kenya's private sector include staff competence, organizational structures that allow for open decision making, quality management systems and the use of information technology not only to ensure dissemination of information but also the accuracy of information reaching to all stakeholders. The authors observe that the use of IT in relaying information ensures that all suppliers get access and this reduces information asymmetry. The participation of many suppliers consequently raises the levels of competition and quality resulting in the best value of sourced materials to private sector companies. While the PPDA of 2005 has been in operation since 2007, Kenya's public institutions have been riddled with corruption resulting in many court cases and cancellation of contracts due to allegations of irregularities in the award of such contracts (Engelbert, Reit & Westen, 2012). In the public sector, procurement is used as a business tool by the government to improve the participation of disadvantaged groups such as Women and the Youths. The realization of such objectives; coupled with the need to get the best value for public funds requires effective and efficient procurement processes.

Recent research by Barsemoi, Mwangagi and Asienyo (2014) points out that the use of the internet and IT infrastructure has had revolutionary effect on the execution of the procurement function including raising the levels of integrity in the process. Application of IT in the procurement process is singled out as one of the sure ways of reducing information asymmetry among suppliers. The authors report that the use of IT in the private sector is one of the factors that have led to transparency in private sector procurement and also improved the competitiveness in the procurement process. In acknowledging this importance, the government has put in place ultimatums for various public to procurement entities automate their procurement processes.

Nasra (2014) also did a study seeking to establish the relationship between procurement performance and operations efficiency in the telecommunication industry in Kenya. The study found that flexibility ensured procurement performance to a great extent. Other factors were found to include; Cost, time, and quality that also played a great role in ensuring procurement performance. Nzau and Njeru (2014) in their study on the factors affecting procurement performance in public universities and find that procurement planning, staff competency management support

on procurement performance in public universities in Nairobi County. They report that 94% of respondents indicated that procurement departments prepared procurement plans. They further report that 79 percent of the respondents were of the view that procurement staff lacked adequate skills in supply chain management. Nevertheless, they report that 76 percent of the respondents acknowledged the efforts management in providing professional support including training and educational opportunities for procurement staff. Since procurement staffs are involved in the selection and evaluation of suppliers, report by 76% of respondents that procurement staffs have inadequate skills creates suspicion as to the objectivity with which they can undertake supplier selection and evaluation. Nzau and Njeru (2014) recommend that management at universities enhance public training professional support so as to enhance procurement performance.

## **RESEARCH METHODOLOGY**

This study was conducted through descriptive survey research design. Geothermal Development Company had an approximate population of 1080 employees spread in various regions, subsidiaries and head office. The target population for the study included top management, procurement department and user departments that directly relates with procurement department in sourcing process. Out the approximate 1080 employees, the departments involved had an approximate of 180 employees at geothermal development corporation headquarters.

The GDC staffs at the head office were all management staffs in various departments. For the purpose of this study, the department was viewed as strata and individuals were picked randomly from each department for the study. The assumption was that at least all of them had an opportunity to

participate in procurement performance implementation in one way or the other.

Primary data was used for this study. It was collected using self —administered questionnaires. The tool was semi-structured and the questions sought to determine the extent to which the independent variables affect the procurement performance in GDC. It consisted of both open and closed ended questions. The questions were designed to elicit responses for both qualitative and quantitative analysis. Drop and pick later method was used to administer questionnaires.

The pilot survey results formed the basis of modifying the questionnaire for the subsequent full-scale survey. The data from the completed questionnaires was cleaned, coded and entered into the computer using the statistical packages for social sciences (SPSS version 21) for analysis. The software package enabled the researcher to analyze the data into percentages, means and standard deviations.

#### **FINDINGS**

The data was collected from the management and staff of Geothermal Development Company. The sample of the study consisted of 54 respondents. Out of 54 respondents the questionnaires were filled and returned by 47 respondents translating to a response rate of 87%. Cronbach's alpha was used by the researcher to test on the internal consistency of the items in the questionnaire used in the study.

The study sought to establish the respondents departments in order to determine if the respondents were from the key departments concerned with the execution of procurement functions. Based on the study findings, the majority 21.3% respondents were from production department, an equal of 17.0% each were from quality assurance department and finance department, 14.9% were from procurement

department, 12.8% were from stores department, 10.6% were from top management staffs and a minority of 6.4% from ICT department. This demonstrated that the majority of the respondents were involved in the execution of supply chain management functions which helped ingathering reliable data on the role of supplier evaluation on procurement performance in State Corporation in Kenya, a case of Geothermal Development Company. On education level of the respondents, 57.45% had bachelor's education level, 19.15% had diploma education level and 17.02% had master's education level. A minority of 2.12% and 4.26% had doctorate and certificate level education. These findings implied that most of the respondents were qualified to understand the nature of the study problem. On working experience of respondents, 14.9% of the respondents indicated they had a working experience of less than an year, 25.5% had a working experience of 1-3 years, 42.6% had a working experience of 3-5 years, 8.5% had a working experience of 5-10 years and 8.5% had a working experience of over 10 years (See Table 4.5).

#### **Supplier Finances**

The study sought to determine whether supplier finances are considered during supplier evaluation in the organization as a measure to improve the procurement performance. The study found out that a large percentage of 72.3 with a frequency of 34 were of the opinion that supplier finances was considered during supplier evaluation in the organization while only 27.7% of the respondents with a frequency of 13 were of the contrary opinion. From this data the study deduced that supplier finances was considered during supplier evaluation in the organization as a measure to procurement performance as improve the confirmed by the response from the majority of the respondents resulting to collection of reliable data.Supplier's financial condition need to be

evaluated at the earliest stages of supplier appraisal.

According to the likert-scale from the questionnaire that sought to determine the extent which supplier finances indicators play a role in procurement performance, 1 represented strongly disagree, 2 represented Disagree, 3 represented Neutral, 4 represented Agree, 5 represented strongly agree. Based on the study findings, most respondents strongly agreed to the statement that company suppliers had sufficient capacity to fulfill the orders. Respondents also agreed to the statements that the scale of borrowing and the ratio of debts to assets of the supplier are assessed; Supplier possibility of takeover or merger that will affect the ability to supply was low; The return on assets, employed by a supplier are considered. However, respondents were neutral to the statement that the profitability and the relationship between supplier's gross and net profits over the last three years was stable. Finally, based on the study findings respondents disagreed to the statement that the turnover of the supplier was calculated over the last three years. In additions to financial stability of the supplier, a buyer should equally look at a supplier's price and cost factors. Evaluating a supplier's cost structure needs a deep understanding of a supplier's total costs, including: direct labor costs, indirect labor costs, material costs, manufacturing costs and the general overhead costs. Understanding cost structure of the supplier will help a buyer determine how efficiently a supplier can produce an item and at the same time provide means for identification of areas of costs improvement (Handfield, 2008).

### **Quality Management**

The study sought to find out the respondents 'opinion as to whether the organization held trainings and seminars to help in enhancing the capability of its employees' performance in an endeavor to meet the quality management goal. Based on the findings most of the respondents were

of the opinion that the organization held trainings and seminars.

The study sought to find out the respondents' extent of agreement of statements on quality management play a role on procurement performance in GDC. The findings indicated that most respondents strongly agreed that the supplier has met the quality approval criteria of quality measure organizations such as KEBS. Respondents also agreed to the statements that procedures are in place for the inspection and testing of purchased products by GDC; the statistical controls are applied regarding to quality. However, most respondents were neutral to the statements that the quality control covers evaluation of quality; the supplier implemented TQM; and that the supplier had met the criteria for the other BSI schemes like kitemark and safety mark. According to Fotopoulos and Evangelos (2010) Total Quality Management is a comprehensive and structured approach to organizational management that seeks to improve the quality of products and services through ongoing refinements in response to continuous feedback.

The study sought to get the respondent's opinion on the other factors of quality management in the respondent's organization that played a role on the procurement performance not captured by the likert scale that sought to determine the extent of agreement of statements on quality management that played a role on procurement performance in State Corporation in Kenya. The respondents gave various opinions on other factors of quality management that included; defects were screened out immediately after occurrence, defects were investigated at the source, quality comes from good design and that quality comes from inspection.

#### **Procurement Performance**

To be able to effectively analyze the responses made by the respondents in regard to procurement

performance, the researcher had to break down the Likert scale into five parts; 1 represented strongly disagree, 2 represented Disagree, 3 represented Neutral, 4 represented Agree, 5 represented strongly agree. Based on the study findings, most respondents strongly agreed to the statement that Procurement performance is measured by assessing the value of money of the goods and services procured. Respondents agreed to the statements that the organization maintains high levels of Quality of procured goods and services offered; public procurement influences achievement of government's goals and objectives; and that performance procurement enhances the organizational level of accountability. However, respondents were neutral to the statement that procurement performance has an effect on employee's code of conduct. According to Walker and Rowlinson (2008), the measurement of procurement performance is the first step in being able to understand the weaknesses and strengths of a given system and put into place corrective actions. The indicators of procurement performance included efficiency in the procurement process measured in terms of the cost of transactions and time. Another indicator was transparency and openness of the procurement system with regards to fairness of participants. The workforce professionalism was also another indicator of procurement performance; a well trained and equipped workforce can enhance the performance of the process of procurement.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

## **Summary of Key Findings**

The study sought to determine the role of supplier finances on procurement performance in Geothermal Development Company. The study found out that a large percentage of 72.3 were of the opinion that supplier finances was considered

during supplier evaluation in the organization as a measure to improve the procurement performance while only 27.7% of the respondents were of the contrary opinion. This was in line with the study findings made by Handfield (2008). Also, the study established that suppliers' finances have a significant positive correlation with procurement performance of 0.42. Increasing levels of suppliers' finances by a unit would increase the levels of procurement performance by 0.42.On overall, a majority of the respondents rated all suppliers' finances factors which included suppliers' turnover, profitability, suppliers technical capability, suppliers return on assets ratios and suppliers' gross margin and net margin ratios as playing a role on procurement performance to a great extent as indicated by the high levels of agreement from the respondents. Supplier's financial condition needed to be evaluated at the earliest stages of supplier appraisal. Some purchasers view the processes as a pre-screening exercise that a supplier must pass before a detailed evaluation process can begin (Handfield, 2008). According to the Chartered Institute of Purchasing and Supplies (2012) financial status and stability are measured by factors such as profitability, cash flows management, assets owned, debts owed among other factors.

The study sought to find out the role of quality management on procurement performance in Geothermal Development Company. Based on the findings most of the respondents were of the opinion that the organization holds trainings and seminars in an endeavor to meet the quality management goal as indicated by a percentage of 83 while a significant percentage of 17 were of the contrary opinion. Also, the study established that quality management had a significant low positive correlation with procurement performance of 0.22. Increasing levels of quality management by a unit would increase the levels of procurement performance by 0.22.On overall, a majority of the respondents rated quality management factors

which included; quality management certifications, TQM implementation by the organization and its suppliers, products inspections, screening of products defects, formulation of good product designs and quality controls by the organizations as playing a role on procurement performance to a great extent as indicated by the high levels of agreement from the respondents. However, the study found out that few suppliers met the British Standards Institution (BSI) international requirements as indicated by a neutral response from the respondents on that statement. Globalization of market economies has urged corporations in all sectors to concentrate on maintaining a sustainable competitive edge, which is directly, related to the upkeep of quality both in terms of services as well productivity. An effective model of such a vision of success is Total Quality Management (TQM), which was a management approach for an organization, centred on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society (Ramasamy, 2012). TQM requires that the company maintain this quality standard in all aspects of its business. This requires ensuring that things are done right the first time and that defects and waste are eliminated from operations. According to Dale (2003), changing the life-long behaviour, customs, practices and prejudices of an organization is not easy (Ngatia & Chirchir, 2013).

#### **Conclusions**

Based on the study findings, the study concluded that suppliers' finances and quality management played a role on procurement performance in State Corporations in Kenya. These were the major factor that mostly played a role on procurement performance in Geothermal Development Company.

The study also concludes that suppliers' finance was an important factor that played a role on procurement performance in Geothermal Development Company. The regression model of the study showed that suppliers' finance had a significant role on procurement performance. This implied that increasing levels of suppliers' finance by a unit would conversely increase the levels of procurement performance by an equal measure. Suppliers' finance factors which included suppliers' profitability, supplier's turnover, technical capability, suppliers return on assets ratios and suppliers' gross margin and net margin ratios as playing a role on procurement performance to a great extent as indicated by the high levels of agreement from the respondents.

The study finally concluded that quality management was also a factor which played a role on procurement performance in Geothermal Development Company. According to the study findings, quality management factors quality management certifications, TQM implementation by the organization and its suppliers, products inspections, screening of products defects, formulation of good product designs and quality controls by the organizations as playing a role on procurement performance to a significant extent as indicated by the high levels of agreement from the respondents. However, the study found out that few suppliers meet the British Standards Institution (BSI) international requirements as indicated by a neutral response from the respondents on that statement.

#### Recommendations

Based on the research findings, the study recommends that the firms consider supplier financial capability, return on assets, the profitability and the relationship between supplier's gross and net profits and turnover of the supplier during supplier evaluation in the organization as a measure to improve the procurement performance.

Improved procurement performance in the state corporations in Kenya cannot be realized without integration of quality management techniques in their supply chains. It is recommended that quality oriented product designing, investigation of defects at the source, immediate defects screening on occurrence and inspection of raw materials should be implemented in the operations to improve procurement performance. The study recommends that suppliers selected should meet the quality approval criteria of quality measure organizations such as KEBS, quality control techniques should be integrated organizations supply chains and that both the buyer and supplier should implement TQM in their organizations.

#### Areas for further research

The findings emphasized on the role of supplier evaluation on procurement performance in State Corporation in Kenya, a case of Geothermal Development Company. The studied variables included suppliers' finances and quality management. The two independent variables were observed to explain 70.2 percent of the procurement performance. Further research should be undertaken in the private sector and other countries to investigate the other factors that affect procurement performance.

#### REFERENCES

- Araujo, L., Dubois, A., &Gadde, L. E. (1999). Managing interfaces with suppliers. *Industrial Marketing Management*, *28*(5), 497-506.
- Aberdeen group, (2005) the supplier performance measurement benchmark report
- Beamon, B. M. (1999). Measuring supply chain performance. *International journal of operations & production management*, 19(3), 275-292.
- Barnes, T. (1996). *Kaizen strategies for successful leadership: How to take your organization into the future*. Financial Times Management.
- Carr, A. S., & Pearson, J. N. (1999). Strategically managed buyer—supplier relationships and performance outcomes. *Journal of operations management*, *17*(5), 497-519.
- Chemoiywo, P. K. (2014). *Public procurement procedures and supply chain performance In state corporations in Kenya* (Doctoral dissertation, University of Nairobi).
- Chen, Y. J. (2011). Structured methodology for supplier selection and evaluation in a supply chain. *Information Sciences*, 181(9), 1651-1670.
- Chimwani, B. I., Iravo, M. A., & Tirimba, O. I. (2014). Factors Influencing Procurement Performance in the Kenyan Public Sector: Case Study of the State Law Office. *International Journal of Innovation and Applied Studies*, *9*(4), 1626.
- Cooper, D. R., Schindler, P. S., & Sun, J. (2003). Business research methods.
- De Boer, L., Labro, E., &Morlacchi, P. (2001). A review of methods supporting supplier selection. *European journal of purchasing & supply management*, 7(2), 75-89.
- De Toni, A., &Nassimbeni, G. (2001). A method for the evaluation of suppliers' co-design effort. *International Journal of Production Economics*, 72(2), 169-180.
- De Toni, A., &Nassimbeni, G. (2000). Just-in-time purchasing: an empirical study of operational practices, supplier development and performance. *Omega*, *28*(6), 631-651.
- Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. The Journal of marketing, 11-27.
- Ellram, L. M. (1990). The supplier selection decision in strategic partnerships. *Journal of Purchasing and materials Management*, 26(4), 8-14.
- Forker, L., & Mendez, D. (2001). An analytical method for benchmarking best peer suppliers. *International Journal of Operations & Production Management*, 21(1/2), 195-209.

- Gadde, L. E., & Hakansson, H. (2001). Supply chain network Strategies.

  Gordon, S. (2005). Seven steps to measure supplier performance. *Quality progress*, *38*(8), 20-25.
- Giunipero, L. C., & Brewer, D. J. (1993). Performance based evaluation systems under total quality management. *Journal of Supply Chain Management*, 29(1), 35.
- Gunasekaran, A., Patel, C. and Tirtiroglu, E. (2001), Performance measures and metrics in a Supply chain environment, *International Journal of Operations and Production Management*
- Gordon, S. R. (2008). Supplier evaluation and performance excellence: a guide to meaningful metrics and successful results. J. Ross Publishing.
- Hendrick, T.E. and Ruch, W. A. (1988), Determining Performance Appraisal Criteria for Buyers, Journal of Purchasing and Materials Management
- Hirakubo, N., &Kublin, M. (1998). The relative importance of supplier selection criteria: the case of electronic components procurement in Japan. *International Journal of Purchasing and Materials Management*, 34(1), 19-24.
- Krause, D. R., &Ellram, L. M. (1997). Critical elements of supplier development The buying-firm perspective. European Journal of Purchasing & Supply Management, 3(1), 21-31.
- Lamming, R. C., Cousins, P. D., &Notman, D. M. (1996). Beyond vendor assessment: Relationship assessment programmes. *European Journal of Purchasing & Supply Management*, *2*(4), 173-181. Masaaki, I. (1986). Kaizen: The key to Japan's competitive success. *New York, Itd: McGraw-Hill*.
- Masolapublishers.Chartered Institute of Procuremnet and Supply', (n.d.).Supplier Selection
  - The Chartered Institute of Procurement and Supply. [Online] Cips.org. Available at: http://www.cips.org/en/Knowledge/Procurement-topics-and-skills/Supplier---bid---tender-evaluation/Supplier-Evaluation-and-Appraisal1/Supplier-Selection/[Accessed 2015].
- Mugenda, O. M. (1999). *Research methods: Quantitative and qualitative approaches*. African Centre for Technology Studies.
- Orodho, A. J. (2003). Essentials of educational and social sciences research methods. *Nairobi: Masola Publishers*. SundtoftHald, K., &Ellegaard, C. (2011). Supplier evaluation processes: the shaping and reshaping of supplier performance. *International Journal of Operations & Production Management*, 31(8), 888-910.
- Mwale, H., &Nyamwange, S. O. (2014). Supply Chain Management Practices and Organizational Performance of Large Manufacturing Firms in Nairobi, Kenya. Nairobi: University of Nairobi Press
- Conti, T. (2010). Systems Thinking in Quality Management. The TQM Journal, 22(4), 352-368.

- Fotopoulos, C.V., & Evangelos, L.P. (2010). The Structural Relationship between TQM Factors and Organizational Performance. *The TQM Journal*, 22(5), 539-552.
- Hughes, J. (2010). What is Supplier Relationship Management and Why Does it Matter? Retrieved May 25, 2015, from http://www. (Kase, 2004) solutions.com/solutions/supplier-management/
- Gituro, W.,& Bolo, A.Z. (2007). An Empirical Investigation Of Supply Chain Management Best Practices In Large Private Manufacturing Firms In Kenya. Department of Business Administration: University of Nairobi
- Manyura, M. P. (2012). Influence of Vendor Inventory management on organisational performance in retail outlets in Kenya: A Case of UchumiSupermarkets: unpublished MBA Project. School of Entrepreneurship and Procurement Management:Jomo Kenyatta University of Science and Technology
- Miguel, P. S., |&Ledur, L. A. (2011). Supply Chain Management measurement and its influence on Operational Performance. *Journal of Operations and Supply Chain Management*, 4 (2), 56 70
- Alvarado, U. Y.,&Kotzab, H. (2001).Supply Chain Management: The Integration of Logistics in Marketing. *Industrial Marketing Management*, 30(2), 183–198
- Chen, I. J.,&Paulraj, A. (2004). Towards A Theory of Supply Chain Management: The Constructs and Measurements. *Journal of Operations Management*, 24 (7), 1019-1050
- Njuki, (2013). Factors influencing green procurement practices at UNEP Kenya: unpublished MBA Project School of Business, University of Nairobi.
- Frohlich, M.T. & Westbrook, R. (2001).Arcs of Integration: An International Study of Supply Chain Strategies. *Journal of Operations Management*, 30 (5), 526-545
- Bosire, (2011). *Impact of logistics outsourcing on lead time and customer service among supermarkets in Nairobi*: unpublished MBA Project School of Business, University of Nairobi.
- Kamau, (2011). Buyer supplier relationship and organization performance: unpublished MBA Project School of Business, University of Nairobi.
- Billesbach, T. J., Harrison, A., & Morgan, S. C. (2009). Supplier Performance Measures and Practices in JIT Companies in the U.S. and U.K. *International Journal of Purchasing and Materials Management*, 2(2) 24-28.
- Black, S. P. (2010). Internal Certification: The Key to Continuous Quality Success. Quality Progress, 8(1) 67-68.
- Blomqvist, K., Kyläheiko, K., &Virolainen, V. (2002). Filling a gap in traditional transaction cost economics: Towards transaction benefits-based analysis. *International Journal of ProductionEconomics*, 79(1), 1-14.

- Bozarth, C., &Handfiled, R. (2008). *Introduction to Operations and Supply Chain Management* (2<sup>nd</sup>ed). Boston: Pearson Education.
- Buzacott, J. A., &Mandelbaum, M. (2008). Flexibility in manufacturing and services: achievements, insights and challenges. *FlexibleServices and Manufacturing Journal*, 20(2), 13-58.
- Caniëls, C. J., &Gelderman, C. J. (2007). Power and Interdependence in Buyer Supplier Relationships: A Purchasing Portfolio Approach. *Industrial Marketing Management* journal, 36(2), 219-229.
- Chang, S. (2008). An Investigation of Stock Depletion Cost and Its Effect on Inventory. *Journal of Supply Chain Management*. Vol. 27, No. 7. pp. 144-163.
- Charles, N. (2008). Centralised and decentralized procurement functions. *Journal of supply chain Management*.Vol.29, No.4. pp. 66-73.
- Compton, D. (2007). Purchasing and supplies chain Management. (3rd Edition). Newyork: Pearson Publishers
- Cooper, D.R., & Schindler, P.S. (2006). *Business Research Method* (9<sup>th</sup>ed).

  Boston: McGraw-Hill Irwin.
- Creswell, J.W. (2003). Research Design: *Qualitative, quantitative and mixed methods approaches* (2<sup>nd</sup>ed). Thousand Oaks: Sage.
- Evans & James, R. (2007). *Quality & Performance Excellence: Management, Organization and Strategy*. Mason, OH: Thomson Higher Education.
- Gall, M. D., Gall, J. P., & Borg, W.R. (2007). Educational Research (8<sup>th</sup> ed). Boston: Pearson Education Inc.
- Golder, A. (2007), Outsource recruitment to slash unnecessary costs. *Journal of supply chain Management*. Vol. 36, No. 4. pp. 144-148.
- Goldratt, E. M., & Cox, J. F. (1984). A Meta (1st ed). São Paulo: Nobel.
- Handfield, R.B. (2009). *Purchasing and supply chain management* (2nd Ed). New Jersey: Pearson Publishers
- Haouzi, H., Pétin, J., & Thomas, A. (2009). Design and validation of a product-driven control system based on a six sigma methodology and discrete event simulation. *Production Planning and Control*, 20(6), 510-524.
- Haynes, P. J., Helms, M. M., &Boothe, R. S.(2008). Rethinking the Manufacturing Focus: An Overlooked Strategic Tool. *SAM Advanced Management Journal*, 3(3)34-37.

Kannan, R.V., & Tan, K.C. (2005). Just in time, total quality management, and supply chain management: understanding their linkages and impact on business performance. *Omega Journal*, 33(3), 153 – 162.

Simpson, M. (2007), Benchmarking and the organization the performanceVol.18, No.9. pp. 138-142

Ngatia, C. W., &Chirchir, M. K. (2013). Supply chain management practices and performance of Kenya tea development agency managed factories. Nairobi: University of Nairobi Press

Public Procurement and Disposal Act. (2005). Procurement regulations. Nairobi, Kenya: Government Printer

Public Procurement oversight Authority. (2013). *Public procurement Regulations*. Retrieved August 7, 2015, from http://www.ppoa.go.ke, as at 30th January 2013