DETERMINANTS OF PROCUREMENT PERFORMANCE AT THE MINISTRY OF EDUCATION

Stephen Gitau Kimeria
MSc. Procurement and Logistics, Jomo Kenyatta University of Agriculture and Technology

Dr. Gordon Karanja Ngugi
Lecturer, Jomo Kenyatta University of Agriculture and Technology

CITATION: Kimeria, S. G. & Ngugi, G. K. (2013). Factors affecting customer loyalty in third party logistics in Kenya: A case of Roy Hauliers Limited. *International Journal of Social Sciences and Entrepreneurship, 1* (5), 812-832.

ABSTRACT

For most developing countries including Kenya education takes the largest share of the national budget with 13.5% of Kenya government spend going to education in 2011 and 17% in 2010 (RoK, 2013). With such a sizeable investment, a reflection of the realization of the crucial role that education or human capital plays in the development process is crucial. The Ministry of Education (MOED) system is in a bad state and the heavy investment is not yielding commensurate returns. There is urgent need to rethink the delivery of public education and this demands the attention of highest level of leadership, so as to make misappropriation of funds and questionable procurement processes a thing of the past. An effective public procurement system is essential for the smooth running of an economy. This study examined the determinants of procurement performance at the MOED, and specifically aimed to establish to what extent the following objectives which include: stakeholders, resource dependency, leadership style and technology influence procurement performance at the MOED. The study adopted a descriptive research design since the research sought to gather quantitative and qualitative data, summarize, present and interpret information for the purpose of establishing the determinants of procurement performance at the MOED. The study targeted 800 employees from the MOED head office in Nairobi. Descriptive and inferential statistics data analysis techniques were employed and findings presented on tables and charts. The study found out that performance of procurement in the MOED is largely influenced by the following determinants: stakeholders, resource dependency, leadership style and technology, with 90.7% correlation coefficient.

Key Words: *public procurement, stakeholders, resource dependency, leadership style, technology*

Introduction

This study sought to investigate the determinants of procurement performance in the MOED. Governments of both developed and developing countries spend a lot on goods and services to deliver public service effectively and efficiently, as well as to achieve value for money for taxpayers. To make efficient and effective use of the state's money, public procurement is needed. Public procurement is a practice that is used by public sector organizations to acquire goods, services and works from third parties. "It includes money spent by the public sector to provide key services directly to citizens" (Sarfo, 2011). The only way it can be beneficial to all would be for it to be effective. An effective public procurement system is essential for the smooth running of an economy, thus its institutions. A poor procurement system results in higher costs to government and the public. It interrupts the implementations of projects, and increases costs. It also causes poor execution of projects, and delays in the delivery of purchases to the beneficiaries.

Poor procurement performance also increases the likelihood of corruption, spawns concerns about the effectiveness of the law and its process. It also dampens the possibility of competent firms either national or international from participating in bids; this goes a long way to rob an economy of receiving the best goods, works and services and the best price (World Bank, 2000).

Procurement means the acquisition by purchase, rental, lease, hire purchase, license, tenancy, franchise, or by any other contractual means of any type of works, (PPDA, 2005). Procurement is every activity associated with the acquisition and supply of goods, works and services from inception of an idea requiring and leading to a "buy" decision top the disposal of the goods or the conclusion of the service (Charles, 2007). According to Corsten (2009), procurement commonly involves planning to purchase, determination of standards, development of specifications, research and selection of the supplier, value analysis, financing, negotiating price, making the actual purchase, administration of the supply contract, inventory control and stores, disposal and any other related functions.

According to the Public Procurement and Disposal Act, procurement performance is anchored along achieving the following objectives: to maximize economy and efficiency; to promote competition and ensure that competitors are treated fairly; to promote the integrity and fairness of procedures; to increase transparency and accountability in procedures; to increase public confidence in procedures; to facilitate the promotion of local industry and economic development (Mathew, 2009). In order to guide procurement performance, the Act establishes a Public Procurement and Disposal Regulations, manuals, guidelines, Public Procurement Oversight Authority and a Public Procurement Administrative Review Board to handle complains, reviews, and appeals emanating from procurement performances. All procurement duties, functions, processes, procedures, structures, threshold matrices and committees that steer procurement performance are therefore a reserve of this Act together with the Public Procurement and Disposal Regulations of 2006. Although this Act seeks to regulate public procurement and disposal, it is also an important stepping stone to procurement in the private sector. The Supplies Practitioners Management Act, 2007 was assented to law on 22nd October

2007 and commenced on 30th October 2007 to regulate both public and private sector procurement practitioners in a bid to professionalize procurement practice for best performance in Kenya (Andrew, 2010).

The provision of Free Primary Education (FPE) in Kenya is considered one of the most important pro-poor policies that also have the potential of reducing future income inequalities. For most children from poor livelihoods, the most sure way of to exit poverty and compete with others is by acquiring education that is quality. From this perspective, the FPE is an incredibly important policy. However, findings from Uwezo Kenya show that only 30% of Class Three children can read a Class Two English story book. 10% of Class Eight children cannot do Class two division mathematics (Uwezo, 2011). Such a system is in a comatose state and does not have what it takes to prepare children for the 21st century. It beats reason why a government would therefore be investing huge sums of and not focus on management of these funds downstream to ensure value is achieved especially in purchasing function. According to a World Bank (WB) study on service delivery indicators, data showed that scores in private schools were significantly higher in English and Mathematics by 16% and 10% respectively (WB, 2013).

In Kenya, there are three major acts that regulate public procurement: the Public Procurement and Disposal Act (PPDA), 2005; Public Procurement and Disposal Regulations (PPDR), 2006; and Supplies Practitioners Management Act (SPMA), 2007 (RoK, 2005; RoK, 2006; & RoK, 2007). The PPDA, which became effective on 1st January 2007 regulates all public procurement of goods, works and services together with disposal of assets. According to Duncan (2009), public procurement exists in central and local governments, courts, commissions, state corporations, cooperatives and educational institutions.

Literature Review

Agency theory

Agency theory is concerned with agency relationships. Two parties have an agency relationship when they cooperate and engage in an association wherein one party (the principal) delegates decisions and/or work to another (an agent) to act on its behalf. When making this decision, managers must consider the trade-off between: the costs of acquiring the information necessary for monitoring the agent behavior; and the costs of measuring outcomes and transferring risk to agents (Rungtusanatham et al., 2007). The important assumptions underlying agency theory are that: potential goal conflicts exist between principals and agents; each party acts in its own self-interest; information asymmetry frequently exists between principals and agents; agents are more risk averse than the principal; and efficiency is the effectiveness criterion (Ekanayake, 2004). Xingxing, (2012) suggests that rather than relying on one generic supply chain quality management approach for all suppliers, firms need to choose different management mechanisms for different suppliers based on the salient attributes of individual suppliers and their relationships with the buyers.

Along with the delegation of production and services, the responsibility of maintaining satisfactory quality of the supplied products and services is also delegated to suppliers, so buying firms need to ensure that suppliers provide products and/or services that conform to the quality requirements stipulated in the supply contracts. Moreover, competition these days is becoming supply chain versus supply chain rather than firm versus firm (Ketchen $ Hult 2007). So firms are working to increase customer satisfaction and gain competitive advantage by finding ways to improve the whole supply chain, from suppliers to end consumers. The above theory instigated the First research question in this study: What influence do stakeholders have on the procurement performance at the Ministry of Education?

Resource Dependency Theory

Resource dependence theory (Pfeffer and Salancik, 1978) marked a watershed in organizational research by positioning power at the core of organizational discourse. Although the notion of power featured in different forms and with varying emphasis in early organizational sociology (Barnard, 1938; Weber, 1947; Blau, 1964; Thompson, 1967), resource dependence theory was instrumental to focusing scholars on the power to control resource allocation as the key to organizational survival. The theory's central proposition is that organizations will try to manage their resource dependencies with a variety of tactics, such as the cooptation (Selznick, 1949) of sources of constraint, in order to achieve greater autonomy and thus reduce uncertainty in the flow of needed resources from the environment (Pfeffer & Salancik, 1978). An important way to understand the limits in the explanatory power of resource dependence theory is to recognize that organizations are not always capable to take actions to manage external dependencies. However, in its current form, resource dependence theory identifies conditions under which an organization is subjected to external constraints, and a variety of tactics with which organizations attempt to manage them; but it does not identify the conditions under which an organization's attempts to use such tactics would be successful.

The theory of Pfeffer & Salancik (1978) focuses mainly on absorbing certain resources within the organization to overcome dependency on external resources. Something that is hardly or not possible in the cases of financers. However, a university can focus more on alternative types of funding to become less dependent (Pfeffer & Salancik, 1978). For example, universities try to diversify their funding base to the second and third flow of funds, due to a decrease in state funding. Universities can adapt their organization by absorbing knowledge of the grant procurement processes. In the case a university employs personnel (make decision) with knowledge of the procurement processes, the organization is not dependable on others (buy decision) for this knowledge. At the same time, researchers experienced with grant procurement should be encouraged to stay on. In that case, the university is no longer dependent on the knowledge of others to complete the grant procurement process successfully.

Funding is an important resource for which universities are dependent on its environment. Universities are not solely dependent on funding through grants, let alone one specific grant regulation, because there are many grant opportunities. In addition to grant opportunities, universities and its researchers can claim other funding, like contract research. Due to this, a university is not dependent solely on one financer. However, it is possible that in some research areas there are more alternative regulations and other funding possibilities available than in other areas (Pfeffer, 2003). Thus, by using more than one funding resource, a researcher can ensure that he/she is less dependent on one source of funds. However, a researcher is still dependent on the demands of a financer. The above theory instigated the Second research question in this study: how does resource dependency affect procurement performance at the Ministry of Education?

Leadership Theories

There are several leadership theories that have emerged since 20th century, but this study relied on the following Five main leadership theories: Trait-Skills approach; Style-Situational Approach; Contingency or Path Goal Theory; Leader-member Exchange or Transformational Leadership Theory; and Integrated Psychological Approach.

The Trait-Skills Approach looks at the concrete task that the leader performs. The followers of this approach are able to evaluate the leader's daily activities and behavioral characteristics. The Trait Approach was the 1st systematic attempt to study leadership. In the 20th century it was known as the "great man" theory. This approach takes a look at the leaders personal attributes such as but not limited to: motivation, energy, intuition, creativity, persuasiveness and foresight. Some of the traits that are essential to this list include: intelligence, self-confidence, determination, integrity and sociability. Thus it focuses mainly on the leader and not on the followers or situations. The strengths of the Trait Approach includes: 1) it is intuitively appealing, 2) it has research to back it's theory, 3) it highlights the leader, 4) it identifies what the traits of a leader should have and whether the traits we do have are the best for leadership.

The weaknesses of the trait approach are: 1) failure to set the limits of a definitive list of leadership traits, 2) it does not take organizational situations into account, 3) has much one-sided interpretation of the meaning of data, 4) it is weak in describing how leaders' traits influence the outcomes of groups and teams in organizational settings, 5) it does not provide training and development for leadership because individual's personal attributes are for the most part stable and permanent and are not amendable to change (Northouse, 2010) By using trait information, managers can develop a deeper understanding of who they are and how they will affect others in the organization because benchmarks are established and provided in the trait approach in which individuals can use to evaluate their own personal leadership attributes (Northouse, 2010).

Hersey and Blanchard (1977) Situational Leadership Model rests on two fundamental concepts; leadership style and the individual or group's maturity level. The fundamental underpinning of the situational leadership theory is that there is no single "best" style of leadership. Effective leadership is task-relevant, and the most successful leaders are those that adapt their leadership style to the maturity ("the capacity to set high but attainable goals, willingness and ability to take responsibility for the task, and relevant education and/or experience of an individual or a group for the task") of the individual or group they are attempting to lead or influence. Effective leadership varies, not only with the person or group that is being influenced, but it also depends on the task, job or function that needs to be accomplished.

The path-goal theory of leadership was developed by Robert House (1971). The essence of the theory is "the meta proposition that leaders, to be effective, engage in behaviors that complement subordinates' environments and abilities in a manner that compensates for deficiencies and is instrumental to subordinate satisfaction and individual and work unit performance". The theory identifies four leader behaviors namely: achievement-oriented; directive; participative; and supportive, that are contingent to the environment factors and follower characteristics. The path-goal model can be classified both as a contingency theory, as it depends on the circumstances, and as a transactional leadership theory, as the theory emphasizes the reciprocity behavior between the leader and the followers.

According to (Burns, 1978), the transactional leader is given power to perform certain tasks and reward or punish for the team's performance. It gives the opportunity to the manager to lead the group and the group agrees to follow his lead to accomplish a predetermined goal in exchange for something else. Power is given to the leader to evaluate, correct, and train subordinates when productivity is not up to the desired level, and reward effectiveness when expected outcome is reached.

The Integrated Psychological theory of leadership is an attempt to integrate the strengths of the older theories (i.e. traits, behavioral/styles, situational and functional) while addressing their limitations, largely by introducing a new element – the need for leaders to develop their leadership presence, attitude toward others and behavioral flexibility by practicing psychological mastery. It also offers a foundation for leaders wanting to apply the philosophies of servant leadership and "authentic leadership". Integrated Psychological theory began to attract attention after the publication of Three Levels of Leadership model (James, 2011). James argued that the older theories offer only limited assistance in developing a person's ability to lead effectively. He pointed out, for example, that: Traits theories, which tend to reinforce the idea that leaders are born not made, might help us select leaders, but they are less useful for developing leaders. Most of the situational/contingency and functional theories assume that leaders can change their behavior to meet differing circumstances or widen their behavioral range at will, when in practice many find it hard to do so because of unconscious beliefs, fears or ingrained habits. Thus, he argued, leaders need to work on their inner psychology. Further, the Integrated Psychological theory states that none of the old theories successfully address the challenge of developing "leadership presence"; that certain "something" in leaders that commands attention, inspires people, wins their trust and makes followers want to work with them.

The above theories instigated the Third research question in this study: How does the leadership style influence the procurement performance at the Ministry of Education?

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is one of the most influential extensions of the theory of reasoned action. It was developed by Fred Davis and Richard Bagozzi. TAM replaces reasoned actions and attitude measures with the ease of use, and usefulness (Bagozzi, Davis & Warshaw 1992). TAM is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably: Perceived usefulness (PU) - This was defined as "the degree to which a person believes that using a particular system would enhance his or her job performance"; Perceived ease-of-use (PEOU) - defined as "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989).

Today, since organizations are investing huge amount of monies in Information Technology (IT), researchers and academicians have struggled to document the organizational gains from IT (Mitra, 2005). Senior executives have traditionally viewed IT as a back office function that is a “necessary cost” of doing business, without any strategic implications. In the recent years senior managers are now looking IT as a strategic resource and key enabler of growth. Once IT Application tools and software are implemented in the organization, the productivity can only be achieved by acceptance and uses of these tools and software by employees (Mitra, 2005). The above theory therefore instigated the Fourth research question: What is the influence of technology in the procurement performance at the Ministry of Education?

Stakeholder Influence on procurement performance in the MoED

According to Donaldson and Preston (1995), the stakeholder theory has become an indispensable part of the management literature. Frederick (1992), classified stakeholders into internal, external, key, and secondary ones, each carrying a different level of influence to the enterprise. When analyzing from the social network perspective, a firm does not deal with one stakeholder at a time, but multiple stakeholders simultaneously, with interdependent relationships among these stakeholders (Rowley, 1997). Consequently, the relationship between firms and their stakeholders are as complex as the ways to manage them.

The premise of stakeholder theory is that firms are bound to have conflicts with their multiple stakeholders. The central issue of stakeholder research is thus how to minimize these conflicts, within the stream of stakeholder research. Frooman (1999) took the approach of deciphering stakeholder actions and developed his stakeholder influence strategy theory from a resource-dependence perspective. As Frooman theorized, the type of resource relationship between the firm and its stakeholder determines where the power lies in the exchange. The level of “resource dependence” depends on the attributes of a resource, such as the relative magnitude of exchange in a resource relationship and the criticality of that resource. For example, if the firm depends on the stakeholder for a critical resource for survival, the stakeholder will have absolute power over the firm, and vice versa. Furthermore, the balance of power will determine the stakeholder’s choice of influence strategy. Willer, et al (1997) in defining power as “the structurally determined potential for obtaining favored payoffs in relations where interests are opposed”. An asymmetrical relationship occurs when one party has power over the other party in an exchange.

his asymmetrical relationship provides opportunities for one party to gain control over the other party.

Two important features marked Frooman's discussion of stakeholder influence strategies: the way the stakeholders control resources, and the path the stakeholders take to manipulate the supply of resources. If a stakeholder owns resources that a firm needs, the stakeholder can control the firm by determining whether the firm gets the resources and whether the firm can use the resources in the way it wants. Frooman called these "resource control strategies", and differentiated between two types of resource control strategies: withholding and usage. Withholding strategies are defined as those where the stakeholder discontinues the supply of a resource to a firm with the intention of making the firm change its action. Usage strategies, on the other hand, "are those in which the stakeholder continues to supply a resource, but with strings attached" For example, a strike is a withholding strategy carried out by employees; basing a continuation of supplies on a price increase or a change in contract deals is a common usage strategy used by suppliers. Because these two strategies carry different costs to the stakeholder, cost consideration sometimes become key determinant in the choice of influence strategy.

Another important feature of Frooman's theory was the choice of "paths" a stakeholder takes to exert influence on the firm. Two path-related strategies were defined in his model: direct and indirect. Direct strategies are "those in which the stakeholder itself manipulates the flow of resources to the firm, and are often used when the resource relationship is a continuous one, such as those between a firm and its employees, or a supplier and its customers. Indirect strategies are "those in which the stakeholder works through an ally, by having the ally manipulate the flow of resources to the firm. These allies can be called indirect stakeholders, but they often possess important resources to the firm which can be held hostage to sway firm decision. For example, employees often call upon the general public or the government as an indirect stakeholder to correct a firm's unethical employment practice.

Based on the balance of power in a resource relationship, Frooman presented the following four propositions for the four strategy types in his model of stakeholder influence strategy: 1.When the relationship is one of low interdependence, the stakeholder will choose an indirect withholding strategy to influence the firm; 2.When the relationship is marked by firm power, the stakeholder will choose an indirect usage strategy to influence the firm; 3. When the relationship is marked by stakeholder power, the stakeholder will choose a direct withholding strategy to influence the firm; 4.When the relationship is one of high interdependence, the stakeholder will choose a direct usage strategy to influence the firm.

Resource Dependency influence on procurement performance in the MoED

Kamann et al (2004), study revealed that resource dependency perspective is a reason for organizations to collaborate so as to gain more purchasing power to secure supply in a scarce market, or gain certain skills from other organisations that they do not possess themselves. Results from a study by Casciairo (2012), of inter-industry mergers and acquisitions among U.S.

public companies in the period 1985–2000 indicate that, while mutual dependence is a key driver of mergers and acquisitions, power imbalance acts as an obstacle to their formation while resource dependence model contributes to realizing the potential of resource dependency as a powerful explanation of inter-organizational action and competitive advantage.

In a report by European Network on Debt and Development (Eurodad), procurement policies are an important policy tool in the hands of governments to boost the national socio-economic fabric as part of their development strategies to gradually reduce aid dependence (Eurodad, 2009). In fact, civil society is increasingly concerned with moving the debate towards the final goal of the aid effectiveness agenda: the role of aid in supporting meaningful development strategies that enable developing countries to move on from aid, to resource dependency. In a study by Cohen & Levinthal (1989, 1990), absorbing new knowledge can help an organization become more innovative and flexible and achieve higher levels of performance than it would without absorbing new knowledge. In the study, firms that have higher abilities for absorbing new knowledge will have a competitive advantage over firms with lower abilities. A firm's technical knowledge tends to come from four sources:- (1) The firm conducts its own research and development (R&D); (2) The firm derives new knowledge from its own current manufacturing operations; (3) The firm borrows new knowledge from other organizations or other sources; (4) The firm purchases new knowledge, such as through buying new equipment, hiring new knowledgeable people, or paying a consultant to train individuals in the use of a new method;

Resource based theory takes a broader view of resources, focusing on the firm's competencies and capabilities of coordinating productive resources that are not transaction specific (Mc Williams & Gray, 1995; Poppo & Zenger, 1998). According to the resource perspective, transaction and management costs are dependent on heterogeneous capabilities and resources of the firm (Tsang, 2000). Therefore, boundary choices should be a function of the possession and composition of rare and inimitable resources that are a source of competitive advantage (Barney, 1991; Poppo & Zenger, 1998). In a study on vaccine procurement in developing countries, Woodle (2000), persistently insists that countries should begin to acquire the skills and infrastructure needed to independently and effectively manage procurement processes that will deliver the best value for the price paid and ensure a continuous supply of vaccine of known good quality and related health care commodities, both now and in the future, with lesser reliance on WB and WHO.

Leadership style influence on procurement performance in the MoED

A number of researchers have investigated the leadership styles and behavior of managers across hierarchical levels in organizations. Stordeur et al (2000), examined the cascading effect of leadership styles across hierarchical levels in a sample of nursing departments in Belgium, with eight hospitals including 41 wards. The authors also investigated the effect of hierarchical level on the relationships between leadership styles and various work outcomes. The results of their work provided no support for a cascading effect of leadership across hierarchical levels. The variation of leadership scores in their study was explained primarily by the organisational context. They concluded that the hospital's structure and culture were major determinants of leadership styles. However, Edwards (2000) recommend that leadership should be demonstrated at all levels of an organisational hierarchy, as they believe that effective leadership is a prerequisite for organisational success. Coad (2002), points out that transformational leadership at high levels in a managerial hierarchy appears to cascade to lower levels. The author presented a case study which shows that the effect may be blocked by the delegation of authority, by self-serving behaviour by a powerful group member, and through a lack of appropriate training and development at middle management levels. Coad therefore cautions against the assumption that the falling dominoes effect is automatic.

A study by Titus and Roger (2004), records the leadership styles of managers at different organizational levels. It contains a summary of the analyses for senior, middle and first-level managers in respect of their directive, consultative, participative, delegative and overall leadership style. It shows that the level of management is important in the importance and weight attached to the directives of managers – the higher the level of management, the greater the importance attached to such a directive by the recipient. Hence, a directive from a senior manager considered as not important by the middle-level manager, may be interpreted as significant by the first-level manager. It shows that hierarchy is still important in UK organizations although where there are long chains of command, differences in directives between the next levels of command may not be easily apparent. There are no significant differences between any of the levels of management in consultative leadership style.

Participative leadership style is, however, significantly practised between senior and first-level managers but not between senior and middle-level managers or between middle-level and first-level managers. Participation, for example, in policy formulation and decision-making, is highest at the senior management level and lowest at the first-level of management, as one would expect.

In their research on leadership styles, Titus & Rogers (2004), further show that there are significant delegative practices at each of the three management levels with the senior positions taking greater effect. Delegation is the means by which senior managers pass on the jobs of an organisation to their lower-level managers and employees in a hierarchical fashion. Managers and those to whom they delegate should both appreciate the fact that delegation is not only desirable but also necessary, i.e. no organisation can really function without it as delegation is the means by which managers get their work done (Oshagbemi, 1999). It allows work to be distributed for organisational effectiveness. It gains the advantages of the division of labour and enables every member of an organisation to play a part.

Technology influence on procurement performance in the MoED

Numerous studies have proven the potential of technology, according to these researches, technology facilitates organizations to decentralize their operational procurement processes and centralize strategic procurement processes as a result to provide higher supply chain transparency using technology system (Puschmann & Alt, 2005). Ariba and Commerce-One were founded on the premise that technology software that automates the requisitioning process will be able to reduce processing cost per order from as high as $150 per order to as low as $5 per order" (Simchi-Levi, Kaminsky & Simchi-Levi, 2004). Compared to tradition procurement transaction, using technology can reduce cost per transaction by 65% (Davila, Gupta, & Palmer, 2003).

According to Presutti (2003), technology used for inter-organization also enhances the benefits of technology within an organization. Companies using technology system reported that they achieve saving up to 42% in purchasing transaction cost allied with less paperwork, which enables transaction processes to less mistake, and more efficient purchasing. Paper-based procurement process implies transaction costs range from $70 to $300 per purchase order. General Electronic saw those cost drops to 30% by using technology system. A recent study by Accenture (2012), on high procurement, insights into performance in Contributors Accenture Research and Compulsive reveals that leading companies make extensive use of procurement technology to drive high performance. The technology employed varies, but fundamental elements are consistent among procurement masters. The study also found that Data is highly visible, and allows for full reporting and reporting excellence as well as simulation, forecasting and sensitivity analysis of total product cost. The study also found that most of the value gained with a procurement technology platform comes from reduced costs for goods and services, supported by strong procurement compliance programs to prevent the erosion of realized savings.

The balance of the savings comes from greater operational efficiencies that is, reduced costs to serve. Reduced costs of goods and services, along with better compliance, accrue from: a smart but controlled requisition-to pay process, use of electronic sourcing, enhanced supplier management, effective contract lifecycle management, greater supplier collaboration, use of business intelligence, data warehousing and spend analytics; more efficient data maintenance and improved data accuracy. Reduced costs to serve accrue from: improved invoice management and optimized settlement channels, automated workflows for reviews and approvals, support for segmentation and differentiated service levels and the use of self-service procurement and catalogs for business users (Accenture, 2012).

Electronic commerce (e-commerce) tools provide the opportunity to enhance two elements of procurement process: communication and transaction aspects (Oslomobekov et al., 2002). Surveys have confirmed that e-commerce tools and IT solutions have an influence on procurement-related processes. Companies have reported:- 1) Cost reduction, (Croom & Johnston, 2003; Davila et al., 2003; Lin & Hsieh, 2000; Radovilsky & Hegde, 2004; Subramaniam & Shaw, 2002); 2) Reduction in purchasing cycle time or order time, (Davila et al., 2003; Lin & Hsieh; 2000; Radovilsky & Hegde, 2004); 3) Reduction in number of suppliers challenges, (Davila et al., 2003); 4) Increase in the number of products supplied by main suppliers, (Muffatto & Payaro, 2004); 5) Inventory savings, (Subramaniam & Shaw, 2002); 6)

Reduction of purchasing prices, (Davila et al., 2003); 7) Increase in internal customer service levels, (Croom & Johnston, 2003).

Web-enabled B2B e-commerce enhances inter-organizational coordination resulting in transaction cost savings and competitive sourcing opportunities for the buyer organization (Subramaniam & Shaw, 2002). As organizations seek to enhance market efficiencies six forms of e-procurement applications have been noted. Knudsen (2003), cites:- e-sourcing; e-tendering; e- informing; e-reverse auctions; e-MRO; web-based enterprise resource planning. In addition, -e-collaboration is an important enabler (Knudsen, 2003). In many commercial organizations the business case for e-procurement is predicated on being able to delivery a variety of benefits, which include:- lower prices; lower transactional costs; better compliance; speedier processing and delivery.

In a study conducted by the International Society for Technology in Education (ISTE) and the Consortium for School Networking (CoSN), it was confirmed that technology use in education yields a broad array of meaningful results including improving school efficiency, productivity, workforce skills and decision-making (CoSN, 2005).

Procurement performance at the Ministry of Education

The Procurement Division is one of the administrative support service departments in the Ministry. It advises the Ministry on the application of sound principles, techniques and procedures pertaining to procurement, stock control, custody, verification and disposal with the sole objective of helping the Ministry to achieve maximum economy, effectiveness and efficiency through proper stores accounting, prevention and detection of loses, wastages or misuse and procuring and disposal of stores professionally and in the most advantageous manner to the Government. The department performs the following functions within the Ministry; Interpretation, implementation and enforcement of the Government Procurement Regulations, systems and procedures; Ensures total quality management of goods and services with proper inventory control which includes warehouse management, stores verification and management; Handles audit queries and correspondence on procurement audit reports (if any); and it is also a secretary to various Ministerial Committees (RoK, 2013).

In a study by the MOED found that regarding the extent to which teachers are involved in making decisions pertaining to the procurement, distribution, production and storage of teaching and learning materials, the survey results show that only 25% of the teachers are involved in the decision making process. Related to this, 28% of the teachers indicated that they were not at all involved in decision-making regarding repairs and maintenance in their schools. Similarly, the results show that there is an acute lack of skills in some key aspects of asset management in most of the teachers. Only 13% of the Head teachers said that their staff had skills in textbook requisition; while 14% said that their staff had skills in distribution of learning support materials (RoK, 2008).

The survey also sought to establish to what extent teachers, SMC and BOG members were involved in school procurement. Although the school procurement is supposed to involve teachers and SMCs/BOGs, only 22% of Head teachers interviewed said that these groups were involved. This suggests that the procurement process may be prone to manipulation since accountability is reduced. It is significant that 29% of the staff at the district level reported lacking skills in procurement and the tendering procedures in force. A further 42% reported having “some” skills while only 10% confirmed having the requisite skills. In the light of the policy decision to decentralize this function to institutional level, it is imperative that district education office staffs have the skills in procurement and tendering in order to give the institutions the necessary backstopping (RoK, 2008).

Results show that 22% of the national officials say that legislation and regulations on procurement is not clear on the award process. Lack of skills to design and develop is clearly indicated in the results: (i) 33% of the respondents say they lack skills in preparation of tender documents; (ii) 33% of the respondents say they lack skills in evaluation of bids; and (iii) 33% of the respondents say they lack skills in contract deeds. 22% of the respondents say procurement records are not used to inform management decisions in future procurements (RoK, 2008).

Research Methodology

The study adopted a descriptive research design. Descriptive design uses a preplanned design for analysis and it determines and reports the way things are (Mugenda and Mugenda, 2003). Public procurement is a complex area with a set of processes, procedures, regulations and objectives that are different from the private sector procurement. Orodho (2003), defines research design as the scheme, outline or plan that is used to generate answers to the research problem. Sekaran (2010), states that a good research design has a clearly defined purpose and also consistency between the research questions and the proposed research method.

Data from MOED head office shows that there are 800 members of staff (RoK, 2013). This study targeted to concentrate on members of staff in the MOED due to availability and easiness in collecting most data from a centralized location. This research study used a stratified random sampling method to select 10% of the respondents to give a sample size 80. Kerlinger (1986), indicates that a sample size of 10% of the target population is large enough so long as it allows for reliable data analysis and allows testing for significance of differences between estimates.

Primary data was obtained directly from respondents through the administration of questionnaires. The primary data provided reliable and accurate first-hand information relevant to this study about the determinants of procurement performance at the Ministry of Education and other issues necessary for the research. The questionnaire were administered using a drop and pick later method to the sampled respondents. The secondary information was obtained from the library, internet, journal articles, newspapers and research reports.

Data Analysis

The questionnaires were checked for completeness and consistency of information at the end of every field data collection day and before storage. Data capturing was done using Excel software. The data from the completed questionnaires was recoded and entered into the computer using the statistical packages for social sciences (SPSS) for windows for analysis. The SPSS computer program was commanded to produce frequency tables, graphs, pie charts and the necessary measures of variances for interpretation. Descriptive statistics (standard deviation, percentages and frequency distribution) was computed for presenting and analyzing the data. Descriptive statistics enables the researcher to describe the aggregation of raw data in numerical terms (Neuman, 2000).

Correlation was used to analyze the degree of relationship between the variables in the study. The coefficient of correlation (r), determines the degree (strength) of relationship and its value should be between -1 and 1. Regression was used to obtain an equation which describes the dependent variable in terms of the independent variable based on the regression model, (regression is used to determine the type of relationship). Further, factor analysis was undertaken in order to obtain a detailed perceptual and attitudinal aspects of the data's variability. Data was presented in the form of frequency distribution tables and pie charts to facilitate description and explanation of the study findings. The study also used a five point Likert scale ranging from 1=strongly disagree to 5=strongly agree for item analysis purpose. Likert scale is easy to use in respondent–centered and stimulus-centered studies (Patton, 2002).

Results

The study sought to find the determinants of procurement performance in the MOED. In table 1, legislation and regulations on procurement are not clear on the award process as shown by a mean of 3.9818 and a standard deviation of 1.02724; that the procurement process may be prone to manipulation since accountability is reduced as shown by a mean of 3.9091 and a standard deviation of 0.98644; that District Education Office staffs have the skills in procurement and tendering in order to give the institutions the necessary backstopping as shown by a mean of 3.8000 and a standard deviation of 0.82552; that teachers are involved in making decisions pertaining to the procurement, distribution, production and storage of teaching and learning materials as shown by a mean of 3.5455 and a standard deviation of 0.78924.

Table 1: Extent to which respondents agreed with various statements on Procurement performance at the Ministry of Education

	Mean	Std. Deviation
Teachers are involved in making decisions pertaining to the procurement, distribution, production and storage of teaching and learning materials	3.5455	.78924
The procurement process may be prone to manipulation since accountability is reduced	3.9091	.98644
Legislation and regulations on procurement is not clear on the award process	3.9818	1.02724
District education office staffs have the skills in procurement and tendering in order to give the institutions the necessary backstopping	3.8000	.82552

Results of the linear regression indicate that R2=.822 and R= .907. This is an indication that there is a strong relationship between Stakeholders, Resource dependency, Leadership styles and Technology and Procurement Performance in the MoED. The p- values showed that Technology is the most significant with p-value of 0.011, followed by Stakeholders with p-value of 0.026, followed by Leadership style with p-value of 0.295, followed by Resource dependency with p-value of 0.310.

Discussions

What influence do stakeholders have on the procurement performance at the Ministry of Education?

The study found out that the if the organization depends on the stakeholder for a critical resource for survival, the stakeholder will have absolute power over the firm; that suppliers can manipulate the flow of resources to the organization; that employees can manipulate the flow of resources to the organization; that the performance of an organization is solely dependent on the interests of key stakeholders.

How does resource dependency affect procurement performance at the Ministry of Education?

The study found out that uncertainty consists of environmental uncertainty and behavioral uncertainty ; that organizations want to control their dependency on their environment to ensure their survival in the environment in which they operate; that organizations will try to manage their resource dependencies in order to achieve greater autonomy and thus reduce uncertainty in the flow of needed resources from the environment; that organizations are not always capable to take actions to manage external dependencies.

How does the leadership style influence the procurement performance at the Ministry of Education?

The study found out that the leadership style creates an opportunity for employees to become specialists within one specific area; that the leadership style to a greater extent protects employees from arbitrary rulings from leaders; that the leadership style would potentially give a greater sense of security to the employees; that it increases the effectiveness and efficiency of the administrative structure.

What is the influence of technology in the procurement performance at the Ministry of Education?

The study found out that technology that automates the requisitioning process will be able to reduce processing cost; that if used for inter-organization it enhances the benefits of e-procurement within an organization; that most of the value gained with a procurement technology platform comes from reduced costs for goods and services, supported by strong procurement compliance programs to prevent the erosion of realized savings; that managers are now looking IT as a strategic resource and key enabler of growth.

Procurement performance at the Ministry of Education

The study also found out that legislation and regulations on procurement is not clear on the award process; that the procurement process may be prone to manipulation since accountability is reduced; that District Education Office staffs have the skills in procurement and tendering in order to give the institutions the necessary backstopping; that teachers are involved in making decisions pertaining to the procurement, distribution, production and storage of teaching and learning materials.

The overall effect of the variables

The study findings showed a great influence of: stakeholders, resource dependency, leadership style and technology to the performance of procurement in the MoED. The study found out that there was 82.2% of corresponding change in procurement performance for every overall change in all the four predictor variables jointly.

Conclusions

The aim of this study was targeted towards researching the determinants of procurement performance in the MoED. The findings in this study revealed a significant positive relationship between procurement performance in the MoED and the following determinants/influences which passed a reliability test: stakeholder, resource dependency, leadership styles and technology.

Conclusion drawn from the findings indicate that most respondents affirmative towards technology having the greatest influence in determining procurement performance in the MoED. The findings reveal that technology is strategic in reducing procurement processing costs, which is key in driving high performance. This conforms with a study by Accenture (2012), which reveals that leading companies make extensive use of procurement technology to drive high performance. These findings also relate with those made by Presutti (2003), that technology enhances the benefits within an organization since companies using technology system reported that they achieve a savings up to 42% in purchasing transaction cost allied with less paperwork, less mistake, and more efficient purchasing. General Electronic saw those costs drop by 30% from using technology system. The study also found out stakeholders, resource dependency and leadership styles are also major influencers of procurement performance in the MoED, with the following observations taking a lead: stakeholders manipulate performance especially where procurement relies on particular stakeholder for a critical resource; the MoED has to position itself autonomously by controlling its own resources to a larger extent, so as to secure its procurement function; leadership style enhances employees specialization, protection from ruthlessness and job insecurity and therefore giving effectiveness and efficiency of the administrative structure, that is key to performance. Therefore, stakeholders; resource dependency, leadership styles and technology are critical checks in influencing procurement performance in the MoED.

Recommendations

From the conclusion of this study, the magnitude of influence on procurement performance by stakeholders, resource dependency, leadership styles and technology is undoubtedly rife. With this foresight, it is only prudent for this study to make the following recommendations which are major change elements towards best procurement performance in the MoED:

1. When making this decision, managers must consider the trade-off between: the costs/risks of acquiring the information necessary for monitoring the stakeholder behavior; and the costs of measuring outcomes and transferring risk to agents;
2. Rather than relying on one generic supply chain quality management approach for all suppliers, firms need to choose different management mechanisms for different suppliers based on the salient attributes important in individual suppliers;
3. Managers should be focused on mainly absorbing certain resources or expertise staff within the organization to overcome dependency on external resources. An example is in doing a cost benefit analysis to settle a make-buy decision;
4. The organization should consider more than one funding resource, to overcome over dependency that could easily lead to frustrating procurement funding;
5. Managers should consider adding value to employees through motivation, energy, intuition, creativity, persuasiveness and foresight since this will boost intelligence, self-confidence, determination, integrity and sociability which are important to procurement performance;
6. The organization should invest in an information system that integrates the procurement function with the whole supply chain. Such a system is an Enterprise Resource Planner which adores a financial system that is cognitive to procurement responsiveness;

7. Employees should be trained on using information technology tools and software that are implemented in the organization, since procurement productivity can only be achieved by accepting and using of these tools and software by employees;

References

Accenture (2004). eGovernment leadership: High performance, maximum value. http://www.accenture.com/xd/xd.asp?it5enweb&xd5industries\government\gove_egov_value.xml (accessed August 5, 2005).

Agaba, E & Shipman, N. (2006) Public Procurement Reform in Developing Countries: The Ugandan Experience. In G. Piga & K. V. Thai (Eds.), Advancing Public Procurement: Practices, Innovation and Knowledge-Sharing (pp. 373-391) USA: Pr Academics Press

Barnard, C. I.(1938) The Functions of the Executive. Cambridge, MA: Harvard University Press.

Blau, P. M. (1964) Exchange and Power in Social Life. New York: Wiley

Borrego, M. Elliot P. D. and Catherine T. A. (2009) "Quantitative, Qualitative, and Mixed Research Methods in Engineering Education." Journal of Engineering Education 98.1: 53-66. PDF file.

Burns, T. and G. Stalker. (1961) The Management of Innovation. London: Tavistock

Buying Power for Aid Governance and Public Procurement, http://internationalbudget.org/wp-content/uploads.pdf. (Retrieved August 27th, 2013)

Churchill GA, Iacobucci D (2004). Marketing research: Methodological foundations, 9th Edition, Thomson South-Western, Ohio

Coad, A.F. (2002), "Not everything is black and white for falling dominoes", Leadership and Organisation Development Journal, Vol. 21 No.6, pp.311-8.

Coase, R.H. (1937). The nature of the firm. Economica, New Series, 4 (16), pp. 386-405.

Consortium for Research on Educational Access, Transitions and Equity (CREATE). Free Primary Education and After in Kenya: Enrolment impact, quality effects, and the transition to secondary schools. Research Monograph No 37 Moses Oketch & Anthony Somerse. http://www.create-rpc.org/pdf_documents/PTA37.pdf (Retrieved September 10th, 2013)

Corsten, p. (2009). Public procurement practices in developing countries. Journal of Economics. Volume 22

Davila, A., Gupta, M., & Palmer, R. J. (2003). Moving Procurement Systems to the Internet: The Adoption and Use of E-Procurement Technology Models. European Management Journal, 21(1), 11-23.

Duijf, S. B. (2009) The organizational structures of grant procurement processes in Dutch Universities: BSc 28 November

Edwards, G. (2000), Differences in Leadership Style and Behaviour According to Hierarchical Level in an Organisation. A Monograph, The Leadership Trust Foundation, Ross-on-Wye

Evelyn Jepkemei (2011). An analysis of the 844 system of education in Kenya.

Genugten, M.L. van (2008). The Art of Alignment: Transaction Cost Economics and the Provision of Public Services at the Local Level. Enschede: Dissertation University of Twente.

Gnanih, E. L. (2012) Investigating the effect of the public procurement law on the Ghanaian educational sector. Ashesi University College

Hersey, P. and Blanchard, K. H. (1977). Management of Organizational Behavior 3rd Edition– Utilizing Human Resources. New Jersey/Prentice Hall.

House, Robert J. (1996). "Path-goal theory of leadership: Lessons, legacy, and a reformulated theory". Leadership Quarterly 7 (3): 323–352. doi:10.1016/S1048-9843(96)90024-7.

Humphreys, P., Mclvor, R. & McAleer, E. (1998). The purchasing function as a professional service firm: implications for training and development. Journal of European Industrial Training, 22(1), 3–11

International Monetary Fund. (2004) Public Expenditure Management- Country Assessment and Action Plan (AAP) Kenya. World Bank and IMF, 2004. PDF file.

KENAO (2010) Government Audit report Kenya: overview of corruption and anti-corruption, http://www.worldbank.org/en/country/kenya/overview (Retrieved September 10th, 2013)

Kenyan Constitution (2010) statement

KNUT (2013) Press Release June 26, 2013

Kouzes, J.M. & Posner, B.Z (2003). The Leadership Challenge, (3rd Ed.). San Francisco: Jossey-Bass. ISBN: 0787968331

Lardenoije, E. J., Van Raaij, E. M., & Van Weele, A. J. (2005). Performance Management Models and Purchasing: Relevance Still Lost. Researches in Purchasing and Supply Management, the 14th IPSERA Conference, (pp. 687-97). Archamps.

Mark Lowcock, (2013) Global Permanent Secretary of the Britain Department For International Development (DFID)

Mitra, S. (2005). Information Technology as an Enabler of Growth in Firms: An Empirical Assessment. The Journal of Management Information Systems, 22(2), 279-300.

Northouse, P.G (2007). Leadership Theory & Practice (3rd Ed.). Thousand Oaks, CA: Sage. ISBN: 1-4129-4161-X

Phillips Piotrowicz, (2006) E-procurement and strategic performance. Kent Business School, University of Kent, Canterbury, UK

PPDA Procurement Sector Review Report (2005) Report of the Fifth Procurement Sector Review Workshop Held on 29th June, 2005 at Speke Resort Munyonyo. Retrieved from www.ppda.go.ug/index.php?option=com_docman&task=doc_download&gid=94&Itemid=30

PPOA (2012) Final Report, Ministry of Education Procurement Review. Review Period: 1 July 2011-30 June 2012

Presutti, W. D. (2003). Supply Management and e-procurement: Creating Value Added in the Supply Chain. Industrial Marketing Management Journal, 32(3), 219-226.

Public Procurement Oversight Authority (2007) Assessment of the Procurement System in Kenya. Edition Final Version, Prepared by Rambøll Management A/S

Puschmann, T., & Alt, R. (2005). Successful Use of E-Procurement in Supply Chains. An International Journal of Procurement, 10(2), 122-133.

Selltiz C.S., Wrightsman L.S. and Cook S.W. (1981) Research Methods in Social Relations, Holt, Rinehart & Winston, London, quoted in Jankowicz, A.D., Business Research Methods, Thomson Learning, p.190.

Selznick, P. (1949) TVA and the Grass Roots. Berleley, CA: University of California Press.

Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2004). Design & Managing The Supply Chian : Concept, Strategies & case Studies: Tata McGraw-Hill.

Telgen, J., Zomer, G., & de Boer, L. (2003). The efficiency and effectiveness of government purchasing in The Netherlands. Retrieved September 2, 2008, from University of Twente web site: http://www.bbt.utwente.nl/ompl/staff/Telgen/

Thompson, J. D. (1967) Organizations in Action: Social Science Bases of Administration. New York: McGraw-Hill.

Titus Oshagbemi, Roger Gill, (2004) "Differences in leadership styles and behaviour across hierarchical levels in UK organisations", Leadership & Organization Development Journal, Vol. 25 Iss: 1, pp.93 - 106

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Towards a Unified View. MIS Quarterly, 27(3), 425-478.

Weber, M. (1947) The Theory of Social and Economic Organizations. Ed. T. Parsons. New York: Free Press.

Weber, M. (1948). From Max Weber: Essays in Sociology, translated, edited and with an introduction by H. H. Gerth and C. W. Mills. London: Routledge and Kegan Paul.

Williamson, O.E. (2006). Transaction cost economics: how it works, where it is headed. The Economist, 146 (1), pp. 23-58.

www.treasury.go.ke

Xingxing Zu, Hale Kaynak, (2012) "An agency theory perspective on supply chain quality management", International Journal of Operations & Production Management, Vol. 32 Iss: 4, pp.423 - 446