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PROCUREMENT AND LOGISTICS

THE ROLE OF STRATEGIC PROCUREMENT ON AN ORGANIZATION'S PERFORMANCE: A Case Study of Cooperative Bank; Head Office

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Abstract

The purpose of this study was primarily based on finding out the role of strategic procurement in an organization's performance, in my case, the performance of Cooperative Bank of Kenya. The overriding philosophy which agitated the study on this particular organization for the study was because the company in question invariably purchases high volume of goods and services both locally and internationally, an attribute that gave the researcher a broad perspective of examining the degree of strategic procurement in the company. Over the years, the procurement function has remained passive in regard to the acquisition of high value goods and services, an attribute that cause long lead times and also high costs of purchased goods. This perennial problem has precipitated a decline of procurement/supply performance of enormous companies. The study sought to obtain more literature pertaining issues on strategic procurement and the researcher came up with conceptual framework based on how different variables affect the organization's performance. In gathering out the data descriptive research method was used. In regard to this method, the researcher will use a structured questionnaire which will be based on simple and understandable question. The researcher also used personal interview which entails the aspect of asking questions in a prescribed form and order. The researcher found out that though a lot of strides have been made in provision of strategic procurement in Cooperative Bank, still there are couple of challenges which hamper full implementation of these attributes. The noticeable challenges include; Lack of clear communication; Lack of full support by suppliers; inadequate technical support; Lack of proper policies and also less training forums. The Co-operative bank being the area of study will gain significantly from the findings that will reveal the level to which their procurement function applies Strategic approaches.

Keywords: Strategic procurement, organizational performance, continuous improvement, supplier development.

Introduction

Cost efficiency and better productivity has always been a major issue in procurement but in the hype of today's ever increasing competition in the market, strategic procurement has become an indispensable area which invariably brings forth some semblance of efficiency in various companies. It is imperative to note that strategic procurement approaches in the contemporary business environment are susceptible to world class business options which are embraced by the successful companies in the market Sanjay (2000). Dealing with business complexities has made the buyers to think strategically. The basic premise of this principle is that strategic procurement provides the right direction in understanding the amount of effort to be applied to fill the performance gap, compared to competitors Lysons (2006).

With no long-term success assured, in global competition, survival becomes temporary, and only period of survival becomes very important. Companies that become complacent at any moment of

time are likely to fall behind in no time and competitors from any part of the world will replace them. As decision makers, buyers must question whether they have the luxury of maintaining traditional habits, behaviour and practices as they attempt to guide their present procurement strategy through the unfamiliar, uncertain turbulence going around them Sanjay(2000).

Today, competitive pressure is not only to become a low-cost producer but how a company can become a lowest cost producer; create not only simple differentiating product features but how to build complex differentiating features difficult to emulate for competitors; how to delight both internal and external customers and still remain lean and improve quality; reduce lead times and deal with short product life cycles. Strategic thinking can make procurement managers aware of the following issues: Product to advise management to make or buy; Core skills to be guarded within the company and the one to be openly outsourced; Type of suppliers to deal with and capabilities to be nurtured; Type of procurement tasks to be prioritized and technologies to be acquired; What to be added to fill the gap between today's and tomorrow's performance requirements not only in terms of immediate cost reductions but cumulative cost savings which could be achieved in the long term Herbert (2005).

Strategic supplier partnership for competitive advantage is another important area which can make a company to intensify its market share in the business environment. However, it is the most valuable and difficult type of relationship. The partners have a broad understanding of each other's needs and visions and share important values. There is a high level of trust and mutuality, with open information sharing, gains sharing and concern for mutual well-being. Because the partnership shares so much, it is adaptable to change and transcend tactical difficulties. The strategic buyer-supplier partnership philosophy creates a working environment promoting team work, trust and quest for continuous improvement. It is customer-focused, vision-focused and service-providing philosophy in which relationship based on a perception of independent needs creates competitive advantage jointly Lysons (2000).

Problem Statement

Though many companies are striving hard to embrace the essence of involving procurement personnel in strategic procurement decisions, too often procurement staffs of all levels are not consulted from the outset in respect of strategic procurement approaches and are brought into the procurement process after key decisions have been made and implemented by the board of directors of the companies. To this extent therefore, the procurement function has remained passive in regard to the acquisition of high value goods and services an attribute that causes long lead times and also high costs of purchased goods. This perennial problem has precipitated a decline of procurement/supply performance of enormous companies Sanjay (2000). This study aimed at investigating this phenomenon and establish the role of strategic procurement on performance of Cooperative Bank of Kenya.

General objective

The general objective of this study was to establish the role of strategic procurement approaches on an organization's performance.

Specific objectives

- a) To review strategic procurement approaches embraced by the organization.
- b) To assess the effects of strategic procurement implementation in the organization.

c) To identify challenges faced by the company in provision of strategic procurement approaches.

Importance and Justification of the Study

The findings of this research study are deemed to be applied entirely in the procurement functions of both public and private companies in aid of rationalizing short and long term objectives in line with strategic procurement. Since the overriding philosophy in strategic procurement is to identify current and future needs as well as creation of new-buyer supplier relationships, the study was mirrored in a way that brought forth a clear understanding of best procurement approaches which enhances companies’ performance.

Literature Review

This chapter commences by reviewing the theoretical literature on key strategic procurement issues and their role on an organization’s performance. The driving force behind strategic procurement is the essence of creating substantial value in the entire supply chain setup. It is imperative to note that, the strategic procurement attributes can only be realized in an environment which its top level management of the company invariably supports its implementation Howard (2004). Areas covered under this topic include; the role of procurement staff; supplier selection process; selection of the right alliance partner; partnership between suppliers/ procurement entities and most importantly supplier evaluation.

Conceptual Framework

The key variables which were measured in regard to researcher’s study entailed both the independent and dependent variables. The researcher used conceptual model indicated below to explain intensively and extensively the key strategic procurement approaches and how they influence organization’s performance.

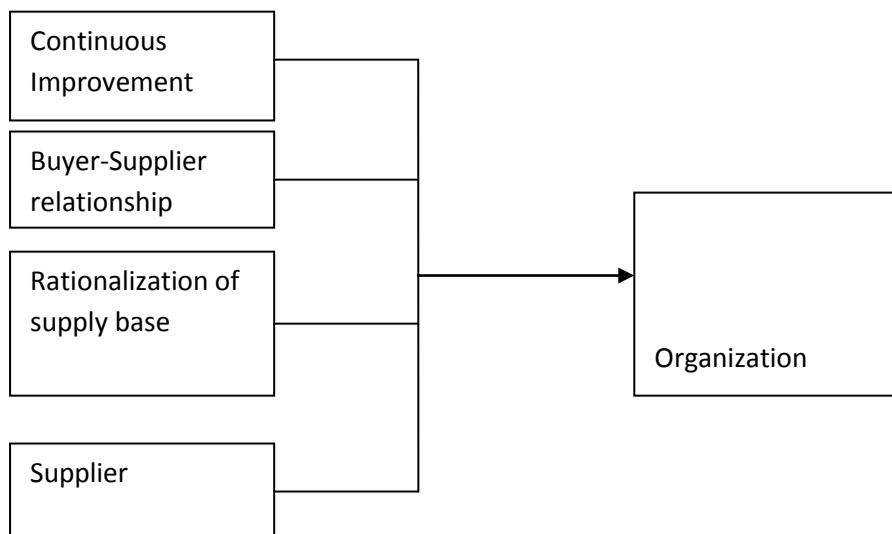


Figure 2.1: Conceptual Framework

a) Continuous improvement

The essence of continuous improvement in the perfection of supply activities between the buyer and the supplier contributes to success of the overall performance of an organization. Ideally, providing a

means for identifying best practices, providing a structure for sharing knowledge and learning the methods and techniques partners can use to make improvements, forms the basis of high performance in the supply function, thus a successful organizational performance. On the other hand, in cases where there is no room for continuous improvement, the function of supply makes minimal strides in its performance (Sanjay, 2000). The distinct activities based on continuous improvement encompass; quality control, quality assurance, consolidation of cross-functional teams and lean supply.

b) Buyer-supplier relationship

Companies that embrace the essence of relationship with suppliers in areas of transaction eventually, create a room for win-win situation approach in their primary activities. This attribute enables companies in question to reap benefits from each other since every company works for the best of each other hence this ensures a high degree of supply performance Lysons (2000). The main activities under buyer-supplier relationship entail; supplier visits, early purchase involvement, long term partnership with suppliers and provision of supplier conference forums.

c) Rationalization of supply base

This entails the issue of narrowing down the sourcing entities in the procurement function through establishing only the best valuable suppliers to deal with. Reduction of supply base paves way to high degree of efficiency in procurement function and this attribute translates to success in an organization's performance Lysons (2006). The activities under rationalization of supply base entail; quality analysis, technical analysis, cost trend analysis and information flow analysis.

d) Supplier development policies

The practice of working with supplier to improve their performance and capabilities is important strategic approach which in turn accelerates the internal supply performance of the buying company. This is achieved through the essence of perfecting what the supplier is supposed to deliver to the buying company Sanjay (2000). The prime activities under this approach encompass; training, assessment of supplier's operations, provision of incentives to improve supplier performance and most importantly buyer-supplier information feedback.

Dependent variable

From the basis of this study, the independent variables affect immensely the dependent variable, which is the organization's performance. To this extent therefore, the overall performance of the supply function squarely depends on the degree of the fore mentioned strategic approaches.

Review of empirical literature

The empirical literature encompasses the need for strategic procurement approaches and how it influences the internal supply performance function of companies. Also the literature covers contemporary strategic procurement issues embraced by companies.

Research design: The researcher used descriptive research design which primarily shows the state of affairs as it exists at the present Kothari (2004). The research was conducted through a case study of Cooperative Bank of Kenya. The data was collected, edited, summarized and reduced to basic representative values that helped the researcher present his findings of the study in frequencies, charts and presentation in tables and graphs.

Population and area of study: The population on focus in this study comprised the employees of Cooperative Bank of Kenya, head office, which has a population size of three hundred employees (300). The three hundred employees are distributed in four (4) distinct departments.

Sampling method and size: To constitute a structured sample, the researcher used stratified method since population to be sampled was heterogeneous. The researcher also used stratified sampling which provided greater precision geared to bring forth proportionate stratification whereby each stratum had the same sampling fraction Kothari (2004). The population was stratified into a number of strata and sample item were selected from each stratum. The researcher used a sample of ninety (90) employees which constituted 30% of the whole population under the study which is three hundred (300) employees Mugenda and Mugenda (1999).

Data analysis and presentation: Mugenda and Mugenda (1999) confirm that the main purpose of content analysis is to study existing information in order to determine factors that explain specific phenomenon. To this extent therefore, the responses to the questions were interpreted and put into different specific and relevant categories. Being a descriptive research the data was analyzed and tabulated using descriptive methods which illustrated the diverse findings of the study. The descriptive methods used involve; frequencies, percentages and presentations of tables and graphs.

Research Findings and Discussion

Overall rate of response

The research study targeted ninety (90) employees from four distinct departments of the Co-operative Bank of Kenya. Seventy seven (77) questionnaires were filled accordingly and returned.

Table 4.1 Rate of response

Departments	Sample size	Response frequency	% Response
Procurement	22	22	100
Finance	18	16	88.9
Sales and Marketing	30	24	80
Human resource development	20	15	75
	90	77	85.5

The researcher obtained feedback from seventy seven respondents out of the targeted ninety respondents across several departments of Co-operative Bank of Kenya. Procurement department registered 100% response while finance department registered 88.9% response. Sales and marketing department registered 80%. Finally human resource development registered 75%.

Comparative analysis based on how Co-operative Bank of Kenya embraces strategic procurement

a) Continuous improvement: According to the data collected and analyzed an average percentage of 59.9 is based on perfection of strategic procurement based on continuous improvement 26.7% of the respondents indicated that continuous improvement is only done on occasional basis. 13.3% of the respondents interviewed indicated that they don't at all embrace strategic procurement based on continuous improvement.

b) Buyer-supplier relationship: The researcher reviewed the level of buyer-supplier relationship. The following buyer-supplier relationship activities were used to measure the degree of relationship; supplier visits, early-purchase involvement, long-term partnership with suppliers and supplier

conference forums. An average of 31.65% is based on provision of buyer- supplier relationship activities, 43.3% of the respondents indicated that procurement approaches based on buyer supplier relationship are done on occasional basis while 25% of respondents indicated that such activities are never done.

c) Rationalization of supply base: The distinct rationalization of supply base activities which were reviewed by the researcher entailed; quality analysis, technical analysis, cost trend analysis and information flow analysis. From the findings, we can attest that an average percentage of 66.7 are based on advocating rationalization of supply base activities while 25% of the respondents indicated that these are done less often. 8.3% of the respondents indicated that these approaches are not done.

d) Supplier development: In order to obtain explicit details based on supplier development, the researcher measured the following distinct activities in line with supplier development. The activities in question entailed; training provision, assessment of supplier’s operations, provision of incentives to improve supplier performance and most importantly buyer supplier information feedback. An average percentage of 44.05 of the respondents are directly linked with perfection of supplier development of the company. 35% of the respondents indicated that these approaches are rarely done while 20.95% of the respondents indicated that these activities are not done.

The analysis based on the effects of strategic procurement approaches

In order to identify the level strategic procurement is embraced by the bank the researcher measured the following procurement phenomenon: price escalation, reworks, delivery of surpluses, delays in delivery of goods, complete none delivery of goods, use of company’s fleet to deliver goods, wrong supply, defective items complaints from user department and delivery of less quantity goods.

Effects of strategic procurement

Strategic procurement approaches was noted in levels of price escalation, reworks, delivery of surpluses, delays in delivery of goods, complete none delivery, use of company’s fleet to deliver goods, wrong supply, defective items, complaints from the user department and most importantly delivery of less quantity goods. From the analytical point of view 73.8% of the respondents indicated that these procurement phenomena don’t happen while 26.2% of the respondents indicated that these procurement phenomena do happen often.

General views on problems/challenges faced by company in provision of strategic procurement

Table 4.5 Challenges in provision of strategic procurement

Challenges	Frequency	Percentage
Lack of clear communication	72	93.5
Lack of full support by suppliers	68	88.31
Inadequate technical support	75	97.4
Lack of proper policies	56	72.7
Less training forums	42	54.5

From the findings indicated in the table 4.5, 93.5% of the respondents indicated that lack of clear communication is an impediment in provision of strategic procurement. Lack of full support by suppliers and inadequate technical support gathered 88.31% and 97.4% respectively. Lastly, lack of

proper policies was identified by 72.7% of respondents while less training forums were identified by 54.5% of the respondents.

Recommendations to improve strategic procurement

Recommendations based on effective communication across all the stakeholders, provision of training forums, provision of clear policies, establishment of technical support and formation of buyer supplier relationship were immensely highlighted by the respondents interviewed. From the basis of the findings, we can establish that effective communication between all the stakeholders in the supply chain set up is the prime approach which should be prioritized. This is attested by high rate of percentage indicated by the respondents that is 97.4%. Provision of clear policies and establishment of technical support follows the attributes to follow by registering 90.9% and 88.31% respectively. Provision of training forums follows by having 85.7% while establishment of buyer-supplier relationship has 83.1%.

Strategies/recommendations to improve an organization’s performance

Table 4.7 Recommendations to improve an organization’s performance

Recommendations	Frequencies Percentage
Establishment of good sourcing entities	65 84.4
Continual improvement on procurement processes	63 81.8
Provision of proper procurement policies	64 83.1
Provision of internal satisfaction surveys	68 88.3
Provision of good working relationship	70 90.9

Table 4.7 shows distinct recommendations geared to improve the level of internal supply performance of the company. Provision of good working relationship between the procurement and user department is given the first priority by being given 90.9%. Provision of internal satisfaction surveys and establishment of good sourcing entities obtained 88.3% and 84.4% respectively. Provision of proper procurement policies was awarded 83.1% while continual improvement on procurement processes obtained 81.8%.

Summary of research findings

The research study was carried out from seventy seven respondents out of the targeted ninety respondents across four departments of the bank. This represented 85.5%. The data collected was classified, tabulated and clearly illustrated by the use of tables and figures. From the basis of comparative analysis the researcher was in a position to review/assess the effects of strategic procurement. Also the researcher was in a position to establish the critical challenges that hamper full implementation of strategic procurement. Recommendations were also made by various respondents on how to improve strategic procurement. The researcher also came up with a questionnaire tailored to Co-operative Bank’s internal users. The rationale behind this questionnaire was specifically designed to know the internal user’s verdict in regard to strategic procurement.

Summary

The research study was a success since most of the underlined objectives were achieved. The researcher was in a position to get three quarters of response from the targeted respondents an attribute that made the whole task of data collection to be exhaustively done. In order to get diverse

opinions and perceptions of different personalities across a wide range in regard to strategic procurement, the researcher requested the respondents to indicate their age bracket. From the basis of the findings the youth representation accounted for only 45.4% while the rest of respondents accounted for 54.6%. The researcher sought to establish the level of academic qualifications of the targeted respondents with a view to integrate the same to internal supply performance. The findings showed that the enhancement of procurement approaches in perfection of internal supply performance to some extent is affected by capacity deficit in terms of academic qualifications since only 32% of the respondents are under category of undergraduate and post graduate while 68% have diploma and 'O' level certificates.

In order to obtain intensive and extensive perspective in line with issues based on internal supply performance the researcher requested the respondents to indicate their work experience in the company. 78% of the respondents have a work experience ranging from months to 15 years. The rest of the respondents which comprise 22% have an experience of more than 15 years. This findings show that the bank has a balanced number of employees who have diverse understanding of internal supply performance trends. The researcher also obtained detailed information on comparative analysis based on how Cooperative Bank embrace strategic procurement. The strategic procurement approaches highlighted comprise continuous improvement, buyer-supplier relationship, rationalization of supply base and supplier development. In regard to these strategic procurement approaches, 59.9% of respondents advocate the provision of continuous improvement while 31.65% focuses on buyer-supplier relationship activities. Rationalization of supply base activities is advocated for by 66.7% of the respondents while on the other hand an average percentage of 44.05 of the respondents are directly linked with perfection of supplier development approaches.

In order to establish the effects of strategic procurement embraced by the bank, the researcher measured the following procurement phenomenon: price escalation, reworks, delivery of surpluses, delays in delivery of goods, complete none delivery of goods, use of company's fleet to deliver goods, wrong supply, defective items complaints from user department and delivery of less quantity goods. From the analytical point of view 73.8% of the respondents indicated that these procurement phenomenon don't happen while 26.2% of the respondents indicated that these procurement phenomenon do happen often. Also the researcher sought to know the challenges that affect the company in provision of strategic procurement implementation. 93.5% of the respondents indicated that lack of clear communication is an impediment in provision of strategic procurement. Lack of full support by suppliers and inadequate technical support gathered 88.31% and 97.4% respectively. Lastly, lack of proper policies was identified by 72.7% of respondents while less training forums was recognized by 54.5% of the respondents.

Conclusions

Though a lot of strides have been made in provision of strategic procurement in Cooperative Bank, still there are couple of challenges which hamper full implementation of these attributes. The noticeable challenges include; Lack of clear communication; Lack of full support by suppliers; inadequate technical support; Lack of proper policies and also less training forums. From the basis of internal user's level of satisfaction we can conclude that 77% of the respondent termed procurement department of bank as good while 13% of the respondent considered the function to be fair. 7% of the respondents were in favour of the function being an excellent function in terms of procurement activity provision. Only 3% of the respondents were not satisfied by the procurement performance of the company and to this extent the department was termed as a poor function in terms of perfection of its activities. This attribute therefore shows that the internal users have high confidence in regard to how procurement function does their various activities.

From the analytical point of view its evident that the relationship between procurement and user departments of Cooperative Bank is good. This is put forth by high degree of 85% of the respondent who termed the relationship to be good. 7% of the respondent termed the relationship to be fair while 5% of the respondent were of the opinion that the existing relationship is excellent one. However a small percentage of 3 termed the relationship to be poor. This good rapport between the procurement function and user department can be termed as the driving force behind the provision of strategic procurement.

Recommendations

In order to have a full turn around in regard to provision of strategic procurement the company is duty bound to effect high degree of effective communication across all the stakeholders, provision of training forums, provision of clear policies, establishment of technical support and formation of buyer supplier relationship. Also the procurement department should address fully the following internal user's requirements that are; Provision of good working relationship, Provision of internal satisfaction surveys and establishment of good sourcing entities. To add on that the procurement department should come up with proper procurement policies geared to create continual improvement on various activities. The subject of all these facets of strategic procurement should be based on a designed work plan that covers the holistic procurement functions. This procurement work plan should invariably be used as the reference point on issues based on acquisition of goods and services for the company.

Also the study recommends for continuous research on the latest procurement approaches embraced by successful enterprises in the market. This approach should be designed to facilitate technological innovations and promote dissemination and exchange of technology information in the procurement function. This attribute is paramount since it will give the buying company Cooperative Bank an opportunity to grasp highly competitive activities which can add significant value in return.

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EFFECT OF PROCUREMENT REGULATIONS ADHERENCE ON ADMINISTRATION OF THE PROCUREMENT PROCESS IN KENYAN PUBLIC ENTITIES: A CASE STUDY OF KENYA RURAL ROADS AUTHORITY.

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Abstract

The Public Procurement sector in Kenya has evolved from a crude system with no regulations to an orderly legally regulated procurement system by procedures laid out in the Public Procurement and Disposal Act, 2005 and the Public Procurement and Disposal Regulations, 2006. Hence the purpose of this paper was to examine the effect of procurement regulations adherence on administration of the procurement process in Kenyan public entities: case study of Kenya Rural Roads Authority (KeRRA). The study applied a descriptive research design. The study population comprised of 50 employees working in KeRRA. Systematic random sampling technique was applied to select a sample size of 25 respondents. The study collected primary data using questionnaires. The gathered data was analyzed using descriptive statistics. Statistical Package for Social Sciences (SPSS) computer software was used to generate frequency, tables and percentages. Analysis of data revealed that low level of procurement regulations adherence hindered creation of favorable environment for administration of the procurement process. Most (61%) respondents indicated that occasionally procurement related disputes occurred in the organization. The major limitation of this study was that it relied solely on the experience of KeRRA. Perhaps including the experiences of other public entities could increase the transference of findings of KeRRA to other entities as well. Poor procurement practices hinder sustainable development and negatively impact upon economic growth. Therefore, public entities need to recognize the importance of adhering to procurement regulations to improve the public procurement process. The proposed typology of adherence to procurement regulations for the public entity can serve as a basis for future research in this area. The study adds to knowledge by providing information on public procurement procedures. Other organizations may consider the factors identified in this study to evaluate their procurement function.

Key words: Procurement Process, Procurement Regulations, Public Entity and Public Procurement.

Introduction

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement (Ebrahim,2010).Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Leeders, 2006).

Public Procurement

Public procurement is concerned with how public sector organizations spend taxpayers' money on goods and services (Hall, 2009). Globally, in many developed nations, government organizations across the world tend to spend between 8 per cent and 25 per cent of GDP on goods and services (Organization for Economic Co-operation and Development, 2006); in the UK, public procurement

expenditure is approximately £150 billion (Department of Environment, Food, and Rural Affairs, 2007). In Africa, public procurement procedures are poorly executed and this negatively affects realization of increased economic development in the region. In Nigeria for instance, high level of corruption and bureaucratic procedures in the government are some of the key challenges responsible for lack of development of road network infrastructure in the northern parts of the country.

In developing countries like Kenya, the public procurement sector is often the largest domestic market. The government has the obligation of providing goods, works and services to meet a variety of citizen needs. The necessity for public procurement law and also clearly defined procurement systems arises from the fact that, unlike the private sector, public procurement is a business within a national and political system, whose pillars of strengths are integrity, fairness, accountability, competition, transparency, national interest, promotion of local industry and economic development (PPOA, 2009).

Key Principles of Public Procurement

Value for Money: Sometimes the government is at liberty to consider other criteria than the lowest price; for example technical capabilities, qualifications of key personnel, and past performance records in awarding contracts to potential suppliers (Cummings and Qiao, 2003). Some of the barriers which need to be overcome in order to achieve Value for money (VFM) are weak governing bodies, politics, tradition, and lack of education and training programmes (Palmer and Butt, 1985).

Ethics: Purchasing professionals are held to higher standards of ethical conduct than people in other professions, yet some do not even know what is expected of them (Atkinson, 2003). If the workforce is not adequately educated in such matters, this may lead to serious consequences; including, breaches of codes of conduct.

Competition: Competitive tendering is the means by which most goods and services are procured. Procurement rules assist in the creation of competition markets and benchmarks and reform efforts in this area would improve quality and lead to greater competitiveness among suppliers.

Transparency: Transparency is an essential aspect of ensuring accountability and minimizing corruption, and has gained prominence in Organizations for Economic Cooperation and Development (OECD) countries. Government procurement is one area where corruption is rampant in both developing and developed countries. Transparency requires governments to adhere to higher standards conduct by ensuring that conduct will be open to scrutiny (Smith-Deighton, 2004).

Accountability: At the international level, governments are often involved in trading activities and procure goods and services such as defense equipment, provide or receive aid, and operate diplomatic posts in other nations and the conduct of these activities results in financial risk exposures, and accountability problems. At the national level public sector managers have to deal with a more competitive environment than has been the common practice in the past. The public is also demanding greater accountability and better service (Gunasekaran, 2005). Therefore, managing the risks associated with the complex competitive environment give rise to accountability problems (Barrett, 2000) as the roles and responsibilities of the participants in the process are not clear.

Statement of the Problem

The principle reason for the enactment of the Public Procurement and Disposal Act, 2005 was to have a legal regime that would weed out ineffectiveness in the procurement process, remove patterns of abuse, corruption, and the failure of the public purchaser to obtain adequate value in return for the expenditure of public funds. However, these objectives have never been fully achieved in practice especially at the procuring entity level due to reported weaknesses among procuring entities in adhering with the provisions and regulations of procurement processes found in the PPDA.

Administration of the public procurement process plays a significant role towards supporting realization of increased country's economic growth and development. In developed nations such as USA and UK, sound procurement processes have been identified to play an important role in development of country's infrastructure such as roads, railways, housing and telecommunication systems (Edward, 2009). According to Kinyanjui (2010) developing countries in Africa, such as Nigeria, Ghana, Malawi, and Kenya have failed to achieve infrastructure development goals due to application of poor procurement processes. The poor state of many roads in Kenya and other public infrastructures is greatly influenced by low emphasis on the employed procurement process and major reforms on public procurement processes could play an important role towards development of country's road infrastructure (Dorothy, 2010).

Kirungu (2009) says that while the legal and regulatory framework is demand adequate, the most significant risks in procurement are found in the institutional environment and performance of the procuring entities in complying with the procurement law and its regulations. In a survey conducted by PPOA (2008) it was found that over 70% of Procuring Entities in Kenya lost over 1 billion shillings as result of application of poor procurement processes.

In spite of having various studies undertaken on procurement problems by various writers as indicated above, none of the studies have specifically addressed the effect of procurement regulation adherence on administration of the procurement process in Kenya public entities. This indicates that there is limited literature available on public entities procurement processes and this has created a major knowledge gap on amongst procurement managers on how to improve the procurement process in Kenya public entities. It is therefore against this background that this study was undertaken to investigate the effect of procurement regulation adherence on administration of the procurement process in Kenya public entities with a specific reference to KeRRA.

Research Objectives

The general objective of this study was to examine the effect of procurement regulation adherence on administration of the procurement process in Kenyan public entities.

The specific objective was to determine the effect of procurement regulation adherence on administration of the procurement process in Kenyan public entities.

Research Question

How does adherence to procurement regulations affect administration of the procurement process in Kenya public entities?

Conceptual Framework

The conceptual framework is shown in figure 5.1.

Independent Variable

Dependent Variable

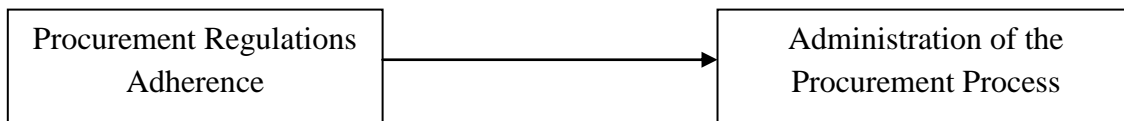


Figure 5.1 Conceptual Framework

Literature Review

The literature was reviewed from journals, reference books, internet, working papers, periodicals and reports.

Procurement Regulation Adherence

The level of procurement regulation adherence is the degree in which state enterprises applies and follow the procurement guidelines as stipulated in the public procurement Act. Procurement guidelines govern the choice of suppliers, products and the methods and procedures to be used to communicate with suppliers (George, 2010). Public enterprises in road construction industry procurement systems exhibit low level of adherence to procurement regulations adherence since cases of malpractices are experienced and this negatively affects administration of the procurement process.

According to PPOA (2007), the public procurement system in Kenya has been undergoing reforms consistent with the global trend since the mid 1990s, most notably within the periods covering 1997-2001 and 2005. Before these reforms, the legal framework governing public procurement was very amorphous, providing a conducive environment for the perpetration of various malpractices in public procurement including the endemic corruption that characterized the system. George (2010) contended that the level of adherence to procurement regulations greatly influences the effectiveness and efficiency of the procurement process in public entities.

According to Patrick (2009), with the official launch of Public Procurement Reforms, the country set on the reform road in the area of public procurement by; putting in place a unified legal and regulatory framework to guide the reforms. This was realized through the gazettelement of the Exchequer and Audit Act (Public Procurement, Regulations, 2001), which harmonized all the Treasury circulars and manuals governing procurement in the public sector. Putting in place an institution to oversee development and implementation of the public procurement policy in Kenya and improve transparency. This was realized through the creation of the Public Procurement Directorate (PPD) to oversee the public procurement process in Kenya and the Public Procurement Complaints, Review and Appeals Board (PPCRAB) to handle tendering disputes Act (Public Procurement, Regulations, 2007).

According to Johnson (2010) the landmark in the reforms was in 2005 when the Public Procurement and Disposal Act, 2005 was enacted by Parliament. The Act established an oversight body, the Public Procurement Oversight Authority (PPOA), Public Procurement Oversight Advisory Board and the Public Procurement Administrative Review Board. It amended all other laws relating to procurement in public entities ensuring that all of it is done under the umbrella of the Act thus widening the scope of application of the law and providing a proper basis for enforcement. With the gazettelement of the subsidiary legislation entitled Public Procurement and Disposal Regulations 2006, the law became operational on 1st January 2007 (PPOA, 2007).

According to Andrew (2008) the Public Procurement and Disposal Act, 2005 became operational on 1st January 2007 with the gazettelement of the Public Procurement and Disposal Regulations, 2006.

This called for all public enterprises to strictly implement procurement functions in accordance with the act. However, despite all these regulatory machines, the public sector procurement process is not in tandem with these legislations. According to the study by Price Water House Coopers PWHC (2009), over 50% of public enterprises in Kenya do not comply **with procurement regulations** and this has created corruption loopholes and other malpractices on procurement processes.

According to PPOA (2009) the current public procurement framework in Kenya has recently been strengthened in a number of respects: With the enactment of the PPDA and Regulations, Kenya today has in place a sound and comprehensive legal framework for public procurement with a clear hierarchical distinction. The PPDA clearly establishes the procurement methods to be applied, advertising rules, and time limits, the content of tender documents and technical specifications, tender evaluation and award criteria, procedures for submission, receipt and opening of tenders, and the complaints system structure and sequence. The PPDA and Regulations cover goods, works, and services for all procurement using national funds. Both documents are published and widely distributed within government. The legal framework is complemented with a series of Standard Tender Documents (STDs) covering procurement of goods, works and services, and the responsibility for updating the STDs is clearly assigned to the PPOA (PPOA, 2009).

Measurement of Administration of the Procurement Process

Administration is a method of tending to or managing the affairs of a group of people, department or organizations activities contributing directly to an organizations output. Every procurement department needs to concentrate on how the procurement process is administered to help utilize funds and resources effectively. All procurement processes and procedures are clearly outlined in the Public Procurement Act. All public entities are expected to follow the Act; the PPOA was enacted to ensure that the administration and execution of the Act is followed effectively.

Procurement largely contributes to the spending of the public entities thus the procurement processes must be highly monitored in how they are administered to ensure efficiency and effectiveness. Unless the procurement process is administered effectively and efficiently, its performance will be highly affected thus adequate factors relating to the above should be highly concentrated on.

In public entities the factors mentioned above largely affect the procurement process in that they have to be incorporated so as to realize success. Whatever plan is selected its administration is measured on basis of extent of administration or level of administration or as a percentage of administration. In some cases it may be measured using the extent to which it delivers success or achievement, saves on cost and resources and time taken to administer each process. Procurement processes take different time frames and amount of resources example time taken for a tendering process is longer than a request for quotations. Every process should be monitored at every stage to ensure transparency and to avoid lag or delays in the process.

To ensure effective administration of the procurement process, the management should be keen to follow up by following processes as stipulated in the Act and also putting measures in to place that will help in achieving effective administration of the procurement process. Procuring entities should constantly train their employees, update their software, implement good strategies, and comply with regulations at every stage of any procurement process.

Research Methodology

The study applied a descriptive research design. The target population comprised of 50 employees working in Kenya Rural Roads Authority under the Ministry of roads. Systematic random sampling technique was applied to select a sample size of 25 respondents. The study collected primary data using questionnaires. Secondary data sources include publications and literature related to the research.

Research Findings

Procurement Regulation Adherence

Level of Procurement Regulation Adherence: The study sought to determine the level of procurement regulation adherence in the organization and as shown in the figure 8.1 majority (52%) of the respondents felt that the level of procurement regulations adherence was average, 39% felt that it was low, 9% felt that it was high. The respondents contended that low level of procurement regulation adherence hindered creation of favorable environment for administration of the procurement process and this concurred with George (2010) that the level of adherence with procurement regulations greatly influences the effectiveness of the procurement process in public entities.

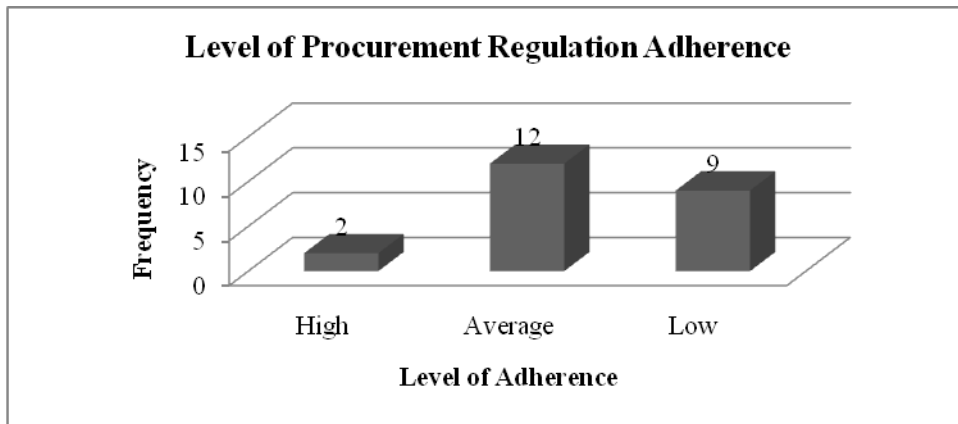


Figure 8.1 Level of Procurement Regulation Adherence

Claims of Conflict of Interest Relating to Procurement: The study aimed to establish whether the organization had experienced any claims of conflict of interest relating to procurement. As presented in table 8.1 majority (96%) of the respondents indicated that the department / organization had experienced claims of conflict of interest while 4% indicated that the organization had not experienced claims of conflict of interest. These results indicate that there were cases of conflict of interest reported in the organization / department.

Table 8.1 Claims of Conflict of Interest

Reported Claims	Frequency	Percentage
Yes	23	96%
No	1	4%
Total	23	100%

Frequency of Conflict of Interest Claims that are related to Procurement: The question sought how often procurement related disputes occurred in the organization. The figure 8.2 thus indicates that

majority (61%) indicated that procurement related disputes occurred occasionally while 35% indicated that disputes occurred rarely and 4% indicated that disputes had never occurred. This indicates that conflict of interest was a major occurrence in the organization / department.

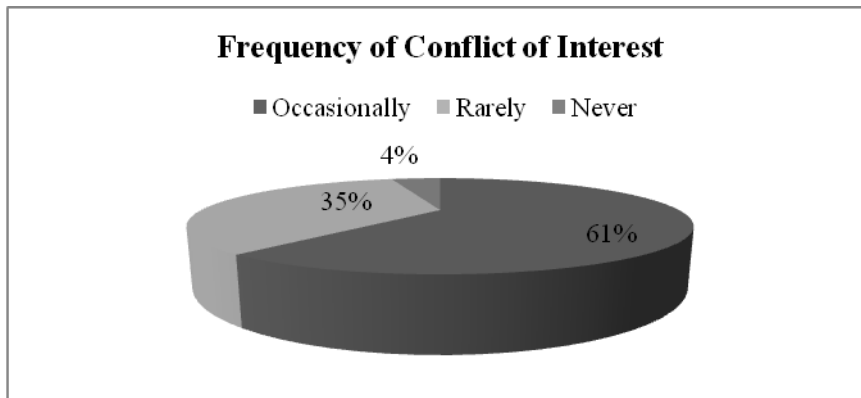


Figure 8.2: Frequency of Conflict of Interest Claims

Extent to Which Procurement Regulation Adherence Affects Administration of the Procurement Process: The study sought to establish the extent to which procurement regulation adherence affected administration of the procurement process. Majority (65%) of the respondents stated that procurement regulation adherence adversely affected administration of the procurement process, 26% stated that that it greatly affected, 9% of the respondents suggested that it mildly affected administration of the procurement process. These results indicate that procurement regulation adherence played a major role in administration of the procurement process. The table 8.2 shows the response of the respondents.

Table 8.2 Extent to Which Procurement Regulation Adherence Affects Administration of the Procurement Process

Extent	Frequency	Percentage
Adversely affects	15	65%
Greatly affects	6	26%
Mildly affects	2	9%
Does not affect	0	0%
I don't know	0	0%
Total	23	100%

Summary

KeRRA is entitled to follow the Public Procurement Act and the Public Procurement Regulations which clearly outlines the procurement process. In addition to this the organization is also governed by the PPOA.

The level of procurement regulations adherence was found to be low and this hinder administration of the procurement process in road public sector organizations. As a result of this the study noted that there were frequent cases of procurement related disputes which was an indication of non-compliance of procurement regulations and declined efficiency and effectiveness in the procurement process. This was in agreement with Edward (2009) that lack of effective process of enforcing application of procurement regulations in many public sector organizations hinders compliance with

procurement regulations. Majority (65%) of the respondents stated that lack of procurement regulation compliance adversely affected the administration of the procurement process.

Conclusion

Administration of the procurement process in Kenyan public entities plays a major role towards improving the performance of public sector organizations and realization of increased economic growth and development. Public sector organizations in road sector play a significant role towards development and maintenance of country's road infrastructure and therefore much emphasis should be given to strengthen administration of procurement processes.

The level of procurement regulations adherence in KeRRA remains low in spite of various measures made by the government to improve on procurement regulations implementation. This greatly affects administration of the procurement process since most of the procurement functions are not in tandem with the procurement procedures legal framework. This supports findings by George (2010) who contended that the level of adherence to procurement regulations greatly influences the effectiveness and efficiency of the procurement process in public entities.

Most roads public sector organizations including KeRRA lack an effective framework that monitors and supervises whether procurement functions are in tandem with the procurement guidelines in the procurement act and this subjects procurement functions to high level of manipulations by unethical procurement staff leading to wastage of organization resources. Prioritizing on improving the level of enforcement to tackle challenges can improve efficiency and effectiveness in administration of the procurement process and hence lead to adherence of procurement regulations.

Recommendations

To improve on the level of procurement regulations adherence, the procurement personnel should be trained on how to conduct various procurement functions; the organization should consider hiring academically qualified procurement personnel and continually train all procurement personnel on application of procurement regulations. The government should enforce application of procurement guidelines in all public entities as stated in the Public Procurement Act. All the undertaken procurement practices should not be fraudulent and a high level of transparency should be maintained so as to avoid procurement of unnecessary and low quality goods and services.

Public entities should draft procurement policies that are compatible with procurement regulations and all employees should be made aware of the formulated policies. The PPOA directives should be put into consideration while formulating policies and so as to avoid inconsistency with the Public Procurement Act. The level of stakeholders' involvement should be improved by application of monitoring and supervisory mechanism to oversee if all procurement processes are in line with the procurement regulations guidelines.

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THE EFFECT OF FINANCIAL RESOURCES ON PROCUREMENT PLANNING IN PUBLIC INSTITUTIONS IN KENYA: A CASE STUDY OF KENYA AIRPORTS AUTHORITY

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Abstract

The purpose of this study was to examine the effect of financial resources on procurement planning in public institutions. Procurement is the acquisition of goods and services in return for a monetary or equivalent payment with the purpose of satisfying individual/organizational requirements. Procurement planning is the process of identifying and consolidating requirements to be acquired. The objective of the study was to find out the effect of financial resources on procurement planning and to provide recommendations on how to mitigate the effect of financial resources. The study was a descriptive survey. The research population consisted of the procurement department staff, functional managers and assistant managers and departmental heads at Kenya Airports Authority. A sample of twenty employees was randomly selected to participate in this study. Data was collected using secondary and primary sources. Secondary sources consisted of publications and literature related to procurement and procurement planning. The primary data was collected using questionnaires prepared for the employees which were issued in a random manner. Descriptive statistics was used to analyze the data. The data was presented in form of tables and pie charts. All the data collected was edited and analyzed using the Statistical Package for Social Sciences software. In accordance with the sample selected, the results indicated that financial resources affected procurement planning. The study recommended that training should be conducted on the field of budgeting and the budgeting process. Training on budgeting and the budgeting process will enable the institution prepare budgets that are sufficient to the organizational needs. Thus, mitigating the effect of financial resources on procurement planning. It also recommended that the organization should have a structured integration between the procurement and finance department so as to ensure budget sufficiency.

Key words: Procurement, Planning, Financial resources, Procurement planning, Public Institutions.

Introduction

Public procurement has become an increasingly important factor in economics and business circles globally. This is shown by the growing interest of donors, government, civil society, professional organizations, the private sector and the general public. The importance of public procurement in terms of size relative to world GDP and world trade was enlightened in a report by OCED (2001).

Procurement is a key function in the operations of an organization. It is the process of obtaining goods or services in any way, including borrowing, leasing and even force or pillage. These goods and services must be purchased at the correct time and location for the express gain or use of public institutions. The Procurement of goods, services and works is one of the major areas in government operations which, when strategically and systematically handled it can lead to higher levels of performance and productivity.

Overview of the procurement function: Procurement environment has changed over the years thus affecting the strategies employed to optimize procurement. According to Ukalkar (2000) there are five major factors which have affected procurement. These factors are the globalization in scope of the procurement products (goods and services), rapid growth rate of business activities as a result of information technology, increased customer demands leading to proliferation of products to target more diverse tastes by mass customization of products, increased customer awareness making them more sophisticated about the products they buy and the proliferation of standards in compliance to “environmental, health, safety and customer rights protection laws, the emergence of regional trade blocs, international standards like ISO-9000 and company standards QS-9000 systems and procedures”, thus warranting periodical reviews on procurement systems, processes, status in the organization, a professionally trained, motivated and responsible personnel to manage the functions.

Evolution of public procurement in Kenya: Over the years, since independence, the government has sought to rationalize procurement in public institutions through various instruments; mainly the 1967 Supplies manual, circulars from the Treasury issued from time to time and, at times, the involvement of the Crown agents. In the year 2001, the government came up with Procurement regulations (Exchequer and Audit Rules) to replace the circulars. These were slightly amended in the year 2002 to accommodate certain concerns. This was an improvement, but an insufficient move to fill in the existing gaps. The answer to the prevailing shortcoming in the procurement of goods and services in the public sector was seen to lie in enacting an Act of Parliament to govern the whole public process. This was realized in October, 2005; paving the way for the Minister of Finance to gazette the Public Procurement and Disposal Regulations 2006 through legal Notice No. 174 of 29th December, 2006 with an effective date of 1st January, 2007 (GoK, 2007).

The Procurement Act is crucial in the way the procurement processes are managed, and has sought to minimize cases of interference from players outside the concerned committees while at the same time discouraging fraudulent practices through debarment, transfer of procurements to other procuring entities and introduction of deterrent penalties.

Importance of procurement planning: Procurement planning is important to the organization, it is mandatory for public institutions to prepare a procurement plan. Procurement planning is one of the pre-requisites for the effectiveness and efficiency of the procurement function thus leading to the ultimate success of the organization. Procurement planning ensures that all the relevant procedures, regulations, principles and laws under the procurement function are followed and maintained. It also provides a good basis for monitoring the entire procurement process and prevents procurement irregularities. Procurement planning is also critical internal control tool. Each procurement requirement should be planned as part of the budget preparation process and should be reflected in a Procurement plan that has been prepared and is maintained and updated by the Procurement Unit on the basis of End-User Department information. Procurement initiation requires existence of a procurement plan. This is the first level of commitment control. Commitment control helps ensuring cash availability to meet the cost of procurement contracts.

Procurement planning facilitates efficient and effective treasury management by spreading out annual procurement activities consistent with the needs and resources available. It also ensures transparency and predictability.

Procurement planning is an important aspect of the procurement process. Section 26 (3) of the Act and Regulations 20 and 21 make procurement planning mandatory. The procurement plans are prepared as part of the annual budget preparations (Mugo, 2011).

Procurement at Kenya Airports Authority: The Kenya Airports Authority (KAA) is a State owned enterprise. KAA was established in 1991 under KAA Act, Cap 395 of the Laws of Kenya with the mandate to: administer, control and manage aerodromes in the country, provide and maintain facilities necessary for efficient operations of aircraft, provide rescue and firefighting equipment and services, construct, operate and maintain aerodromes and other related activities, construct or maintain aerodromes on an agency basis on the request of any Government department, provide such other amenities or facilities for passengers and other persons using the services or facilities provided by the Authority and approve the establishment of private airstrips and control of operations thereof (Kenya Airports Authority, 2012).

KAA headquarters are located at the Jomo Kenyatta International Airport Head office building. The Authority is made up of the following major stations namely: Jomo Kenyatta International Airport, Moi International Airport, Wilson Airport, Kisumu Airport, Eldoret International Airport, Malindi Airport, Lamu Airport, Ukunda Airstrip, Lokichoggio Airport and more recently like Wajir Airport. Kenya Airports Authority (KAA) provides facilitative infrastructure for aviation services between Kenya and the outside world. Our focus is on greater efficiency, superior quality service and increased capacity in all the Kenyan Airports.

The Procurement and logistics departments' key role is the acquisition of all Goods, services and Works at the most efficient and effective manner with economy in mind. The department has staff strength of thirty. All are qualified professionals and are members of the Kenya Institute of Supplies Management (KISM). These members of staff are distributed over the different stations around the country. The expectation of Kenya Airports Authority procurement department is to ensure that all purchases of goods and services are carried out in accordance with applicable laws and directives from the Board of Trustees and follow sound business practices (Kenya Airports Authority, 2012).

Problem statement

Lack of procurement planning can have adverse effects to the organizational operations especially in public entities which deal with numerous operations. Ineffective procurement planning can lead to delays in requisition of goods and services thus leading to hindering of the organizational functions. Inappropriate procurement is a consequence of lack proper procurement planning. Inappropriate procurement leads to misappropriation of funds, procurement of unnecessary and obsolete items. In addition lack of procurement planning results to the use of inappropriate procurement methods and procedures.

Each procurement entity is required to produce an annual plan of all the procurements it intends to carry out in the next financial year and this step is important as it enables an entity to aggregate the procurement requirements into large contracts, gain economies of scale and avoid emergency procurement as much as possible.

Procurement planning must be prepared by the "right" personnel and accorded the importance it deserves. Thai (2008) maintains that forms and procedures may be convenient and useful tools, but the planning effort will succeed only with the complete commitment and involvement of top management, along with appropriate personnel that have a stake. This implies that, without thorough procurement planning, the subsequent procurement processes will not yield benefits (Thai, 2008).

A study by Mugo (2011) identified that procurement planning is affected by Lack of transparency and inadequate resources. In procurement planning, challenges are often encountered especially in the public sector. Financial resources are a major challenge affecting procurement planning in public institutions.

Research objectives

The general objective of this study was to examine the effect of financial resources on procurement planning in public institutions in Kenya.

The study was guided by the following specific objective: To determine the effect of financial resources on procurement planning in public institutions.

Research question

What was the effect of financial resources on procurement planning in public institutions?

Conceptual Framework

The conceptual framework identified in Figure 5.1 consists of procurement planning as the dependent variable and the financial resources as the independent variable:

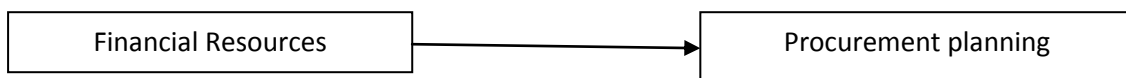


Figure 5.1: Conceptual framework

Literature review

This section dealt with literature with regards to the review of variables, namely financial resources and procurement planning.

Financial resources: Very large sums of money are involved in certain areas of purchasing, with different emphasis placed on different elements depending on the business of the organization concerned. For a transport company, fuel may represent as much as 35 per cent of the total operating budget, but for a manufacturing plant the major cost may be in the plant running costs. These costs need to be carefully managed, but the first step is to determine some purchasing objectives. One of the considerations when setting procurement objectives is ensuring the supply of raw materials and other supplies (Rushton, Croucher & Baker, 2009).

If the resources available are not utilized properly, the supply of such raw materials will be a distant dream. However, organizations have the problem of scarce resources to procure the goods and services they require. This prompts them to request for loans from different reputable money-lending institutions.

In most organizations the financial, physical, human and technological resources allocated to a function/activity will be reduced to quantitative terms and expressed in budgets or financial statements of the resources needed to achieve specific objectives or implement a formulated strategy (Lysons & Farrington, 2006).

Financial resources are very important in other functions that are directly and indirectly related to the procurement of goods and services. Resources are required to purchase the goods and services. Without adequate financing the actual procurement function cannot be undertaken. Funds are also required for certain activities such as Training of employees on procurement issues, research and development in fields of purchasing and consultancy on procurement and logistics. If procurement officers are not trained then they may not function as expected. Training is a quite costly endeavor.

Without adequate financing training cannot be conducted. Financial resource enables the organization to conduct Research and Development in the field of procurement that will enable the organization to enhance procurement planning and the entire procurement function.

Measurement of procurement planning: Procurement planning is the process of identifying and consolidating requirements and determining the timeframes for their procurement with the aim of having them as and when they are required. The procurement plans are prepared as part of the annual budget preparation process as they are necessary to inform the cash flow preparation. The annual procurement planning is an integral part of the budget processes.

Budget Execution is affected by procurement. Unless procurement has been planned adequately, with realistic times taken into account for the preparation of procurement requirements and allotment of budget, the budget execution will be hampered.

In a public institution plans are implemented based on the above identified factors. Whatever plan is executed its implementation is measured on basis of extent of implementation or level of implementation or as a percentage of implementation. In some cases it may be measured using five point likert scale, 1 to 5 or extent of disagreement or disagreement. Procurement plans are categorised as annual, quarterly, semi-annual or long term plans which are over one year. Once implemented they should reviewed from time to time to ensure level of achievement or lack implementation and reasons given and necessary measures taken.

To ensure effective implementation procurement plans, annual procurement planning should be integrated with applicable budget processes and based on indicative or approved budgets. Procuring entities should revise and update their procurement plans, as appropriate, during the course of each year.

Research design and methodology

Research design

The research design used was a descriptive survey as it was concerned with describing the characteristics of public institutions with regards to procurement planning. According to Mugenda and Mugenda (2009) a descriptive survey is an attempt to collect data from members of a population in order to determine the current status of that population with respect to one or more variables.

Research Methodology

The research population consisted of the procurement department staff, functional managers, assistant managers and departmental heads at Kenya Airports Authority. A sample of twenty employees was randomly selected to participate in this study.

Data was collected using secondary and primary sources. Secondary sources consisted of publications and literature related to procurement and procurement planning. The primary data was collected using questionnaires prepared for the employees which were issued in a random manner.

Descriptive statistics was used to analyze the data. The data was presented in form of tables and pie charts. All the data collected was edited and analyzed using the Statistical Package for Social Sciences software.

Research findings on financial resources

Financial budget: The study sought to establish whether the departments of the respective respondents operated with a financial budget. Majority (94%) of the respondent indicated that their department had a financial Budget. This trend indicated the importance attributed to financial resources in the department. From the data on financial resources it is evident that financial resources have a great influence on procurement in public institutions.

Sufficiency of the financial budget: The researcher sought to find out whether the departmental budgets that are assigned to each department are sufficiency with regards to the operational needs. The results indicated that majority of the (64.70%) respondents stated that the departmental budget was not sufficient while 35.30% stated that the budget was sufficient to their operations. The figure below shows the response of the respondents.

The researcher also sought to find out the degree of insufficiency form the respondents who stated that their department budget was not sufficient. 64.70% of the respondent suggested that their departmental budget was insufficient by (0-20) %, 17.65% of the respondents stated that the insufficiency of the budget was between (21-40) % while another 17.65% of the respondents stated that it was between (41-60)%. The table below represents the response on the degree of insufficiency.

Table 8.1: Distribution of response on the degree of insufficiency

<i>Class width</i>	<i>Frequency</i>	<i>Percentage</i>
0-20	11	64.70
21-40	3	17.65
41-60	3	17.65
61-80	0	0
81-100	0	0
TOTAL	17	100

Challenges associated with the budget and budgeting process: The study sought to establish the challenges encountered with the departmental budget and budgeting process. From the response of the respondents the main challenge was: budget insufficiency, from the response it was evident that the financial resources did not satisfy the institutional needs with regards to procurement. In addition the quotations received over the financial year from tenderers normally exceed the estimated amount thus leading to insufficient funds.

Extent to which financial resources affects procurement planning

Table 8.2: Extent to which financial resources affects procurement planning

Response	Frequency	Percent
Adversely affects	4	23.5
Greatly affects	9	53
Mildly affects	4	23.5
Does not affects	0	0
I do not know	0	0
TOTAL	17	100

The study sought to establish the extent to which financial resources affects procurement planning (Table 8.2). 23.5% of the respondents stated that financial resources adversely affected procurement planning, 53% stated that that it greatly affected procurement planning, 23.5% of the respondents suggested that mildly affected procurement planning. However, none of the respondents stated that financial resources do not have an effect on procurement planning. The table 8.2 shows the response of the respondents. This finding shows that financial resources are an important factor to procurement planning.

Summary

Majority of the respondents suggested that their department operated with a financial budget. However, 64.70% respondents stated that the financial budget was not sufficient while 35.30% stated that the budget was sufficient to their operations. Majority of the respondents suggested that the percentage of deficiency of the budget ranged from 0-20%.

The study identified that the main challenges associated with the Budget and budgeting process is financial insufficiency. The funds allocated do not sustain procurement for the entire financial year. It was also established by the study that financial resources has a great effect on procurement planning.

This present study established that most of the procurement plans had been implemented at a rate range from 81-100 percent. However, it was also established that financial resources was the main factor affecting procurement planning.

Conclusions

Based on the findings it was evident that financial resource affected procurement planning. The organization did have financial budgets for the financial year however these budgets were insufficient to the procurement needs thus affecting the procurement process and procurement plans.

Recommendations

In view of the findings the study recommended that training should be frequently conducted on the field of budgeting, the budgeting process, procurement planning and procurement scheduling. This training would result in increasing procurement capacity and solving financial resources issues. Training on budgeting and the budgeting process will enable the institution prepare budgets that are sufficient to the organizational needs.

Training on these financial aspects will also assist the organization in mitigating the effects of financial resources on procurement planning. Training on procurement planning will ensure that the employees can effectively and efficiently plan procurement thus mitigating the challenges affecting procurement planning.

In addition training should be conducted on procurement scheduling with an aim of insuring that the procurement in the organization is conducted within the speculated timeframe as per the procurement plan. There should be a strict timeframe of conducting procurement in line with the procurement plan. This would ensure that there are no delays in procurement thus ensuring efficiency in planning.

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FACTORS AFFECTING FLEET MANAGEMENT IN PUBLIC SECTOR: A CASE OF SELECTED EMBASSIES IN KENYA

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Abstract

Public procurement frameworks in developed and developing countries alike are recognized as being characterized by an unstable tension between the public expectations of transparency and accountability, and of efficiency and effectiveness of resource management. This conformance - performance tension, manifest throughout a complex procurement environment, is further destabilized by conflicting stakeholder interests at the political, business, community and management levels and exacerbated by competing claims between executives, lawyers, technologists and politicians for lead roles in this arena. This study evaluated the factor affecting fleet management in public sector in selected embassies in Kenya. Various treaties and empirical studies of fleet management were reviewed as a prelude to the research. The study focused on establishing the strategies adopted by managers in dealing with challenges of fleet management in public sector and also determines the measures taken by managers to minimize the factors affecting fleet management in public sector. Descriptive survey design was used for this study and random sampling will be used to come up with a sample from the target population consisting of selected embassies in Kenya. Questionnaires were used to collect the primary data and the final analysis will be done using statistical package for social science (SPSS). Frequencies and descriptive statistics were used in this to present the findings of the study. The study found that efficient and effective fleet management practices have significant effects on the performance of the organization whether public or private. Fleet Management allows organizations especially those that rely on transportation in their business to significantly remove or minimize the risks associated with vehicle investment, improving efficiency, productivity and reducing their overall transportation costs. Fleet management is affected by factors such as government transport policies, import duties, Taxation, Road infrastructure conditions; mode of usage.

Keywords: Factors affecting; fleet management; public sector; management practices

Introduction

The action involved in managing organizations must be centered on the assessed needs and creation of future opportunities. “Drucker said that determining priorities was agonizing and time consuming, yet necessary”. This simple statement can act as a self reflection for any manager to determine their effectiveness. In planning a day or week, managers must place an emphasis and a significant time allotment for the assessment of the company’s goals and vision. These goals must then be constantly reassessed to determine if they are still meeting the needs of the organization. Ineffective managers choose to follow the antiquated management styles of the past allowing for their time to be task driven (Rosenstein, 2008). Fleet management is an integral part of organization management.

According to Government Fleet Magazine, the biggest challenge facing public sector fleets in 2011 is budget constraints due to the decline in tax revenues over the past few years. Public entities are funded largely through sales and property taxes; the two areas most devastated by the economic downturn. Successful management for the public sector essentially boils down to revenue versus costs and maximizing fleet efficiency. Public sector fleets are currently feeling the pressure to lower

capital expenditures and reduce operating costs to compensate for tax revenue shortfalls. This is quite a challenge for public sector fleets, as the economic crisis has caused reduced funding resulting in older fleet assets and budget cuts have caused staff layoffs. There is an ongoing push to minimize fleet capital procurements by keeping vehicles and equipment in service longer. All capital expenditures are being intensely scrutinized. Capital purchases are deferred or eliminated completely and in most cases, total capital expenditures are reduced. (GFM, 2011).

Fleets are taking various steps to address these economic constraints. The silver lining to tighter budgets and fiscal problems is that fleets have been able to make operational changes not otherwise feasible in other years. Successful examples are widespread decreases in the number of take-home vehicles, fleet right-sizing and consolidations, along with optimized fleet efficiency with telematic enabled fleet management. The challenge for fleet management is to stretch the capital outlay budget as far as possible. Defrayed vehicle purchases must be considered and weighed against the increased expenses of operating an aging fleet. Other funding sources may need to be considered to offset the lack of capital funds, such as lease agreements. Cooperative purchasing agreements are increasingly considered for vehicles, equipment, and parts purchases. Vehicle cannibalization programs and the purchase of used parts have also been considered. (GFM, 2011).

According to the previous studies Drucker, (1959), stated that management has evolved into a system of creating relationships between informed workers who are able to direct growth. In today's organizational structure managers and executives should not be demanding production results. Rather, they should be creating teams, partnership, and seeking opportunities to grow the organization into a more profitable and efficient system that is able to produce and evolve based on the consumer needs. According to Drucker, the objective of any organization is to positively change the lives of those with whom it has direct contact. This encompasses employees, customers, suppliers and the community in which it operates.

Review of Literature

Management involves the manipulation of the human capital of an enterprise to contribute to the success of the enterprise. This implies effective communication: an enterprise environment (as opposed to a physical or mechanical mechanism), implies human motivation and implies some sort of successful progress or system outcome. As such, management is not the manipulation of a mechanism (machine or automated program), not the herding of animals, and can occur in both a legal as well as illegal enterprise and environment. Based on this, management must have humans, communication, and a positive enterprise endeavor. This represents a summary of literature reviewed in the study.

Theories of Management

Different theories have been brought forward by different scholars that give details of the management processes befitting a management situation and its applicability. The resource based view is relatively used in the field of fleet management as well as the Heinrich's Domino theory and the Risk homeostasis theory.

Resource Based theory of management: The resource-based theory (RBT) describes a firm as a set of resources. Firm resources are all assets, capabilities, competencies, organizational processes, firm attributes, information, knowledge, and so forth, that are controlled by a firm and that enable the firm to conceive and implement strategies designed to improve its efficiency and effectiveness, (Barney, 2011). There are four categories to sort resources into: financial capital, physical capital, human capital, and organizational capital. According to the RBT view, competitive advantage is a result of

either ownership of, or un-restricted access to, inimitable assets, innovations and resource barriers. RBT suggests that in order to survive and improve operational performance, a firm is dependent on an efficient bundle and flow of the right type of resources from its surroundings. Competitive advantage is in this sense dependent on a firm's ability to effectively implement a strategy that maximizes value through access to external resources (Barney, 2011).

Heinrich's Domino Theory: Heinrich's Domino theory suggested there are five 'dominos': ancestry and the social environment; human factors; hazards and unsafe acts; the accident; and injury (Laflamme et al, 1999). These show causation as a linear flow of time ordered stages and options for prevention. Heinrich argued that if this series is interrupted by the elimination of one or more of these factors, the accident sequence is interrupted and the injury cannot occur. In a fleet safety context, developing a safety culture affects the social environment, improving the depot layout improves the environment, training affects human factors, speed reduces hazards and crashes, and seatbelts reduce injury. This is good approach because it focuses on underlying causes and the importance of investigation. Bird (1997) and Cooper (1998) also described Heinrich's work.

Risk Homeostasis Theory: According to Wilde's Risk Homeostasis theory (RHT) people have a desired or target level of risk with which they are comfortable. When external factors, such as adding more safety features to a vehicle, impact on their perceived level of risk, they will adjust their behaviour to maintain their target level of risk. Another term for this is behavioural adaptation. It means that managers should not assume that a direct safety benefit will result from safety initiatives.

Wilde (1994) suggested that to create change, people's perceptions and attitudes to accepting risks should be influenced. RHT has since been questioned by Ludvig and Geller (2000) who suggested that spread of effect and counter control may be a better explanation, as some countermeasures can have positive impacts on other areas than those targeted, as well as negative impacts. Job (2002) described this as category shift. Whether Wilde's theory is valid or not, it highlights the importance of change management when implementing fleet safety programs. Ludvig and Geller (2000), Murray and Rand (2000), and Skewes (2002) also focus on change and the importance of involving workers at all levels in the decision making and implementation processes.

Fleet Management

Route management takes the theory of optimizing route efficiencies and combines that with the real-time fleet tracking and turn-by-turn driver direction to ensure that vehicles actually use those routes that minimize the distance, the amount of fuel used, or the amount of time required to fulfill their duties. Route management also includes the monitoring of driver behaviour and truck activity to ensure safe driving practices.

These objectives are unsurprising and are consistent with generic public management. They simply say that the management of public procurement needs to be in accordance with community standards, and effective, efficient and consistent with the broader roles of government. However, while they seem simple, experience is that translating them into operational reality involves issues and policies that are frequently in conflict if not mutually incompatible. Broadly, three approaches, sometimes in various degrees of combination, are employed to deliver these objectives. The following discussion includes each of these approaches, generally defined in terms of their focus on regulation, management and centralization of public procurement.

It is unlikely that an analytical framework for public procurement can be understood by digesting a procurement training manual. It is impossible to develop a comprehensive framework for the understanding, analysis or management of public procurement independent of its political context.

By its very magnitude, public procurement demands high quality public governance in terms of transparency and accountability as well as effective management that can deliver optimum risk management and value-for-money outcomes. It also demands coherence with other public policy environments, especially business policy because of its significance in the economy (Harland, Gibbs, & Sutton, 2000) even though these various operational elements often fail to come together into a coherent policy or politically sensitive management framework.

Within the management environment, control, risk mitigation and transparency objectives are often the focus of centrally mandated regulatory compliance frameworks while management performance in terms of value outcomes is often pursued through devolved decision making and deregulation. In what follows we seek to develop each of these factors as a foundation for a framework within which they can be more meaningfully ordered, related and understood. All of these elements make up the procurement environment and need to be accounted for in any useful framework if it is to reconcile the activities of procurement managers with the demands of their executives, the agendas of the politicians and the expectations of the business sector, the media and the community. (Harland, Gibbs, & Sutton, 2000)

Fleet Management Models: Given a vehicle fleet and a stochastic process characterizing the load arrivals in a transportation network, the primary objective of fleet management models is to make the vehicle repositioning and vehicle-to-load assignment decisions so that some performance measure (profit, cost, deadhead miles, number of served loads, etc.) is optimized. However, besides making these vehicle repositioning and assignment decisions, an important question that is commonly overlooked by many fleet management models is how the performance measures would change in response to a change in certain model parameters. For example, freight carriers are interested in how much their profits would increase if they introduced an additional vehicle into the system or if they served an additional load on a certain traffic lane. Railroad companies want to estimate the minimum number of railcars that is necessary to cover the random shipper demands. The Airlift Mobility Command is interested in the impact of limited airbase capacities on the delayed shipments. These models include fleet collaboration model, fleet network model, and prevention model.

Prevention model: The Prevention model of safety applies on several levels and dimensions (Laflamme 1999). Primary actions are taken in advance, secondary actions spot problems early and manage them, and tertiary actions manage consequences and rehabilitation. Proactive actions deter or limit exposure and reactive actions adapt to exposure. The macro level is policy-related and the micro level relates to specific countermeasures. Prevention also operates on a continuum from active (involves people) to passive (involves environment). Passive measures are those that protect individuals automatically without any action on their part, including vehicle design changes. Active measures require individuals to actively participate in their own protection.

It is advocated by the domain of public health that providing passive protection through product or environmental design is the preferred strategy (Williams 1999). Griffiths (1997) also contends that employers should anticipate human failure and specify passive safety features on vehicles, as this does not require any difficult behavioural changes. A counter argument is that it lowers people's concentration and skill levels. In reality, a combination of both is generally implemented in organizations.

Factors affecting Fleet Management

Fleet Management is a function that allows companies which rely on transportation in their business to remove or minimize the risks associated with vehicle investment, improving efficiency, productivity and reducing their overall transportation costs, providing 100% compliance with

government legislation (duty of care) and many more. Fleet (vehicle) management can include a range of functions, such as vehicle financing, vehicle maintenance, vehicle telematics (tracking and diagnostics), driver management, fuel management and health & safety management etc. There are factors affecting that affect these functions and they include internal factors and external factors in organizational and fleet levels.

Internal Factors: At the organization level we study mandate, background and organizational structure. Mandate is the command to act for the firm. The core mandate can be oriented to relief or development. Relief operations can generate an unforeseen increase in the demand of transportation while transportation requirements for development projects are stable in the short run. The organizational background explores the antecedents of the firm in terms of age and geographic coverage. Typically, large organizations have four organizational levels: headquarters, regional offices, national offices and project offices.

At the fleet level we focus our attention on the fleet management model and fleet management functions: fleet structure, deployment and routing, vehicle life cycle, drivers and road safety, and monitoring and evaluation. We study three types of fleet management models: decentralized, centralized and hybrid. Fleet structure is described using fleet size, age and vehicle brands. Fleet deployment and routing are studied at the national and field level. Most of the academic literature on humanitarian logistics focuses on optimizing routing and deployment for responding to disasters. Viswanath and Peeta (2003) identify critical routes for earthquake response using a multi-commodity network flow model. Sheu (2007) models the response to urgent relief demands during the first 3 days of response to disasters.

Vehicle lifecycle management covers the stages of vehicle management from procurement to disposal. Big organizations purchase brand new vehicles while smaller ones usually purchase second hand vehicles. Insurance policies must deal with security issues and geographic coverage. Maintenance refers to preventive maintenance, the most widely used maintenance policy (Ozekici, 1995). Repairs are unplanned maintenance. They can be due to component failure, accidents or sabotage. Fuel management relates to fuel sourcing and fuel consumption control. Vehicle disposal and replacement deal with the end of vehicle life cycle. Academic literature on replacement is extensive. Wang (2003) classifies replacement policies in age or mileage based, repair limit based or up to failure. Examples of these policies can be found in, Bertsekas (2005).

Drivers are a critical component in fleet management. Mejza and Corsi (2003) find the best performers of motor carriers in the US as to driver management practices. They study hiring and training as well as incentives for drivers and find that careful hiring processes lead to better performance. They also find that driver training combining both conceptual (classroom) and experiential (in the car) programs are preferred by the best performers. Formal reward systems are identified as best practices in driver management. We look into driver hiring, training, rewards and turnover. Road safety refers to the actions taken by drivers and passengers to avoid accidents. Some measures of road safety are: the mandatory use of seat belts, no more than 8 hours driving per day (Jones and Stern, 1987), driving only during daylight time (Orris, Buchannan, Smiley, Davis, Dinges and Bergoffen, 2005) and stopping to rest at least every 4 hours (Lin, Jovanis and Yang, 1993). Car accidents can be an issue for firms especially when they involve third party injuries. Key performance indicators related to fleet management are used by organizations particularly to monitor vehicle lifecycle.

External Factors: Operating conditions (Balcik et al, 2008), demand uncertainty, and donors have a potentially strong effect on fleet management. Lack of stability and security are serious issues for

firms operating in developing countries. Another characteristic of humanitarian operating conditions is the lack of local infrastructure and facilities (Van Wassenhove, 2006 ;). Tax status affects costs and procedures related to vehicle and spare parts procurement as well as fuel price. Organizations can have total, partial or no tax exemption. Although conceding tax exemption is discretionary to each country, very often organizations belonging to the United Nations or the Red Cross Movement are duty free. Finally, firms may face highly fluctuating exchange rates that can affect sourcing and disposal decisions and capacity allocation (Chakravarty, 2005).

Research design

The study adopted a descriptive research design. A descriptive research design is concerned with finding out the what, where and how of a phenomenon; (Mugenda and Mugenda, 2003). To answer the research questions of this study will integrate both qualitative and quantitative methods. The target population for this study was made up of fleet officers in selected embassies in Kenya. The target population of this study will be 10 respondents from each of the embassies selected for the study. The selected embassies include Australian, Canadian, USA, UK Britain, Korean, Japan and Chinese embassies. The researcher also used purposive sampling to select those respondents that best suit the purposes of the study and those believed to have the information sought. In this case the researcher will select fleet managers in Australian, Canadian, USA, UK Britain, Korean, Japan and China in Kenya. Primary data was collected using open and close-ended questionnaires distributed to managers in Australian, Canadian, USA, UK Britain, Korean, Japan and China embassies in Kenya. The study preferred questionnaires primarily due to their practicability and applicability to the research problem.

Conclusion

The establishment and effective administration of a fleet management program can have a positive impact on the cost effectiveness and efficiency of a locality's fleet operation. Because each municipality's fleet and usage is unique, a universal management guide does not exist that can be applied to all types of fleets for every locality. For example, a police vehicle has different maintenance demands than a pickup truck in the department of public works. Likewise, a police vehicle in an urban setting has requirements different from a rural county sheriff's vehicle. Even within a single department, a vehicle used by a detective may be maintained and replaced on a different schedule than that of a patrol car (Faulks, 2001).

However, some commonalities exist. An effective fleet management program for any local government should establish guidelines for the acquisition, maintenance, replacement and disposal of vehicles. Local officials should put together a fleet management policy that clearly covers all of the guidelines established. This policy should be monitored for compliance by the heads of each of the individual departments. Essential to this oversight is the maintenance of pertinent records such as vehicle daily mileage logs, fuel usage logs, and the cumulative costs of parts, labor and overhead by a vehicle over its life. This brochure is designed to help local officials craft an effective fleet management system best suited to their individual needs (Schwartz, 1998).

Procedures supplementing the public procurement policy should be established on how vehicles will be acquired and what type of vehicles should be acquired based on their intended use. The goal of optimized acquisition is to obtain the lowest possible price and the highest possible quality. In many cases, it is more cost effective to have employees use their own cars and reimburse mileage rather than purchase a vehicle. However, the vehicle's use will drive this decision. For example, a probation officer who is conducting home visits may require a county-owned vehicle for personal privacy and

security reasons. When it is necessary to acquire a vehicle, local government officials should investigate purchasing through a State contract.

Many embassies pick a specific number of years or rely on staff opinion to determine when to replace a vehicle. A much more cost effective method is to track each vehicle's total life cycle costs from the date of its acquisition to its point of disposition. This information is especially helpful for fleet management, since all too often vehicle replacement is one of the first items sacrificed when budget cuts occur. With accurate and complete records showing the optimal time to replace a vehicle, budget constraints will be less likely to drive fleet management decisions. Once it has been determined that it is time to replace a vehicle, you should make sure there are no better alternatives than purchasing a replacement. Ensure that the vehicle you are taking off the road is used enough to justify a replacement. Periodic review of all comparable vehicles in the fleet will identify those that are underutilized and allow you to reassign them where they are needed more, (Wang, 2002).

Recommendations

The study observed that there is a very high likelihood of significantly reducing transport costs that are an obstacle to development in many regions if the right fleet management strategies are implemented in the public sector. Therefore, public sectors have the mandate to create clear and applicable strategies that are likely to bring about cost reduction.

To the government an effective fleet management program for any local government will establish guidelines for the acquisition, maintenance, replacement and disposal of vehicles. Local officials should put together a fleet management policy that clearly covers all of the guidelines established. The public sector should provide services that non-payer cannot be excluded from, services which benefit all of society rather than just the individual who uses the service (such as public education), and services that encourage equal opportunity.

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FACTORS INFLUENCING INVENTORY MANAGEMENT IN PUBLIC SECTOR:A CASE STUDY OF THE OTHAYA DISTRICT HOSPITAL

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Abstract

The aim of this study was to investigate the factors influencing inventory management at the public sector from which the researcher settled in Othaya District Hospital. The various factors influencing inventory management were broken into Procurement procedure, lead time, supplier selection and e-procurement. The particular objectives that were analyzed included; to determine how procurement procedures influence inventory management, to determine how e-procurement influences inventory management at Othaya District Hospitals. The researcher used a sample size of thirty percent of the target population to act as the sample size, since it have been argued that such a sample size is adequate for a descriptive survey study (Patton, 2002). The target population for this study consisted of officers from various departments. These were the employees who are directly responsible in inventory management to ensure that the customer demands are effectively and efficiently met, as well as those who are indirectly involved. Sixty five (65) of the targeted eighty five respondents took part in this research study across all the sections of the company. The researchers used questionnaires to collect data for the research. The questionnaires contained both open and closed ended questions and covered all the areas of inventory management to come up with good raw data for the research. The responses obtained were analyzed in detail taking into consideration any information collected through observation. Part of the data was quantitatively analysed using statistical methods such as SPSS (Statistical Package for Social Scientist computer software.) which was commanded to produce frequency tables, graphs and the necessary measure of variance for effective interpretation. The key findings in the research indicated several challenges in inventory management Such challenges include limitation of scope from which suppliers are selected, lack of transparent supplier appraisal process, lack of transparent tender awarding process and pre-qualification of supplier not made public. Delays was another challenge which was caused by the processes of initiating a request for supplies to the supplier, non availability of some pharmaceuticals from the Kenyan market or in the global market, legislation issues also come in to play as these products had to be authorized to be used in Kenyan market hence delays while awaiting approval and other logistical issues. Lack of e-procurement which could have been fast and reduce the delays. The study was of great importance to Kenyan government and donors it assisted in identifying areas of improvement in procurement process of such projects. To researchers the study formed basis for future research.

Keywords: Disposal, E-Procurement, Surplus Property, Expediting, Efficiency , Effectiveness

Introduction.

Inventory consists of all goods owned and held for customer satisfaction. Inventory is a necessary evil to any organisation although there are various costs that accrue as a result of keeping inventory. It is therefore important for any organisation to keep a good balance between the amount of inventory to keep at any one time so as to ensure that both internal and external customers are satisfied without causing the organisation to incur high inventory costs .Inventory management is required at different locations within a facility or within multiple locations of a supply network to

protect the regular and planned course of production against the random disturbance of running out of materials or goods.(Williams,2000). The scope of inventory management also concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting.

The various types of inventory include: raw materials, which are all materials before they are placed into production, work in progress, which are manufactured products that are only partially completed at some point in time while finished products are manufactured goods that are complete and ready for sale. (Williams, 2000). Inventories represent a sizeable investment and a potential source of waste that needs to be carefully controlled. If managers keep too much inventory on hand, they will waste money storing it and lose money if inventories are damaged or stolen. On the other hand, managers who run out of inventory may have to stop production until the necessary materials are supplied, wasting time and labour. (James, 1999).In most realistic inventory situations, certainty does not exist. Both demand and acquisition lead time usually fluctuate and cannot be completely predictable. Even inventory models such as EOQ are not applicable to all inventory situations. Demand or usage of items can be greater or lesser than anticipated due to external or internal factors. Also the acquisition lead time can vary from favourable to unfavourable due to supplier and transshipment difficulties. If there is no inventory of items when required due to any reasons, a stock out occurs. This situation can lead to decrease in profits and sometimes even losses. On account of increased pressure on the working capital, the need for minimum or no inventory has been felt very much. However, it is not practical to completely avoid stocks as stocks are held to avoid too frequent purchases and to avoid loss of production due to plant shut down. As it is necessary to hold stocks, it is necessary to control it. One problem that arises with uncertainty of demand is that of providing buffer stock to protect any shortages. (Shenoy *et al* 2000).

There is an optimum level of investment below which opportunities are lost through having too little and above which more opportunities are lost through idleness of excess stock. The costs associated with large inventories are; loss of return of tied up capital, risk of obsolescence, storage costs, handling costs, clerical costs and insurance premiums. On the other hand costs associated with low inventories include; forgone sales, forgone purchase discounts, loss of customer goodwill, increased unit costs of purchasing and transportation and extra costs of economic production runs. (Richard *et al* 2004).

It is important that both the Public sector and the private sectors in Kenya embrace good inventory management practices as a tool of enhancing the performance of the procurement process. The research focused on the Public sector and investigates the challenges of inventory management and shall give recommendations on how to overcome these challenges.

Statement of the Problem

Inventory management plays an important role in an organisation's service delivery and ability to satisfy customers. The effectiveness of inventory control is directly measurable by how successful an organisation is providing high levels of customer service and low inventory investment. At the

Othaya district Hospital there is need to always have enough materials in stock so as to ensure that good and services are offered to all the customers. The department should never run out of supplies due to the sensitive nature of its function 'Offering medical services'. It is very important to ensure that there is efficient supply of various goods at all times because there need comes in handy to ensure proper performance of the supplies and stores department. In any case, the procurement department function is spread throughout the organisation.

There is difficulty in determining the desired stock levels that ensure a free flow of materials without incurring heavy expenses in stocking those materials. For the past three financial years, the department has held excess inventory of some items while there has been lack of other necessary items in store required to meet customer demands. The inventory has not been able to run the organisation smoothly as there have been several stock outs or total lack of various stock items. There is some evidence of suppliers who cannot meet delivery schedules and thus cause delivery uncertainty. The procurement department often provides the supplier with short notices or requests frequent changes to a schedule and thus increasing the probability of delivery uncertainty. This shows that the department has not determined its order and re-order levels, which is a good practice in inventory management.

There is also an extended order cycle time, i.e. the time between the recognition of a purchase requirement and the physical receipt of material from a supplier (Greene, 1997). The longer the order cycle time the more uncertain delivery becomes resulting to a possibility of a stock out.

There is also an inaccurate or uncertain demand forecast, a source of uncertainty affecting inventory levels at the procurement department. This has increased the need for safety stock to meet future demand regardless of the demand uncertainty.

Research Objectives

The general objective was to assess factors influencing inventory management in the Public Sector. This was guided by the following specific objectives

- 1) To determine the effect of procurement procedure on inventory management in Othaya District Hospital.
- 2) To determine the effect of e-procurement on inventory management in Othaya District Hospital.

The study sought to answer the following questions:

- 1) How does procurement procedure influence inventory management in public Sectors?
- 2) Does e-procurement influence inventory management in Public Sector?

Justification of the Study

Inventories represent a sizeable investment and a potential source of waste that needs to be reviewed regularly and closely reviewed e.g. through perpetual stock taking, periodic reviews also as well as internal and external auditing. This should be done in full participation of the employees. In this relation the Procurement department should establish the challenges it is facing by having inventories in excess. For this reason, the study sought to assist the department in knowing how much inventory

it should keep at any one time and the reasons it should keep such inventory. The studies also enabled the department to establish the kind of technology it should adopt to ensure efficiency in inventory management. The study was of benefit to the public sector especially the Procurement and Stores department as a whole.

The study was used in increasing the knowledge base to existing challenges in inventory management systems literature available in Kenya, especially in the private sector. The study provided basis for further studies on inventory management in Kenya. Upon successful research, the researcher was in a position to ascertain the role of procurement on the performance of public Sector and hence make recommendations on areas of improvement. Thus the Othaya District Hospital may adopt the finding of this research and implement them in the institutions. The major contribution of this study was to document the procurement procedures used and recommendations on how e-procurement can lead to overall performance of Othaya District Hospital. The results of this study can also be used as a source of reference by other scholars and students in future.

Scope of the Study

The study was conducted using one case study of the Othaya District Hospital. It has been in operation for many years now consistently offering the same goods and services to the public and whose importance is unmatched. The study focused on the nature of inventory management at the procurement and supplies department, the nature and type of challenges faced in inventory management and how to overcome those challenges. The study specifically focused on Procurement Officers, Procurement Assistants, Store men as well as the Clerical Officers working in that department. It aimed at gaining an overview of the nature and practice concerning inventory management systems and their effectiveness in ensuring customer satisfaction.

Literature Review.

The purpose was to find out how other authors conceptualized the concepts as well as the findings and methodology that has been adopted in past empirical studied on the inventory management.

Conceptual Framework.

The conceptual framework includes independent variables identified as procurement procedures, lead time, supplier selection and e- procurement on one hand and inventory management as dependent variable on other hand. The problem under investigation is inventory management as affected by the identified independent variables. Inventory management is shown on the right side while the independent variables are shown on the left hand side in figure 1.

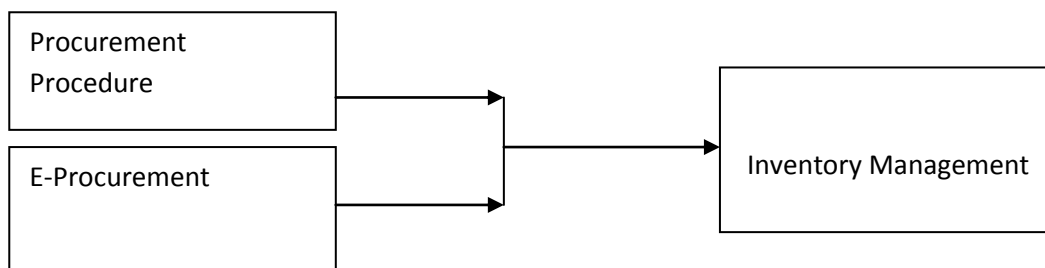


Figure 1: Conceptual framework

Procurement Procedures: The public procurement procedure is the process followed in acquiring of goods, works and services by the government procuring entities which includes purchasing, hiring, leasing or any other contractual means of engaging suppliers in the provision of services to the public (Ient, 2002). Public procurement is controlled by government and is financed from taxation, grants, public debts and fees for services. The main goal of public procurement is effective and efficient provision of public service. It is aimed at satisfaction of customers in terms of cost, quality, and timeliness of the delivered product or service, minimizing administrative operating costs, conducting business with integrity, fairness and openness. (GoK, 2005).

The procurement procedures outline in detail the specific actions to be taken so as to accomplish a purchase task within the guidelines of the company. The procedure provides the framework and direction for achieving the most economical supply of materials with the maximum efficiency. It also provides the means of processing information and communicating from the time of need until the materials are delivered (Kenneth, 2003).

According to Gary (2002), procurement procedure entails the following major processes; Procurement Planning, Solicitation Planning, Solicitation, Source Selection, Contract Administration and Contract Closeout. Procurement planning is the process of identifying which project needs can be best met by procuring products or services outside the project organization and should be accomplished during the scope definition effort. It involves consideration of whether to procure, how to procure, what to procure, how much to procure, and when to procure. Procurement planning should also include consideration of potential sellers, particularly if the buyer wishes to exercise some degree of influence or control.

E-Procurement: E-procurement is simply aspects of the procurement function support by various forms of Electronic communication, (Knudsen, 2002) and its use in both the public and private. This typology has been adapted from various sources including, (Caldwell et al. 2002; de Boer et al. 2002; Knudsen 2002; Telgen 2001). Market places (market sites) take various forms and may be buyer, supplier or neutral Centric and have been thought beneficial in reducing costs and optimizing supply chains (Barratt and Rosdahl, 2002).

ERP integration, dispute settlement, other services, and, management information. The term e-procurement has become synonymous with electronic market places (market sites). During the height of dot.com mania between about 1999 and 2000 electronic market places were seen as a potentially lucrative source of revenue for aspiring dot.com companies. The promotional material was along the lines that if your organization is not using a market place then it is not doing e-procurement and would be left behind. This line was generally accepted in the public sector which saw the potential of electronic market places as a magic pudding into which could be mixed a large part of the spending of public sector entities with great opportunities for small and medium sized enterprises and other worthy suppliers. Notwithstanding the very wishful thinking, the reality has been different.

Research Design

The research was a case study. A case study refers to the collection and presentation of detailed information about a particular participant or small group, frequently including the accounts of subjects themselves. The researcher used a case study because it places more emphasis on a full

contextual analysis of few elements and conditions and their interrelations which will rely on qualitative data. The case study was chosen for the study because it enabled the researcher to get more detailed information about the employees’ views on the challenges affecting inventory management.

The study used both qualitative and quantitative approaches. The qualitative approach was the use of non- quantifiable methods to collect, to evaluate and analyze data. (Borg and Gall, 1993.) The reasons for this approach were to permit the researcher to study selected issues, cases, or events in depth and detail. Also, data collection should not be constrained by predetermined categories of analysis, allowing for a level of depth and detail that wouldn’t be provided by the quantitative approach. (Borg and Gall, 1993).

Target Population: The target population for this study consisted of officers from various departments. These were the employees who are directly responsible in inventory management to ensure that the customer demands are effectively and efficiently met, as well as those who are indirectly involved. Questionnaires were also administered to all the respondents’ .The questionnaires were constructed in both open and closed ended questions to enable for quantitative and qualitative analysis respectively.

Sample Size and Sampling Design: Purposive sampling techniques were applied in selecting the study area (Othaya district hospital). The main factor considered in determining the sample size was to keep it manageable enough. Also to enable the researcher to derive from it detailed data at an affordable cost in terms of time, finances and human resource (Mugenda and Mugenda 1999).The study adopted stratified sampling techniques to select suitable sample size. The researcher selected (30%) of the target population to act as the sample size, since it have been argued that such a sample size is adequate for a descriptive survey study (Patton, 2002)

Table 1. Target Population

No table of figures entries found.

Group Category	Population Size	Population Sample Size
Finance Officers	10	3
Administrator	8	2
Procurement Personnel	20	6
Marketers	10	3
Casual Workers	235	71
Total	283	85

Source: Othaya District Hospital.

Data Collection Methods

These are the approaches that the researcher used in data collection during research process. In this study, the researcher utilized both primary and secondary data in the research process.

The primary data was collected through questionnaire and interviews. Secondly personal interview were used to interview some of the officials in Othaya District Hospital. Secondary data were obtained from the tender documents, published material, journals and internet sources.

Effect of procurement procedures on inventory management: The first objective of the study was to analyze the effect of procurement procedures on inventory management in public sectors.

Table 2. Respondents’ Ratings on procurement procedures in Othaya district hospitals.

Procedure	Strongly agree	Agree	Not sure	Disagree	Strongly disagree
Supplier Selection is affected by politicians and other external players.	21%	40%	3%	19%	17%
Open tendering is done transparently.	9%	15%	10%	36%	30%
Restricted tendering is never done in Othaya district hospital.	3%	10%	25%	39%	23%
Bids evaluation is handled by competent members.	5%	13%	25%	35%	22%
Annual procurement plan is not prepared in good time	15%	35%	13%	19%	18%
Composure of tender committee is all inclusive (all departments represented)	15%	23%	25%	19%	18%
Urgent procurement is not common in Othaya district hospital.	20%	33%	18%	21%	8%
Deliveries’ inspection process is not handled well by inspection committee.	33%	34%	9%	19%	5%
All suppliers are promptly paid on delivery.	15%	23%	25%	19%	18%

Major procurement procedures like request for open tendering, bids evaluation and inspection of deliveries are not conforming to PPOA requirements. This implies that inventory management level is very low. 70% of visited hospitals and are worst hit by procurement procedures as reflected by table 4.4 above.

66% also agreed that open tendering is not done transparently. 61% agreed that Supplier Selection is affected by politicians and other external players, local community, staff members. Inventory management level must be guided by the aforementioned procurement procedures. The study revealed that inventory management level is still low as reflected by figures 4.2 below.

Procurement plan preparation:

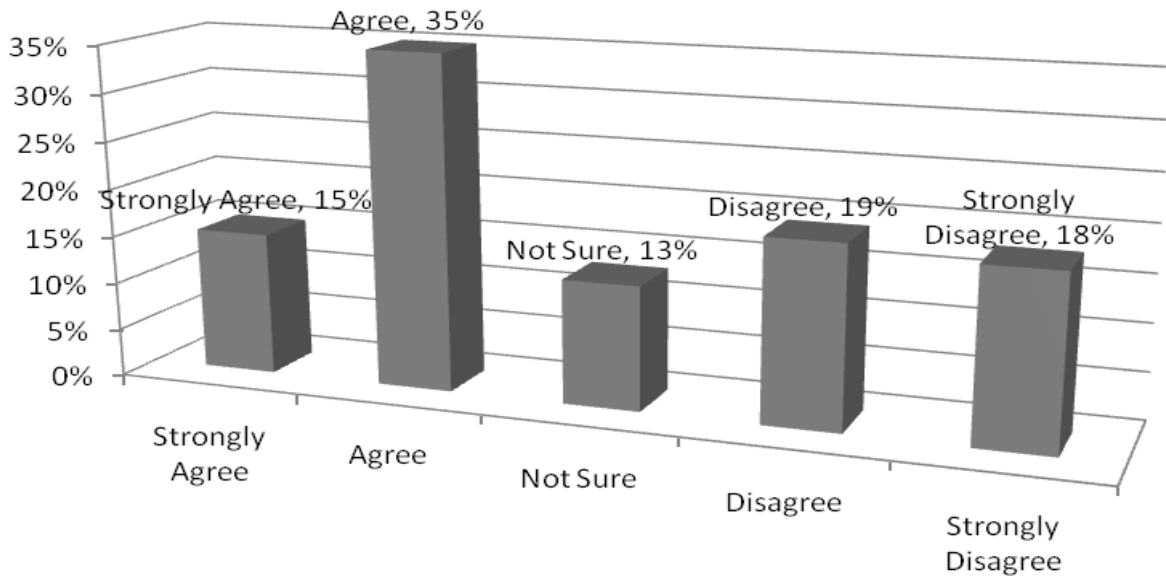


Figure 2: annual procurement plan is not prepared in good time.

Effect of e-procurement on inventory management.: E-procurement (or business-to-business networks) is an online system by which companies can be connected directly to suppliers for the purpose of buying products and services at the lowest cost possible. E-procurement essentially replaces its offline version, called tendering.

Table 3. Effects of e-procurement on the procurement process

STATEMENT	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
e-procurement system on procurement leads to quality purchase	0.0	0.0	4.6	9.2	86.2
e-procurement system on procurement leads to less time in the process	0.0	0.0	1.5	10.8	87.7
e-procurement system makes the procurement process less costly	0.0	0.0	3.1	0.0	96.9

Despite the hospital having e-procurement ,86.2 percent of the respondents strongly believed e-procurement system would lead to quality purchase and less time of the procurement process. When asked whether e-procurement makes the process less costly 96.9 percent strongly agreed. Majority of the respondents appreciated the need for a e-procurement as a remedy to shorten ordering cycles, a wider adoption of "just-in-time" practices and increased supplier involvement in product.

Conclusions

From the research objectives and research question, what is the procurement procedures currently used in Othaya district hospital, does the hospital have a e-procurement system and how does it affect inventory management, what are the recommendations for improving inventory management in Othaya district hospital have been by large extent achieved. Nevertheless, several challenges are facing inventory management process hence resulting to some extent achievement of intended inventory management in public sector objective by the government. Such challenges include lack of transparent tender awarding and pre-qualification of supplier not made public. Delays was sought to be another challenge which was caused by the processes of initiating a request for supplies to the supplier, non availability of some pharmaceuticals from the Kenyan market or in the global market, legislation issues also come in to play as these products had to be authorized to be used in Kenyan market hence delays while awaiting approval and other logistical issues. Lack of e-procurement which could have been fast and reduce the delays.

Recommendations

For effective role of inventory management to be achieved the government through the ministry of Health needs to lay more emphasis on enforcing the laid out procedures in Othaya district hospital by conducting regular audits. It was evident that at times, the procurement procedures were not fully observed and shortcuts were used to ensure goods and services are procured in the hospital. Also the procurement department should ensure that the hospital is well equipped with procurement plan as it would provide the organization with the information about the purchase of goods and services, how vendor will be chosen, what kind of contract will be used, how vendor will be managed and who will be involved at each stage of the process. E-procurement should be implemented in Othaya district hospital since with proper implementation is an organized form of open communication. It allows managers to confirm, cutting down on unnecessary purchases and cost and therefore inventory management. E-procurement in the public sector should also increase transparency in procurement through electronic publishing of tender notices and contract awards and this enhances accountability and reduces the instances of corruption therefore inventory management.

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AN ANALYSIS OF PROCUREMENT PROCEDURES ON THE IMPLEMENTATION OF GOVERNMENT CONSTRUCTION PROJECTS IN KENYAN PUBLIC UNIVERSITIES: CASE STUDY OF MASINDE MULIRO UNIVERSITY

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ABSTRACT

The universities just like any other public institutions in Kenya are buyers of goods, services and works. Hence public procurement plays a critical role in the Kenyan economy and an important factor in economic growth. Sound and efficient use of scarce public resources is the responsibility of the government and every public entity. Despite the efforts made by the PPOA to strengthen the public procurement system in Kenya, a number of government funded construction projects in the public sector exceed the contract sum, time schedule or general gross inefficiency. The objective of this study is; to analyse the influence of procurement procedures on construction project implementation in public universities. Descriptive survey design was used in the study using questionnaires and an observation checklist as instruments which were validated by piloting in private universities. The sample size was purposive targeting a population of twenty university employees seconded to construction projects. The primary data was collected by administration of questionnaires. Collected data was factor analysed by use of percentages, frequencies among others. Ordinal regression analysis was employed for quantitative data. The findings indicated that 80% of respondents agreed that procurement procedures greatly influenced implementation of construction projects in the Kenyan public universities, hence recommended that procedures should be strictly adhered to, for quality end products. Areas for further research; Analysis of value addition of strategic approaches in procurement activities on the implementation of construction projects in public universities, Determination of the influence of contextual factors on the relationship between procurement function activities and project implementation of construction projects in public universities. In conclusion findings of this study may assist the construction industry to embrace the procurement procedures for satisfactory end results that will satisfy the project sponsor, users and stakeholders.

Key words: Goods, Procurement procedures, Project implementation, Services, Works.

Introduction

Procurement evolved through four successive stages that have greatly influenced the procurement services. Lysons and Farington (2006) noted that the four successive stages are product; process, relational and performance centred purchasing. In the construction projects the performance centred purchasing stage is the most relevant as it focuses on the best products/materials management methods that employs an integrated methodology to manage relationships, processes and outcomes jointly with the suppliers. (Bailey, et al 2005). Sourcing involves much more than picking a supplier or contractor for each requirement in isolation. It involves continuing relationships, decisions about how to allocate the available business and what terms to do business with. (Bailey, et al 2005) Another factor that needs to be kept in mind in making key source decisions is; who else should be involved in the process? Three American writers Robinson, Faris, and Wind back in 1967 identified the decision making unit, categorised as user, buyer, the decision maker, the gate keeper and influencer.

Over the years, purchasing management has been increasingly gaining importance as a crucial role within organizations and its survival and prosperity to evidently being duly recognized. In the public sector, there is need for various forms of materials to support government programmes in Universities for education activities. Alonzo Decker (2002) observed that management depends on purchasing to produce profit through savings developed from well planned and carefully executed purchasing programs. Therefore this study seeks to investigate the influence of procurement services on the implementation of government construction projects in the Kenyan public universities.

Statement of the Problem

Despite the efforts made by the PPOA to strengthen the public procurement system in Kenya, a number of government projects in the public sector like university construction projects exceed the contract sum, time schedule or generally gross inefficiency in such activities. This has raised a number of questions; to what extent does procurement procedures influence project implementation? This study seeks to answer this question by analysing the effects of procurement procedures on the implementation of the government construction projects in the Kenyan public universities.

Objective of the Study

Analyse the influence of procurement procedures on project implementation

The research question that guided the study was: How do procurement procedures influence project implementation in public universities?

Literature Review

Procurement procedures

Across the globe the procurement services can determine the success or failure of any organisation. Purchasing is viewed as a service function to the university construction projects. It is subordinated to the civil engineering and finance among others (Jones 1997) Majority of the projects employ services of a dedicated team of purchasing and supply specialists. Never the less it's a specialised service because it's about proactive purchasing, where the kind of work becomes more strategic in emphasis, concentrating more upon such activities as negotiating long-term relations, supplier development, and total cost reduction, rather than ordering and replenishing routines (Bailey, et al, pg5, 6) which is summarised in the employment of the right procurement procedures and strategic approach in purchasing management.

Procurement procedures for projects

This is a systematic process provided by the law and has to be followed by the public procurement entities. Once the procurement needs have been identified by the end user the very first activity to be undertaken by the PE is the feasibility study then the environmental impact assessment, procurement strategy, procurement plan backed up by market research data, prequalification, procurement management records, tendering, contract award and contract management.

Procurement planning: A detailed breakdown of goods, works or services required, schedule of planned delivery, implementation, completion dates for all goods and works or services required, estimate of value of each procurement package of goods, works, consultancies and other works, source of funding, indication of items or sections of services, consultancies or works that can be aggregated as a single package, procurement method, details of any committed or planned

procurement expenditure under existing multiyear contracts, price adjustment mechanism for long term projects and timeliness for critical stages of the delivery or implementation programme in relation to the instructions issued by the PPOA in the general manual.

Initiating Procurement Requirements: This process only commences after confirming that funds are available for the procurement and signed approval from the authorising official. The procurement is initiated using the requisition form filled by user department and submitted to the procurement unit.

Selecting Procurement Method: There are seven method of procurement each with different conditions of use. These are further broken down to three; a contracting authority can choose amongst the three; open procedure, restricted procedure and negotiated procedure. Factors that determine the procurement method of use are the estimated value of goods within the specified threshold, works or services, urgency of requirement, limited number of suppliers or service providers among others.

Inviting tender: The methods of inviting tenders vary depending on the procurement method used by the procuring entity.

Receiving of tenders: All submitted sealed tenders will be put in the tender box which is closed until opening time.

Opening Tenders: This is done by the tender opening committee immediately after the deadline for submission of the tenders. Each tender opened will have the name of the person submitting the tender, the total price of the tender and what has been given as the tender security(if applicable)read out loud and record in the tender opening register. Those submitting the tenders or their representatives may attend the opening of the tender.

Evaluation: This is the process by which the best evaluated tender is selected for award of contract from among all the tenders received. Preliminary evaluation is done soon after opening the tenders to await technical evaluation which is done within the thirty days after opening the tenders. This will be done by the technical evaluation committee then financial evaluation will be done within five days after the completion of the technical evaluation.

Confirmation of qualifications: A procuring entity may prior to the award of the tender confirm the qualifications of the tenderer who submitted the lowest evaluated responsive tender, to determine whether the tenderer is qualified to be awarded the contract in accordance with the qualifications listed in section 31(1) of the ACT. If the lowest evaluated tenderer is determined not to be qualified in accordance with the ACT then the tender will be rejected and the next lowest evaluated responsive tenderer will be subjected to similar confirmation of qualifications

Award Decision and Communication: Any recommendation to award the contract by the evaluation committee must be submitted to the tender committee for approval and awarding of the contract to the tenderer. The PE then notifies the successful and unsuccessful tenderers' the result at the same time

Creation of Contract

The person submitting the successful tender and procuring entity shall enter in to a written contract based on the tender documents, any arithmetic errors are corrected within fourteen days if any after notification.

Contract Management: Once the contract has been placed, it must be managed to ensure that the provider performs in accordance with the terms and conditions of the contract and the PE equally meets the obligations under the contract. Any variations made by user department, should be known to the PE all changes and variations to the contract must be approved by the TC in advance. Variations in quantity must not increase the original contract value by more than 10% & for supplies and 15% for services. The PE must monitor the progress of the contractor in delivering the contract regularly and take action in accordance with the contract as soon as any problem is noticed.

Inspection and Acceptance of Goods, Works or Services: This is done by the inspection and acceptance committee to ensure that the correct quantity is received and the technical standards have been met. The appointment letter for the inspection and acceptance committee members' should make clear the duties of those members and insist that they satisfy themselves personally that work has been done in accordance with the contract before authorising payment.

Sourcing

Lyson (2006) defines the systematic process of sourcing as identification of need, definition and re-evaluation of users needs, make or buy decision, identification of the type of purchase ,market analysis, identification of possible suppliers and pre-screen, evaluation of the remaining supplier base ,choose supplier, deliver product/perform service lastly make a performance evaluation in the post purchase.

Purchase Research:It is the basis for effective source decisions as a strategic approach. Effective source decisions will only be made when relevant factors have been considered and weighted against the risks and opportunities which apply. (Bailey,et al, 2005pg 178)Purchasing research refers to the systematic gathering, recording and analysing of data about problems relating to the purchasing of goods and services in relation to the past records in the construction industry, it is an important aspect of procurement/purchasing function. This is due to the rapid changes in technology and economic circumstances and purchasing under conditions of uncertainty where strategic decisions have to be made, need for outsourcing of non critical functions and quantification of the purchasing contribution to profitability and its strategic function in the supply chain.

Pre-negotiation (planning) &Negotiation: Planning is the stage where the entities aggregate requirements in to large contracts, gain economies of scale and avoid emergency procurement wherever possible. Negotiation when strategically applied by the procuring entity can yield positively to the project. The researcher agrees with (Spector B.I (1997) where he emphasises that negotiation style depends on the objective to be achieved-short term gain may use the aggressive style, assertive style for this approach tends to lead to long term problems. A longer term win –win approach based on trading wants is far more likely to reap reward-while one party may concede on price it may be gaining on delivery or payment terms.

Contracting and Subcontracting :It is a strategy of augmenting limited resources and skills while enabling the contractor to concentrate on their main area of expertise. What is bought in subcontracting is the ability to do the job; capacity, expertise and time (Barnett 1995). A subcontractor is an extension of the buyer's resources, therefore an improvement in the subcontractors' performance is the interest of both parties, and thus continuous appraisal is necessary. Every function think they are the best at their work so the researcher has an observation to the emphasis that specialist staff from each area collaborate as a team for the successful implementation of government construction projects in public universities

University Construction Projects

Universities are public entities making a procurement to which the ACT and regulations apply. Universities are categorised under class B. (PPOA2009). Universities, just like other government organisations, participate in nation building through science and technology where by the ministry of public works together with the university technical team like civil engineers/students and government officers engage in the construction of projects like tuition blocks, science labs, hostels among others when funded by the Government or NGO’S. The P.Es must carry out their procurement activities in accordance with the public procurement and disposal Act, Regulations, Standard Tendering Documents Manuals and any directions from the PPOA.

Procurement procedures and the Implementation - Relationship

Purchasing services have a great impact in the implementation of government construction projects in government universities in that all the services even if regarded as a service activity; the researcher is convinced that before the procurement plan is developed, the PE decides which procurement strategy to be adopted. In particular the PE decides whether to a single contractor in a turnkey approach or use multiple contractors this strategic approaches add a lot of value to the implementation of the plan as per the planned schedule. The activities are carried out by a committed team who share the same objective of handing over the product to the client on time. Just in Time Systems would positively influence the completion of the project at the scheduled target time because every stage is taken care of on time using timely information and expertise due to the developed relationship with the suppliers, contractors and subcontractors. The relationship between the right time and project implementation is more less the subsidiary of JIT although this focuses mostly on when the requisition is placed, agreed lead-times and delivery times. The right quantity and implementation of government construction projects in Kenyan public universities still reflects the JIT systems where the quantities should be in the right numbers or volumes just as per the BOQ for timely completion. All the above mentioned are part of the procurement procedures which if adhered to keenly, it may positively influence the implementation of the construction project positively without any legal issues, delays in deliveries among others. Procurement ACT has a great influence on the implementation of government construction projects in Kenyan public universities. The procurement ACT has a mandate of providing the legal framework for regulating public procurement to ensure that the buyers and purchasers are protected against unfair dealings and unethical practices. If the contracts are within the law and executed accordingly then the implementation of the construction projects will be perfect.

The Conceptual Framework

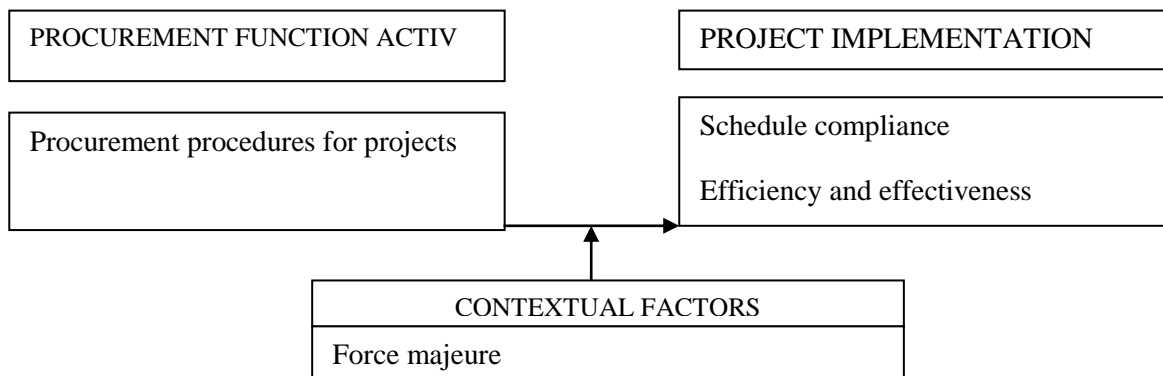


Figure2: The conceptual framework of the procurement services and project implementation

The procurement functions are the independent variables. Project implementation is a dependent variable. The relationship between procurement functions and project implementation is moderated by a number of contextual factors like environmental factors, and force majeure among others.

RESEARCH METHODOLOGY

This study adapted descriptive survey design, where the research was interested in the description of the state of affairs as it exists at the present after implementation of the Public Procurement Act 2005 and Regulations 2006. The study targeted the procurement officers of different levels, the finance officers, architects and engineers of Masinde Muliro University of Science and Technology and users. The grand total was a population of twenty employees of Masinde Muliro University seconded to the government project among others like users of the building was the target population.

Both secondary and primary data was collected for the study. The primary data was collected by administration of questionnaires. While the secondary data was collected by use of documented procurement reports on the construction project and other reports that were relevant to the study.

The researcher used a panel of persons for both content and structural validity. Reliability was tested by giving out six questionnaires to three senior procurement staff and three junior procurement staff in Masinde Muliro University. Split half method was used as a measure of reliability. The collected data or descriptive characteristics to qualitative phenomena were edited coded, classified then analysed according to the factors by use of percentages, frequencies among others.

Summary of Findings

Out of 20 respondents who participated in the study 20% fell below 30 years, 55 between 31-40years while those above 41 years were 25%. 65% were men and 35% women. 25% had been working for less than five years, 65% between 6-10 years, and 10% between 11-20 years etc. Thus most of the respondents had adequate working experience.

The study indicated that the majority of the respondents agreed that procurement function had an influence on the implementation of government projects. Procurement function influences efficiency in total supply chain cycle time, lead times per the plan, relational supply lead-time against industry norm (special consideration), level of suppliers defect free deliveries, satisfactory delivery performance, flexible purchase order cycle time, suppliers ability to respond to quality problems, supplier cost saving initiatives and delivery reliability, timely total inventory, low supplier rejection rate and delivery documentation and goods(see table 4.5).

Strategic approaches in procurement activities on project implementation increases quality to specifications that bears the ability to satisfy stated or implied needs, quality that has a balance of technical considerations such as fitness for use, performance, safety and reliability with economic factors including price and availability, enables to produce a product that is acceptable to the customer, reduces delivery time and within the budget due to cost saving, ensures product development process has minimal impact on ongoing business operations. Procurement procedures affect project implementation as it ensures timely orders, timely deliveries, delivery of good quality material, contribution to value engineering, reduces contractual disputes and enhances quality management of procurement activities. whereas contextual factors like force majeure may cause delay in finances leading to inflation, procurement process taking long time, corruption of systems, misunderstanding between project team representing different departments, poor planning and general management, changes in designs and increased labour adversely affect government project implementation(see table 4.10).

Conclusions

From the study, various conclusions were drawn ie Procurement function greatly influences the implementation of the government construction projects in the Kenyan public universities. Findings of this study revealed that procurement procedures lay a foundation for efficiency and effectiveness hence may assist the construction industry to embrace the procurement procedures for satisfactory end results that will satisfy the project sponsor, users and stakeholders

Recommendations

In light of the above findings, the study recommends for policies and procedures in all operational functions to be strictly executed for quality end products and suggestions for further research are greatly recommended; further recommends that since the study may benefit scholars during their relevant training and development, researchers in procurement may have to look at the issue of procurement procedures and its effect not only in public universities but all other institutions. Policies need to be put in place in construction project procurement field. Procurement officials and project implementers need to integrate when implementing projects to ensure their success. Public university stakeholders need to be making rational decisions related to purchasing functions for example placing officers in their right specialization designations and involving purchasing officers in the strategic planning.

Areas for Further Research

This study was restricted to investigating the influence of procurement procedures on the implementation of the government construction projects in the Kenyan public universities. Based on the study findings, there is need for further research on the influence of value addition of strategic approaches in procurement activities on project implementation, Determination of the influence of contextual factors on the relationship between procurement function activities and project implementation of construction projects in public universities

TABLES AND FIGURES

Table 4.5: Attitude towards Liaison with the procurement team during project implementation

Performance indicators	SA		A		U		D		SD	
	F	%	F	%	F	%	F	%	F	%
Enhances timely orders	9	45	10	50	0	0	1	05	0	0
Enhances timely deliveries	4	20	14	70	2	10	1	05	1	05
Leads to delivery of good quality material	6	30	12	60	1	05	1	05	0	0
Allows for contribution to value engineering	5	25	12	60	1	05	2	10	0	0
Leads to less or no contractual disputes	3	15	9	45	5	25	3	15	0	0
Leads to total quality management of procurement activities	5	25	14	70	1	05	0	0	0	0
Leads to enhancement of transparency in procurement activities.	3	15	15	75	1	05	0	0	1	0
Total	20	100	20	100	20	100	20	100	20	100
		25		61.43		7.86		5.71		0.71

Table 4.10: The reasons for stalling/exceeding the budget in rank

Rank	5		6		7		8		9		10	
	F	%	F	%	F	%	F	%	F	%	F	%
Delay in finances leading to inflation	0	0	0	0	0	0	0	0	0	0	13	65
Procurement process taking long time.	6	30	0	0	0	0	0	0	0	0	0	0
Force majeure	6	30	0	0	0	0	0	0	0	0	0	0
Corruption of systems	0	0	0	0	0	0	0	0	0	0	13	65
Misunderstanding between project team representing different departments	0	0	7	35	0	0	0	0	0	0	00	0
Poor planning and general management	0	0	0	0	0	0	0	0	0	0	13	65
Changes in designs& increased labour	0	0	0	00	00	0	0	0	0	0	13	65

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SUPPLY CHAIN MANAGEMENT

MEDICAL PRODUCTS DEMAND AND SUPPLY STABILITY AS A FACTOR INFLUENCING IMPLEMENTATION OF JUST IN TIME SUPPLY CHAIN MANAGEMENT POLICIES: A CASE STUDY OF THE MINISTRY OF PUBLIC HEALTH AND SANITATION IN KENYA

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Abstract

The purpose of the study was to assess a factor that affects the implementation of JIT supply chain practices in public health sector in Kenya. The factor under study was product demand and supply stability. The objective of the study was to assess the effects of medical products Demand and supply stability towards implementation of JIT policies in Kenyan hospitals and health centers supply chain. There was use of survey research design as a research methodology; a Stratified sampling technique was used in the research process. The type of data collected was both primary and secondary data. Questionnaires were used to collect data. There was use of both closed and open ended questions and five point's likert scale questions. The data collected was measured on ordinal scale. The questionnaires were subjected to a validity test. A target population of 188 HMTS was surveyed on. A sample of 47 hospital management teams was used in the study thus 25% of the regional HMTS being the sample population, a stratified sample frame was used to represent the 8 provinces in the country in consideration of their divergent topographical, social, cultural and economical factors existing in all parts of the country. Data was presented via charts and tables, the collected data were analyzed via use of S.P.S.S with the use of; mean, mode, and median. Inferential statistics tools were equally used, this included use of regression analysis where the researcher analyzed the Coefficients of Determination, Coefficients of Correlation and the variables error terms. The inferential statistics involved formulation of a regression model. The relationship model took a linear regression equation and was summarized as $Y=b_0 + BX+u$. Where b_0 was the overall Beta of the equation/constant, X was variables Affecting Implementations of the J.I.T; X was medical products demand and supply stability. B was the beta for the independent variables i.e. gradient or changes in the independent variable, Y being J.I.T Implementation. The research was done at 95% confidence level. The variables under study had significance levels less than 2.5% in the lower case and higher than 97.5% in upper case thus it indicated that it affected JIT implementation in the Ministry. It was concluded that the stability of the variable under study, meant effective implementation of the JIT policy in the ministry.

Key words: Product, Demand, Supply, Chain, Just in Time, implementation

Introduction

Health services provision responsibilities to the public in Kenya are bestowed to two ministries namely Ministry of Public Health and Sanitation and Ministry of Medical Services. Both ministries have interdependent organization structures that coordinate the supply chain of essential health related needs. This health sector boasts of 47 counties level 5 hospital and various rural health facilities and equally health extension workers services funded by donors. The country also has 8

hospitals called level 6 and 2 referral centers mainly Kenyatta National Hospital and Moi Teaching Referral Hospital, this hospital serve as referral centers for eastern Africa region.

Although there are many benefits of SCM reported in the literature, most SCM linked problems originate from either uncertainties or an inability to co-ordinate activities and partners (Turban, McLean, & Wetherbe, 2004). The bullwhip effect (demand variability) is one of the most common problems in supply chains discussed in the literature (Fransoo & Wouters, 2000; Basu and Wright, 2008). Small fluctuations in demand or inventory levels of the final company/organization in the chain are reflected throughout the chain. Every company/organization in the SC has limited or incomplete information regarding the needs of other members in the SC, and it has to respond with a disproportional increase in inventory levels and subsequently an even larger fluctuation in its demand relative to others in the chain (Forrester, 1961).

The Ministry Of Health has a constitutional mandate of providing equitable and affordable health care services to all Kenyans and in entire region, these services include curative and preventive services (Mission and Vision 2010). For this vision and mission to be realistically achieved, there has to be a proactive supply chain management process which identifies the shortages within and without the supply chain within the shortest time possible in order to minimize the possibility of a shortage of the supply of essential drugs and other supplies to patients or the public. Over so the supplies should be economical enough to minimize the tax payer's burden. Deviating from all this expectation there has been cases all over the country which has raised alarm of lack of enough medical supplies in time or there is excess supplies which is giving them warehousing problems or costs like a case of the Rift Valley General Hospital.

There have been suggestions by the ministry top management on the use of JIT to solve this supply chain bull whip effects in on supply of medical supplies (Health Sector Conference KIA 2012). However the employees still have fears for the failure to implement the philosophy in developing countries. More specific in health sector, these fears have not actually been investigated adequately from the user perspective Although Just-In-Time supply chain can improve healthcare services in Kenya, there is no evidence to show that public hospitals and health centers have adopted the practice or philosophy, like those in developed countries. The reasons as to why the public health sector in developing countries specifically Kenya has failed to embrace JIT as a modern procurement philosophy to solve their SC problems has not been clearly explained in the past other than just resistance to change. Though the factors that affect the strategy have been hypothesized by several authors, there is information gap as to what extend do some of this factors affect the implementation of JIT in Kenya's health sector .Therefore this research sought to fill the information gaps by having an in depth assessment on the effects of these factor in relation to the implementation of the JIT philosophy in Kenyan Ministry of Public Health and Sanitation.

Objective of the Study

To assess the effects of medical product Demand and supply stability towards implementation of JIT policies in Kenyan hospitals and health centers supply chain. This leads us to the following question: What is the effect of medical product supply and Demand stability of medical supplies towards implementation of JIT policies in Kenyan hospitals and health centers supply chain?

Conceptual Framework

The researcher hypothesized commodity demand and supply stability as a factor affecting JIT implementation in public sector to be specific MOPHS in Kenya. The conceptual frame work used in this research is depicted in figure 1. The frame work shows the hypothesized factor influencing JIT

implementation in the public sector and equally the considered focuses/indicators of JIT philosophy implementation.

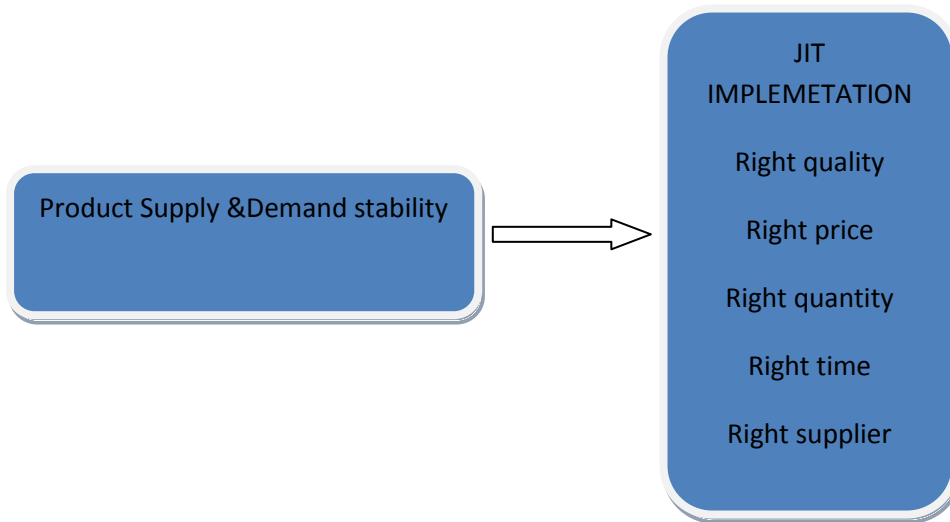


Figure 1: Conceptual Framework

Theoretical framework

Kanban Theory: This Just in time theories strives to answer the following questions; when is the best time to have an inventory part ready for production? Just in time. When is the best time to have an item ready for the next step in production? Just in time. When is the best time to have a product ready for delivery to a customer? Just in time. Why do manufacturers build inventory of both finished goods and raw materials? Just in case!

A buffer of inventory on hand is comforting – and costly. If you hold a lot of items in inventory, you're locking away a huge amount of cash unnecessarily. These items can be lost, stolen, or damaged, or they can deteriorate. They occupy space, which could otherwise be devoted to operations. And they can become obsolete; particularly when products are improved or changed often (many of us can remember images of Kenya Ports Authorities yards full of unwanted, obsolete cars from the 1970s and 1980s.) All of this represents financial loss to the business i.e. opportunity cost.

In the 1970s, when Japanese manufacturing companies were trying to perfect their systems, Taiichi Ohno of Toyota developed a guiding philosophy for manufacturing that minimized waste and improved quality. Called Just in Time (JIT), this philosophy advocates a lean approach to production, and uses many tools to achieve this overall goal. When items are ready just in time, they aren't sitting idle and taking up space. This means that they aren't costing you anything to hold onto them, and they're not becoming obsolete or deteriorating. However, without the buffer of having items in stock, you must tightly control your manufacturing process so that parts are ready when you need them.

The JIT: The most important elements for successful implementation of the JIT production strategy are: (1) top management commitment, (2) development of a JIT policy manual and (3) development of a JIT procedure manual, (4) develop and implement a continuous JIT training program for employees at all level, (5) develop and maintain a JIT circle involving key employee group representatives, (6) redesign the organization to make it flexible and dynamic for allowing JIT

permeate through the system, and (7) develop and maintain an effective communication and control system in order to provide feed backs and control at all levels of the organization and all through the procurement - production - distribution environment Bandyopadhyay (2004)

Medical Product Supply And Demand Stability

In microeconomics, supply and demand is an economic model of price determination in a market. It concludes that in a competitive market, the unit price for a particular good will vary until it settles at a point where the quantity demanded by consumers (at current price) will equal the quantity supplied by producers (at current price), resulting in an economic equilibrium for price and quantity. (Besanko & Braeutigam 2005).

According to Hosseini (1990), the power of supply and demand was understood to some extent by several early Muslim scholars, such as fourteenth-century Mamluk scholar Ibn Taymiyyah, who wrote: "If desire for goods increases while its availability decreases, its price rises. On the other hand, if availability of the good increases and the desire for it decreases, the price comes down." Smith (1776) generally assumed that the supply price was fixed but that its "merit" (value) would decrease as its "scarcity" increased, in effect what was later called the law of demand also. David Ricardo (1817), in *Principles of Political Economy and Taxation*, more rigorously laid down the idea of the assumptions that were used to build his ideas of supply and demand. Ministry of public health being a public services provider, the fluctuations of medical needs in the country favors other approaches of supply chain management at the expenses of JIT for the public cannot manage to source promptly whenever the needs arises and instead prefers to stock their supplies for emerging issues

Just In Time Supply Chain Experiences in Public Healthcare in Kenya

This research establishes whether just in time supply chain management can be implemented and identifies current practices and problems facing the public healthcare sector in Kenya. The objective of the study was to asses problems associated with using the just-in-time supply chain technique in Kenya. One of the factors affecting JIT supply chain in hospitals was hypothesized. Thus, the results lead to a clear understanding of effects in using just-in-time supply chain in healthcare in developing countries, with particular reference to the hospitals and clinics in Kenya.

The current supply chain of medical drugs in public healthcare sector in Kenya is depicted as, medical drugs move from various suppliers to the Kenya central medical stores(KEMSA), county hospitals, health centers, and the final customers: doctors, nurses and patients. There is physical movement of goods and services from the suppliers to the final consumers, and the flow of information from the final customers to the suppliers. In order for the supply chain to work effectively and efficiently, and adding value, there will be need for management to alleviate the purchasing and supply chain problem hypothesized by the respondents. Proactive and visionary managers who can build supply chain relationships are needed to make JIT supply chain work.

In MOPHS, there has to be a proactive supply chain management process which identifies the shortages within and without the supply chain within the shortest time possible in order to minimize shortage of the supply of essential drugs and other supplies to patients or the public. Over so the supplies should be economical enough to minimize the tax payer's burden. Deviating from all this expectation there has been cases all over the country which has raised alarm of lack of enough medical supplies in time or there is excess supplies which is giving them warehousing problems or costs like a case of the Rift Valley General Hospital. There have been suggestions by the ministry

top management on the use of JIT to solve this supply chain bull whip effects in the supply of medical supplies (Health Sector Conference KIA 2012).

Research Gap

Although Just-In-Time supply chain can improve healthcare services in Kenya, there is no evidence to show that public hospitals and clinics have adopted the practice or philosophy, like those in developed countries. The reasons as to why the public health sector in developing countries specifically Kenya has failed to embrace JIT as a modern procurement philosophy to solve their SC problems has not been clearly explained in the past. Therefore this research sought to fill the information gaps as to why the public sector doesn't implement the philosophy (Ministry of Health Management 2012).

Research Design

There was use of survey research design, this involved collection of data from members of DHMTS in the country and to be specific from various 47 counties. There are 188 HMTS in the country which are all distributed or covered in the 47 counties all over the country. The supply of the hospital requirements for the 188 HMTS are all managed at their respective county levels i.e. level 5 hospitals in the county act as the main recipient of the supplies and thus levels 1-4 hospitals fall under their administrative areas. The DHMTs were used as a sample population from a target population of 188 HMTS this minimized the time and cost of the research. A survey research design was used for it is suitable to capture the perception, attitude and behavior of the individuals which will be used to explain the JIT philosophy

Target Population: The target population was counties Health management teams clustered through 47 counties. The total targeted population was 188 HMTS which were within several counties in the country. (Independent Electoral Boundaries Commission-Kenya, 2012).

Sampling Technique: A stratified sampling technique was used during the population size was 188 HMTS of which a sample size of 47 respondents were picked from different level 5 Hospitals and equally from different counties. This was summarized as in Table 1

Table .1 Sample size determination

NO	PROVINCE NAME	SAMPLE POPULAT ION (COUNTY HMTS)=A	% COUNTY- REPRESENTA TION=B	TOTAL POPULATI ON HMTS=C	% REPRESENTATION OF POPULATION VS SAMPLE HMT
1	Coast	6	12.8%	24	25%
2	Rift valley	14	29.8%	56	25%
3	Nyanza	6	12.8%	24	25%
4	Western	4	8.5%	16	25%
5	Eastern	6	12.8%	24	25%
6	North Eastern	5	8.5%	20	25%
7	Nairobi	1	2.1%	4	25%
8	Central	5	10.6%	20	25%
	Total	47	100%	188	25%

The sample design was guided by Kerlinger, (1964) and Mugenda (1999) according to the above Authors they assert 10-30% of the population to form a representative sample. Presently there are 188 HMTS in the country out of this there are 47 which are classified as level 5 which Act as the Administrative Heads and oversee the others. This formed a 25% representation of all the HMTS in the country over and above being their Administrative Heads. This means that the samples from the HMTS are above the minimum percentage representation preferred by the above Authors.

Data Collection Methods

The type of data collected was both primary and secondary data. There was use of questionnaires to collect data. There was use of closed and open ended questions and five point likert scale questions. The data collected was measured on ordinal scale. The five point likert scale was spread in the following format; strongly affect. , Affect, Undecided, Don't Affect, completely don't affect. The dependant variable were measured by ranking the rate at which the asked characteristics /focuses of the kanban theory models dimensions are achieved i.e. right quantity, right quality, right time, right price, right suppliers. Each dimension was awarded a score of 20% and would increase the score as all the dimensions are met by each procurement unit; this was to increase up to 100% if the entire dimension were met by the procurement unit.

Data Collection Procedure

Data was collected using questionnaires. Due to difference in proximity of the county from the researcher, some questionnaires were sent via courier to the Head of the county HMT for the survey. The questionnaires were administrated both directly and indirectly by the researcher, under indirect situation there was use of a research Assistant based in the counties to whom the questionnaire were sent to and answered then returned back to the researcher.

Validity and Reliability of Instruments

The questionnaires were subjected to a validity test. A pilot survey was conducted within Nairobi County by the researcher to pre test the questionnaire. In addition the HMT-(Medical Superintendents) commented on the clarity of questionnaires before being dispatched to the fields. To assess the construct validity, of the questionnaire a pilot survey was done to test if it conferred with the kanban (Taiich Ohno) existing theory about JIT

Data Analysis and Processing

Data collected was analyzed through use of both quantitative and qualitative methods. All quantified responses were analyzed using measure of central tendency, measure of dispersion and regression analysis. The measuring of central tendency involved the use of mean. The inferential statistics involved formulation of regression models; analysis of the coefficient of determination of the models and standard errors of the models parameters. The S.P.S.S program was used during the study to develop the model for the relationships between J.I.T and the variable affecting its implementation in MOPHS. The relationship models took a linear regression equation and was summarized as $Y = b_0 + BX + u$, Where B_0 was the overall Beta of the equation/constant, X was the variable Affecting Implementations of the J.I.T; X –product demand and supply stability, B is the respective beta for the independent variables i.e. gradient/degree of change of independent variables, Y being J.I.T Implementation which is the dependant variable and finally u which was the error term of the regression equation.

Research Finding and Discussions

This includes the analysis of data from the questioners, the data collected included, background information of the respondents, variable affecting JIT implementation in county health procurement units. The variables were analyzed via use of binary regression i.e. use of logic gates example 1-5 for a likert scale logic spread

Preliminary Analysis and Data Screening

Prior to data analysis the data was checked for accuracy and screened for missing values through the use of S.P.S.S. It was important to ascertain the background information or profile of the respondents and this took the following dimension; gender, education, age period in service, county of representation, role in supply chain activities by the respondents. This was important as it laid down the basic foundation on which interpretations are based

4.2 Respondents Profile

After statistical analysis of the data input in the S.P.S.S after the response, the respondent’s background information was summarized in the following tables

Table 2: Supply Chain Participation

Back ground information	frequency	percentile
Participation in supply chain	yes 47	100%
	no 0	0

From the table 2 it was noted that 100% of the respondents had active role in supply chain issues in their counties.

Table 3 JIT Implementation

JIT implementation	yes	no
Frequency	47	0
Mean	100%	0
Std deviation	1	0
N	0	0
	47	

From the table 3 above the entire respondent’s at least had will to implement the JIT policies in their units of management.

From the table 4 on the JIT focus dimensions, out of the 5, 3 had a negative score i.e. right quantity, and right quality had positive scores while right time, right price, right supplier had negative scores. From the ranking or scores it means that 60% of the JIT focus dimensions/targets are not met in most of the HMTS. This indicates poor implementation of JIT policies in the HMTS. This is actually confirmed by the individual views perception of JIT implementation from all the 47 HMTS under study

Table 4: JIT Implementation Levels

JIT TARGETS	YES	NO	TOTAL	FREQUENCY		RANKING	SCORE
				YES	NO		
RIGHT QUANTITY	28	19	47	59.5	40.5	POSITIVE	20%
RIGHT TIME	10	37	47	22.7	77.3	NEGATIVE	20%
RIGHT PRICE	11	36	47	23.8	76.2	NEGATIVE	20%
RIGHT SUPPLIER	20	27	47	43.2	56.8	NEGATIVE	20%
RIGHT QUALITY	28	19	47	60	40	POSITIVE	20%

Positive =40%, Negative=60%

JIT Implementation Variable Analysis

This involved the analysis of the variable that affected the implementation of JIT in HMTS units .There was use of Pearson correlation coefficients, the variable was medical product supply and demand stability, the data was analyzed via S.P.S.S and a bivariate descriptive regression techniques was used during the analysis the correlation coefficient were derived by the program in relation to the independent variable and its effects on implementation of JIT in various HMTS

Variable Correlation Analysis

Medical Products Demand and Supply Stability Correlation

This variable was measured against the JIT implementation targets, i.e. right quality, right quantity, right time of purchases, right suppliers

Table 5: response between the JIT implementation and its independent variable

JIT IMPLEMENTATION DIMENSIONS		JIT IMPLEMENTATION	RIGHT QUALITY	RIGHT QUANTITY	RIGHT TIME	RIGHT PRICE	RIGHT SUPPLIER
PRODUCT DEMAND & SUPPLY STABILITY	Person correlation	.52	.68	.65	.58	.69	.52
	Sig-(2 tail)	.022	.012	.022	.015	.023	.021
	N	47	47	47	47	47	47

From the table 5 above in relation to independent variable medical products demand and supply stability and its effect on JIT implementation the variables had a positive correlation of 0.52. This meant that if the medical products demands and supply are stabilized then the JIT implementation will also be improved to a range of 52 %

Variable Descriptive Statistics Analysis

This tool was used to measure the levels at which the specific independent variable affect the JIT and equally comparison between the independent variable

Table 6: Variables Descriptive Statistics Analysis

JIT implementation	mean	Std deviation	N
Product demand & supply stability	1.05	.254	47

From table 6 the variables descriptive statistics analysis was interpreted as the smaller the mean the stronger the effects on the dependant variables because the question are was on a 5 point likert scale of 1-strongly affects, 2-affects, 3-undecided, 4-don't affect, 5-strongly don't affect. From the response, product demand and supply stability had amen of 1.05 and a standard deviation of .254 it thus implied that the variable strongly affected the implementation of JIT.

Medical Products Demand and Supply Stability Coefficient Analysis

From the hypothesis testing at 95% two tailed confidence interval, it implied that if the significance level was less than 0.025 at lower end or more than 0.975 at the upper end the relationship was significant and thus reject the null hypothesis and accept the alternative hypothesis i.e. if significance was to be >0.975 reject the null hypothesis and equally if significance <0.025 reject the null, these relationships between the variables derived by S.P.S.S during the study were summarized in table 7.

Table 7: Medical Products Demand and Supply Stability

variables	Unstandard confidents		Standard	sig
	beta	Std error	beta	
constant	1.010	0.252	0.00	0.00
Product demand /supply stability	2.16	0.167	0.137	0.22

From the objective understudy, product demand/supply stability effects on JIT implementation, this independent variable was abbreviated as X and JIT as Y variable. From the table 4.4.3 above derived, this variable had a beta of 2.16, a standard error of 16.7% and a significance level of 2.2%. The data having been analyzed using two tails with a confidence level of 95% meant that product demand/supply stability was significant to JIT implementation for it had significance >2.5 at lower

and < 97.5% at upper tie. In case of hypothesis other than research questions were used, then the significance level was <2.5% at lower tie and > 97.5% at the upper tie which fell in the rejection region. This plainly meant that the null hypothesis was to be rejected and instead the alternative hypothesis taken.

The relationship between the two variables was summarized by the following linear equation $Y=1.01+2.16X+0.167u$. From the equation, 16.7% of the variations on JIT implementation levels were not explained by changes in product demand/ supply thus the error term of the equation. The remaining 83.3% of the changes in Y variable are contributed by the changes X variable.

Table 8: Independent Variables Model Summary

model	R	R ²	Change statistics							
			Adjusted R ²	Std error of estimate	R ²	F change	DF1	DF2	Sig	f change
1	.861	.871	.192	.132	.561	1.267	1	47		0.13

The model had an average confident of determination (R2) of 87.1 and a standard error of 13.2% this means that 87.1 % the variations on JIT implementation are caused by the independent variable understudy. The average model linear equation was summarized as $Y=1.01+2.16X+0.0132u$

Summary and Conclusions

In relation to product demand/ supply stability variable, its effects on JIT implementation was summarized as $Y=1.01+2.16X+0.167u$. This implied that the variable had effects on JIT implementation up to 84.3% .The JIT implementation will have 2.16 changes in its units of measurement in their respective procurement units. This is therefore concluded that the variable stability has a very high influence on the ability to implement JIT in Ministry of public health.

Recommendations

The concept of JIT is a pivot element for achieving the ministries mission and vision and their fore it is vital for the government and the Ministry Of Health to address the medical products demand and supply stability, in order to much the JIT concept and minimize wastes in form of storage costs, price cession losses, and poor service delivery due to late delivery of the medical products and high operation costs. There is need for the ministry to have a proactive research process in order to be able to predict future medical supplies demand instability. This can be done through having modern stock management software’s that tracks the products and asses the level of use over a period of time to come up with accurate average stock usage. Finally there should be enough capacity building to ensure that the JIT policies are understood and applied well by the stakeholders and in line with achieving the ministries mission and vision

Areas for Future Research

From the research, medical supplies demand &supplies stability is a strongly affecting variable in implementation of JIT with a mean of 1.05 and standard deviation of 0.254 this basically meant that the ministry and health stakeholders don’t have enough emergency alerts all over the country or are not certain of exactly what is needed where at what time and thus I recommend that future research should be done on the ability of the ministry to predict its future medical supply/demand for its

customers or the public. This can be either through the Kenya bureau of statistics department to ascertain the demographic distribution of population and mapping of epidemic areas and their unique medical needs. Or maximum use of disease surveillance department

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EVALUATING PROFESSIONALISM IN PERFORMANCE OF PUBLIC PROCURING ENTITIES: A CASE STUDY OF THE MINISTRY OF ENERGY AND PETROLEUM-KENYA.

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Abstract

The research was aimed at examining the level of professionalism in enhancing performance of public procuring entities at ministry of energy, Kenya. The purpose of the study was to showcase the milestones of the public procurement and disposal Act 2005 in enhancing performance of the public procuring entities. The data was obtained by the use of face to face interviews and questionnaires which were issued to the employees at the energy ministry. The data was organized and analyzed qualitatively and quantitatively. The research also outlined major findings, discussions and answers to the research questions were provided. Finally, critical conclusions and recommendations were presented. The public procurement and disposal Act, 2005 has gone a long way in enhancing and providing a well-organized procurement system, where there is uniformity in the Public Procurement procedures. The Act has enhanced professionalism in Public Procurement through sponsoring the Public procurement oversight authority (PPOA) training programmes at both bachelors and masters level. It has also provided a common reference point for all procurement professionals, thus ensuring uniformity in carrying out procurement function and reduces possibilities of graft. In terms of stakeholder participation, the Act has ensured that the stakeholders especially the users are fully involved in the procurement process. They are involved in making specifications, opening and evaluation of tenders, in the Inspection and Acceptance Committee and certifying the completion of works. In ensuring that quality goods are procured and delivered, it has established the Inspection and Acceptance Committee which has been established in the Ministries. In ensuring that there is value for money, the Act established the PPOA which gives various manuals and guidelines on procurement and also the PPOA market rate index for various goods and services, which serves as the benchmark for ensuring that they do not buy overpriced goods.

Keywords: Professional, Accountability, Performance

Introduction

Public procurement is broadly defined as the purchasing, hiring or obtaining by other contractual means of goods, construction works and services by the public sector. The goods and services may range from simple goods and services such as papers, pins, cleaning materials and cleaning services, to large commercial projects such as development of infrastructure such as roads, energy centres, water and street lighting projects (Gitonga, 2009) Public procurement is alternatively defined as the process by which public funds are utilized by public entities to purchase goods and services from the private sector.

Public procurement is therefore the principal means through which governments meet development needs such as provision of infrastructure and supply of essential commodities such as medicines in government hospitals. Moreover, many governments use public procurement to support the development of domestic industries, overcome regional economic imbalances and support various communities especially the less fortunate ones.

Therefore the management of public procurement process is one of the functions that have a wider implication in ensuring good governance because all government departments providing services are dependent on this process. Sound public procurement policies and practices are therefore among the essential elements of good governance.

The Public Procurement System in Kenya has evolved from a crude system with no regulations to an orderly legally regulated procurement system. Until the early 1970s public procurement in Kenya was largely undertaken by the British firm crown Agents, since local suppliers were inadequate and most of the needs of the government could only be met from external sources (Gitonga, 2009) The Government's Procurement system was originally contained in the Supplies Manual of 1978, which was supplemented by circulars that were issued from time to time by the Treasury. Thereafter the government established supplies offices within its ministries and departments and appointed supplies officers to take charge of procurement. The Director of Government Supply Services was responsible for ensuring the proper observance of the provisions of the supplies Manual. The Manual created various tender boards for adjudication of tenders. The tender boards that were created included; the Central tender boards(CTB) ,the Ministerial Tender boards(MTB) and the District tender board(DTB)which catered for procurement in the lower levels of the government.

The procurement reforms in Kenya were jointly initiated in 1999 by the government of Kenya and the World Bank. The procurement audits carried out by Soieta Generale Semi Conduttori (SGS) on Kenya's public procurement system disclosed serious shortcomings ranging from inefficiency to lack of sound and transparent legal framework. It established that: There was no uniform procurement system for the public sector as a whole; it did not have sanctions or penalties against persons who breached the regulations in the Supplies Manual, other than internal disciplinary action. Consequently application of the rules was not strict and many of the norms were not followed and the Supplies Manual did not cover procurement of works, The dispute settlement mechanisms relating to the award procedures as set out in the Manual were weak and unreliable for ensuring fairness and transparency, Records of procurement transactions in many cases were found to be inaccurate or incomplete or absent, which led to suspicions of dishonest dealings at the tender boards and The systems had other institutional weaknesses that not only undermined its capacity for carrying out their mandates effectively but also led to a public perception that the public sector was not getting maximum value for money spent on procurement.

In view of the above shortcomings it was found necessary to have a law to govern the procurement system in the public sector and to establish the necessary institutions to ensure that all procurement entities observe the provisions of the law for the purpose of attaining the objectives of an open tender system in the sector. Consequently the establishment of the Exchequer and Audit (Public Procurement) Regulations 2001 which created the Public Procurement Directorate (PPD) and the Public Procurement Complaints, Review and Appeals Board(PPCRAB).

The PPD and PPCRAB, though largely independent in carrying out their activities, had been operating as departments in the Ministry of Finance on which they relied for staff, facilities and funding. Since these institutional arrangements have a potential for undermining the impartiality of these bodies in the long run it was found necessary to create an oversight body whose existence was based on a law. The Public Procurement and Disposal Act, 2005 was thus enacted and it become operational on 1st January, 2007 with the gazettment of the Public Procurement and Disposal Regulations, 2006. The Public Procurement and Disposal Act, 2005 created the Public Procurement Oversight Authority (PPOA), the Public Procurement Advisory Board (PPAB) and the continuance of the Public Procurement Complaints, Review and Appeals Board as the Public

Procurement Administrative Review Board (PPARB). The PPAB and PPARB are autonomous bodies.

The PPOA is mandated with the responsibility of Ensuring that procurement procedures established under the Act are complied with, Monitoring the procurement system and reporting on its overall functionality, Initiating public procurement policy, Assisting in the implementation and operation of the public procurement system by: Preparing and distributing manuals and standard tender documents, Providing advice and assistance to procuring entities, and to Develop, promote and support training and professional development of staff involved in procurement.(PPOA,2009)

The Public Procurement and Disposal Act 2005 also created the inspection and acceptance committee which is charged with the task of inspecting and reviewing of goods, works or services in order to ensure compliance with the terms and conditions of the contract and accepting and rejecting on behalf of the procuring entity the delivered goods, works or services. The Act also created the Ministerial Procurement Committee (MPC) which deals with the procurement of goods and services with a threshold of Kshs 500,000.(PPDA 2005).

The creation and implementation of the Act 2005 created standardized procedures that could be followed by all procurement entity's, and created a legal system that would govern the procurement system, thus bringing sanity in the conduct of public procurement by enhancing accountability and transparency since it provided a legal framework where those procurement personnel who did not follow the outlined procedures could be tried and charged in a court of law. (PPOA,2009)

Literature review

Professionalism

According to Hornby, a professional is a person connected with a job that requires special skill or training. In another definition, (Halloran, 1983) describes a professional as an expert in a given field of study. The procurement system requires the input of professionals with good negotiating skills and a good grasp of market dynamics. This need is urgent in light of the diversity of functions that a Procuring unit is charged with that are intricately connected to its efficiency and effectiveness (PPOA draft zero, September, 2009).

The Public Procurement and Disposal Act 2005 and its Regulations of 2006 coupled with the Supplies Practitioners Management Act 2007 have helped in recognizing procurement professionalism in Kenya. Within the Public Procurement Act, a 'procurement professional' is defined as a person who: Has a professional qualification in procurement and supply management from a recognized institution, is engaged in a calling or occupation in which recourse to procurement is directly or indirectly involved and has experience in the practice of procurement, Is a member of a recognized institute of Purchasing and Supply.

The Supplies Practitioners Management Act 2007 spells out the qualifications for procurement practice, defines who a practitioner should be and the qualification for registration and licensing procedures so as to regulate the profession. Continuous education and training of procurement professionals within the framework established by the Act should be encouraged with the expressed aim of professionalizing public procurement. Therefore sound procurement system requires three key components namely; the right legal and regulatory framework, institutions that fit into the laws and regulations and above all qualified personnel to run those institutions.

While the procurement profession still suffers from lack of adequate procurement competencies, important steps have been taken in recent years to establish a sound basis for a professionalized procurement discipline (PPOA, 2009). One example of such a step is the introduction of the revised scheme of service for supply chain management personnel issued by the office of the president in which clear provisions for the qualifications, skills and experience required for appointment of procurement professionals at various levels are made. This scheme is systematically applied in the selective recruitment of procurement staff led by the public service commission. In another area procurement training programme at bachelors and masters level, primarily targeting the public sector recruitment, are now offered by a number of public and private institutions.

This long term training supply is broadly considered to match the needs of the public sector, and the course content is regularly updated on demand and feedback from the public servants enrolled on the courses. Significant steps have been taken to enhance professionalism in Kenya such as providing a scheme of service and regulations to enhance professionalism. In view of the above steps and regulations on professionalism, this research is aimed at establishing the milestones of the PPDA, 2005 in enhancing and enforcing professionalism in the public procurement function.

Conclusion

Any public procurement should conform to the regulatory legal requirements (that is the Procurement Act and the Procurement Regulations). In carrying out its procurement functions, the Ministry of Energy strives to conform to the law. Breach of law is punishable under the procurement Act. The PPDA, 2005 has gone a long way in enhancing and providing a well-organized procurement system, where there is uniformity in the Public Procurement procedures.

In ensuring that quality goods are procured and delivered, it has established the Inspection and Acceptance Committee which has been established in the Ministries and it is very effective in its functions as the research revealed that there were no substandard goods used. The Inspection and Acceptance Committee accepts or rejects the goods delivered on the basis of conformance to specifications.

In ensuring that there is value for money, the Act established the PPOA which gives various manuals and guidelines on procurement and also the PPOA market rate index for various goods and services, which serves as the benchmark for ensuring that they do not buy overpriced goods. The preparation of the procurement plan has eliminated the need for emergency purchases which are sometimes expensive or buying for the sake of buying, or buying just because there is money. This has gone a long way in ensuring that value for money is realized.

The Act has also enhanced professionalism in Public Procurement through sponsoring through the PPOA, training programmes at both bachelors and masters level. It has also provided a common reference point for all procurement professionals, thus ensuring uniformity in carrying out procurement function and reduces possibilities of graft. In terms of stakeholder participation, the Act has ensured that the stakeholders especially the users are fully involved in the procurement process. They are involved in making specifications, opening and evaluation of tenders, in the Inspection and Acceptance Committee and certifying the completion of works. Thus the Act has brought reforms in Public Procurement and has led to the realization of a sound procurement system. However the researcher recommends that there be separation of governance from management so as to allow the procurement process to flow independently as per the laid down procedures and regulations, if performance of Public Procurement is to be fully enhanced.

The concept of good governance demands that public organizations should have capability to provide the public with goods demanded by a country's citizens or their representative in an effective, transparent, impartial and accountable manner, subject to resource constraints (World Bank, 2009). Good governance is accountable, participatory and transparent and it ensures that political, social and economic priorities are based on broad consensus in society.

Having a legal framework is not enough, it requires support through political will, streamlining of internal processes of procuring entities to remove unnecessary bureaucracies and sensitization of the general public to change the culture of bribery and inducement of officers involved in the procurement process. Without this, the objectives of the Act will be far from being fully realized.

Recommendations

The Procurement Act has put in place the legal framework to enable high performance in the procurement entities. However the following needs to be put in place to reinforce the procurement Act:

Separation of governance from management so as to allow the procurement process to flow independently without undue influence from board members and the political leaders, this will to a great extent increase transparency and fairness in the public procurement.

Vetting of officers and committee members before appointment and take them through trainings on matters of integrity and ethics.

Modernize the procurement process through computerization of the systems for example embracing the E-procurement, which will realize real time procurement thus increasing transparency in procuring goods and services. It will also help in overhauling the paper based system that is inefficient and lower transactions cost.

Continuous sensitization of the general public in order to change the attitude and perception they hold that unless they bribe officials in the procurement process, they cannot win public procurement contracts.

In the new dispensation, the PPOA should sensitize the importance of maintaining professionalism in handling procurement at the county level. This is through organizing trainings and seminars at the county level.

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BRINGING LOCAL ENTREPRENEURS INTO THE SUPPLY CHAIN: OPPORTUNITIES IN COUNTY GOVERNMENTS

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Abstract

Opening up opportunities for emerging entrepreneurs to access Counties supply chains is one of the most useful ways in which mainstream business can contribute to local development in Kenya. It can be a win-win for Counties and local economic development as it can generate substantial enterprise development benefits especially in agribusiness sector. The purpose of this study was to map opportunities for bringing local agribusiness entrepreneurs into the supply chain. This study had three objectives: to establish value addition initiatives for agribusiness SMEs in Counties; to profile marketing channels for agribusiness SMEs in Counties; to investigate response of agribusiness SMEs to opportunities of devolved governance system. The study used descriptive survey method to achieve these objectives. The study sampled five counties each from five regions in Kenya namely North Rift, South Rift, Central, Coast and Eastern where 10 agri-business SMEs from each County participated in the study. This is an invaluable study because it demonstrates the substantial development impact that can be generated by localizing procurement and a wide range of practical tips on how to bring local micro and small enterprises into County Governments supply chains. The study found that many SMEs are struggling to sustain their competitiveness in the face of increasing globalization. The study established that 75% of agribusiness SMEs in Counties has no value addition initiatives in place. The marketing channels of 50% of agribusiness SMEs in Counties are informal while 40% have no any marketing channels in place. The study revealed that 80% of agribusiness SMEs in Counties has no concrete to opportunities provided by devolved governance system. Through entrepreneurial supply chains, some Counties are organizing themselves to forge local solutions to their challenges. The essence of entrepreneurial supply chains is its ability to facilitate alignment of all participants in the chain. This study concluded that devolved governance system and an ability to promote local entrepreneurs are necessary for the success of providing local solutions to challenges facing Counties. SMEs are responding by increasing production and meeting the required standards to qualify for County Governments' procurement. However, local entrepreneurs in agribusiness especially youth and women need to be empowered to enhance local production.

Key words: Supply chain, entrepreneurs, county government.

Introduction

Agriculture is crucial to poverty alleviation and wealth creation. In Africa, agriculture accounts for 65 % of total employment and 32 % of GDP (Jayaram, Riese and Sanghvi, 2010). Therefore agribusiness is strategically placed to drive Africa's future economic development. Agribusiness creates important linkages and encourages investment in a way that can have strong multiplier effects on growth. It is key to fighting food insecurity, not only because it stimulates increased production but also due to its potential to create wealth for smallholders and rural communities. Developing a viable and vibrant agri-business sector in Africa is a development challenge, but it is also a significant market opportunity for companies and particularly small and family farmers who are the largest private investors in African agriculture.

Background

Small scale agribusinesses face particular daily challenges that are not encountered by other agricultural businesses. For one, they focus on ensuring that they are able to identify, create, enact, develop and take advantage of business opportunities. Often, this capability demands a high degree of “intelligence”, which may be gathered from social circles due the limited capabilities of small scale agribusinesses to gather information from more traditional sources (such as conferences and trade journals). From the perspective of classical entrepreneurship scholarship, there is still an ongoing debate about the exact definitions of agripreneurship (Singh and Krishna, 1994; Knudson et al., 2004; Phillipson et al., 2004; de Lauwere, 2005). We have however adopted a perspective of the agripreneur as a business owner who is self employed and seeks to create wealth within the agriculture industry. By adopting this position, we argue along the lines of Phillipson et al. (2004) and de Lauwere (2005); that although excluded by governments and non-governmental agencies from “normal” policy objectives, agricultural enterprises (agripreneurs) should be treated as “normal” firms in their own right. Most Counties in Kenya rely on agriculture. With the devolved government system, agribusinesses in the Counties will play a key role in Counties’ economic growth and development.

Devolution in Kenya is actually a form of decentralization. Decentralization is about transferring of selected functions from a central authority to the lowest feasible structure. Devolution entails the ceding (legal act giving) of power from a Central Authority to Local Authority, the state powers of revenue collection and expenditure among others. In Kenyan case the current Centralized System Government headquartered in the Capital City of Nairobi will transfer power to the 47 Counties listed on the First Schedule of Constitution of Kenya 2010. Each of these Counties will form the County Governments comprising of the County Assemblies and County Executives with State powers of legislature – law making and Executive – implementing the laws and policies respectively. These will include those concerning agriculture and business in general.

Statement of the problem

In recognition of the enormous potential roles of Agri-SMEs, special measures and programmes have been designed and policies enunciated and executed by governments to encourage Agri-SMEs development in Kenya. Measures taken by government include fiscal and protective fiscal policies; specialized financial institutions and funding schemes; favourable tariff structure; Development of Agricultural Development Programmes (ADPs) and establishment of export processing zones. Despite the incentives, policies, programmes, and support aimed at revamping the Agri-SMEs, they have performed rather below expectation. An average operator in Agri-SMEs always hinges his failure on poor access to finance and extension service. Some others argue on the issue of inappropriate management skills, difficulty in accessing global market, lack of entrepreneurial skills and knowhow, poor infrastructure, poor cash management and poor capital. Finance is usually considered as a major constraint of Agribusiness-SMEs, while this may be true, empirical evidences have shown that finance contributes only about 25 per cent to the success of Agri-SMEs. Thus, the operation of extension services, other appropriate support systems like extension education services and enabling environment are indispensable for better thriving of Agri-SMEs in Kenya.

The need for this study was rooted on the worrisome state of Agri-SMEs which has not responded positively despite government programmes, incentives and supportive services of research and extension. This study sought to map opportunities for bringing local agribusiness entrepreneurs into the supply chain.

Objectives

To establish value addition initiatives for agribusiness SMEs in Counties

To profile marketing channels for agribusiness SMEs in Counties

To investigate response of agribusiness SMEs to opportunities of devolved governance system

Literature review

Records have shown that Agri-SMEs can be found everywhere in the society. They include agribusiness farm firms, fast food enterprises, lather enterprises, bakeries, fisheries, piggeries, poultries and the related firms (Onwumere, 2008). Because of Agri-SMEs significant roles in the local and national development and growth of various economies, they have aptly been referred to as “the engine of growth” and catalysts for socio-economic transformation of any country. Agri-SMEs represent veritable vehicles for the achievement of national economic objectives of employment generation and poverty reduction at low investment cost as well as the development of entrepreneur capabilities including indigenous technology. Agri-SMEs manifests itself as a process of increasing the employment choices available to individuals, through better extension services, education, training, health and nutrition and gainful employment (Onwumere et al, 2000).

Methodology

The study sampled five counties each from five regions in Kenya namely North Rift, South Rift, Central, Coast and Eastern where 10 agri-business SMEs from each County participated in the study. The data collection was achieved through the use of structured questionnaire and interview schedule aimed at eliciting data on age, educational level, output level, years of entrepreneurial experience, distance of operators to research and extension service centres. Data analysis was done with the use of simple and efficient descriptive statistics (frequencies, percentages and tables) and rank method.

Results and discussion

The study established that 75% of agribusiness SMEs in Counties has no value addition initiatives in place. Entrepreneurs’ and managers’ lack of experience and lack of management training are major constraints in the early stages of private sector development, especially to SMEs. These constraints are usually more significant than technical skill shortages and make it very difficult for an entrepreneur to manage a business in a way that enables repayment of financing.

The marketing channels of 50% of agribusiness SMEs in Counties are informal while 40% have no any marketing channels in place. Inadequate infrastructure (especially power, telephones, and roads), high duties on imports of processing inputs, lack of access to finance (to pay for needed imports), poor local business services and input supplies (especially packaging), and competition from imports that often come in without duties are also important constraints to SME development. Microenterprises, SMEs, and even county government entities find it difficult to pay for the full cost of business advisory services, especially those where the provider is not able to leverage expensive staff. Micro and SME development programs managed by indigenous people can succeed, even in very difficult environments.

The study revealed that 80% of agribusiness SMEs in Counties has no concrete to opportunities provided by devolved governance system. Major factors affecting the output of agribusiness entrepreneurs included the education level, total cost of production and access to research and

extension services. Therefore, policy considerations by the government should be directed towards achieving the universal basic education, bringing research and extension services sub-centres closer to the people and reducing total cost of production of agri-SME operators will immensely contribute to enhancement of output realization of good returns.

Many of these local suppliers and value chains incorporate small and medium enterprises (SMEs) and farmers (in agribusiness value chains) that lack the necessary financial and technical skills to improve social and environmental management and performance to meet the demand. Moreover, in the counties, agricultural value chains are often fragmented, lack investment, fail to include vulnerable groups such as women and youth enterprises and are missing critical linkages. Considering the emphasis on supply chains in the private sector, and the high engagement of the absolute and relative poor in these chains, there has been increasing focus on supply chain development. Many organizations have stepped in to provide technical assistance or financial services for small suppliers in order to improve supplier business performance and credit risk. These interventions are intended to involve the poor in the supply chain networks and increase their incomes.

Conclusions

Strengthening supply chain linkages is important for poverty eradication given the extent of participation of SME's and farmers in these chains. Providing training to these firms and firms, and support for meeting certifiable standards allows them to formalize, expand their market access, and participate in global value chains thereby increasing productivity and income. Further, SME's are the source of a significant share of jobs, especially in low income countries. Therefore, initiatives to strengthen these firms can likely have a positive impact on job creation.

Recommendations

There is a unique opportunity to help establish SMEs shortly after a change from socialism and parastatal-managed marketing to a private enterprise based economy. However, "supported" training programs are needed to help entrepreneurs develop their management and financial skills beyond the limited scope of their former positions, especially in an economy emerging from parastatal control of agribusiness.

Strengthening supply chain linkages, and specifically, providing training can assist in formalizing SME's and increasing their ability to participate in global value chains. For agriculture value chains, this expanded market access can have a significant impact on farmer incomes. Further, these initiatives will result in increasing productivity of these firms and create growth. Strengthening supply chains also improves access of the poor to products and services.

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FOOD SECURITY: ROLE OF THE NATIONAL CEREALS AND PRODUCE BOARD (NCPB) FOOD SUPPLY CHAIN IN KENYA

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Abstract

In Kenya, food security continues to be an important national concern. The country has been facing perennial food security challenges resulting to spiraling food prices, high inflation rates and draughts, which impacts negatively on the Kenyan population. As a result, many Kenyans have no guarantee to adequate food access leading to constant starvation. This paper seeks to examine food insecurity in Kenya and the role played by the National Cereals and Produce Board (NCPB) food supply chain in the country. In order to understand the situation of food insecurity in the country, the researcher examined the existing agricultural food supply chain. The study employed a descriptive research design. Data collection instruments used included interview guide and questionnaires. The study site was the National Cereals and Produce Board (NCPB) in Nairobi. The study's main focus was the effectiveness of NCPB's: infrastructures, inventory management, food pricing and communication along the food supply chain. The study findings show that: infrastructure was dilapidated, cereals warehouses lacked proper maintenance leading to food wastage. In addition, the institution lacked its own means of transport, grain management capacity, efficient communication and ability to procure food stock during high production periods. Based on the study findings, the researcher suggests that there is need for NCPB to invest in the expansion of infrastructures, effective communication, efficient grain management and market price surveys. These activities will lead to the achievement of effective food supply resulting to food security in the country.

Key Words: Food Supply Chain, Food Security, National Cereals & Produce Board, Kenya

Introduction

The world currently produces enough food for the human beings. FAO (2011). However, food demand is only met in the aggregate, as there are profound disparities in access to food across geographical regions, countries and also incomes levels. Despite considerable efforts to combat global hunger, million people are undernourished. The rise of this extreme discrepancy provides new and unique challenges not only to households but also governments as they strive to provide sustainable dietary sustenance to its citizens .WHO (2011). Meeting food security in a country requires various government strategic measures, of which managing food supply chain is considered key, to achieving this goal.

Food Security

Food security is described as a situation in which all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active healthy life and for maintaining national security. Mwaniki (2006). The 2009 World Summit on Food Security in Rome confirmed the commitment of all states, to work towards the realization of the Right to Food. De Schutter (2009). Thus, most governments afford agriculture a special niche in public policy .Tweeten, (1992). In spite of this, achieving food security in its totality continues to be a challenge not only for the developing nations, Kenya included, but also for the developed world. The discrepancy in the results have been attributed to insufficient resource base, shorter duration of

intervention, absence of efficient food governance or different systems most of which are inherently heterogeneous among other factors . Mwaniki (2006).

The government's role is to design plans and implement policies that ensure that all its people have adequate food at all times by instituting suitable policies and programmes. This is the main reason which the Kenya government saw the origin of National Cereals and Produce Board in 1985 , which was given the mandate to manage the national strategic reserve in terms of controlling the agricultural produce supply chain in Kenya. Food supply in Kenya cereals board is faced with various challenges including running out of food stock while in other seasons having oversupply of food stock; buying of surplus grain food stuff at higher prices than market prices instead of low prices preferably during the surplus period; infrastructures (silos) location being inaccessible due to poor means of transport along with mismanagement of the financial systems. Poverty and hunger continue to be the most pervasive problem in Kenya today, Kamau, et al. (2011) .There is therefore, a need for deliberate measures to be taken to solve the said problems so as to improve the operational performance and efficiency of NCPB to enable food supply to the Kenyan population. According to Sonnino (2009), many global, national and sectoral policies have placed too much emphasis on the production of (rather than access to) food, while the problems of availability, adequacy and access becoming less relevant in their policies. While low productivity in the agricultural sector is one of the main causes of food insecurity in SSA, it is increasingly recognized that hunger and poverty go hand in hand with food insecurity. There is a growing consensus that food security should be defined to include both supply factors (e.g., the availability of food) and demand factors (the ability of all members of a society to acquire it). Vermeulen et al. (2012) contributes that a reduction in consumption can lead to poor health which in turn reduces agricultural productivity. Therefore, tackling the problem of low agricultural productivity on its own does not assure all Kenyans of adequate food at all times. Food security issue should therefore be tackled along the entire supply chain and identifying the possible bottlenecks on the effective supply of affordable and adequate food to the Kenyan population.

The root cause of food insecurity in developing countries is the inability of people to gain access to food due to poverty. Food security has three aspects; food availability, food access and food adequacy. Food availability has to do with the supply of food. This should be sufficient in quantity and quality and also provide variety. Food access addresses the demand for the food. It is influenced by economic factors, physical infrastructure and consumer preferences. Hence food availability, though elemental in ensuring food security, does not guarantee it. For households and individuals within them to be food secure, food at their access must be adequate not only in quantity but also in quality. It should ensure an adequate consistent and dependable supply of food through sources that are affordable to them at all times. Thus the household's food security depends on household food income and market price especially in places where little to no food preservation is practiced.

Food Supply Chain

The association of food, beverage and consumer products companies, (Grocery Manufacturers Association, 2008) defines food supply chain as a system of organizations, people, activities, information and resources involved in producing and /or moving a food product to the consumer. An example of a food supply chain is shown in Figure 1.

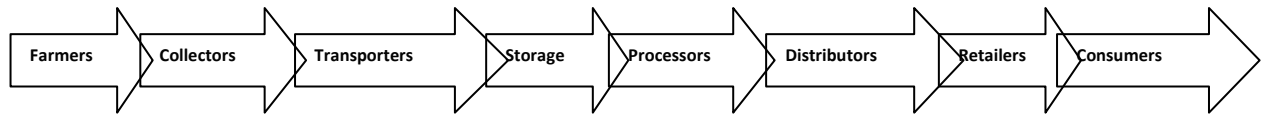


Figure 1: A Typical Agricultural Food Supply Chain Network Model

Figure 1 shows the process of food supply from the farmer to the consumer. Efficient supply chain in the agriculture sector is essential because it will ensure food security and the right price of foods to the end consumers. Growing attention has been paid on sustainable supply chain management in different sectors. However, a limited contribution has been considered especially on current problems facing supply chain of agricultural food sector. Therefore, the paper sought to provide an insight on the role of agricultural food supply chain on food security in Kenya.

As Kenya strives to achieve the millennium development goals, managing agricultural food supply Chain will play a more critical role in this process. Owing to the status of frequent food insecurity in Kenya and the sub Saharan Africa region, there was need to reconcile the agricultural food supply chain with tackling food security issue. In this context, moreover, it is less easy to compartmentalize ‘food production’ as a separate system of provision, given its increasing interconnectedness to other sectors of the economy. We have to re-learn these interconnections by linking food production to broader aspect of food supply chain, Marsden (2012). Supply chain plays a pivotal role in the process although it is not widely recognized as such.

Study Objectives

The objectives were focusing on: a) the infrastructural facilities at the NCPB, b) food stock management by NCPB, c) communication along the supply chain and d) agricultural food pricing.

Conceptual Framework

An illustration of conceptual framework is given to show the relationship between the independent supply chain driver variables of infrastructural facilities, inventory management, food product pricing in the market and finally the communication of information along the supply chain against the dependent variable of food security

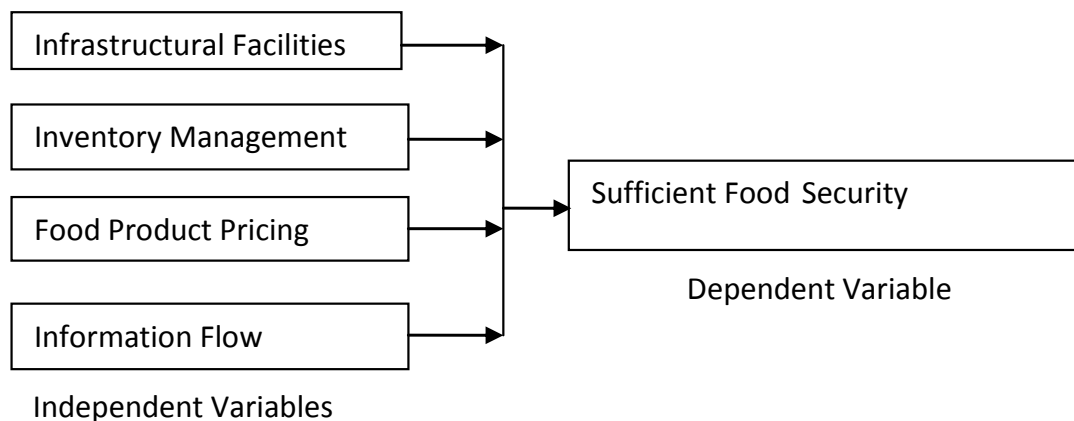


Figure 2: Conceptual Framework of Independent and Dependent Variables

Study Design

The study employed a descriptive research design since the method was useful especially because the researcher required physical observation and more theoretical insight from the respondents. Data collection instruments used included interview guide and questionnaires. The interview was necessary since the respondents were not many and were easy to reach for more interrogation. Questionnaires were employed to facilitate gathering of information, especially where some respondents needed more time for response. The study site was the National Cereals and Produce Board (NCPB) in Nairobi.

Study Population: The target population was 250 NCPB employees countrywide, across two departments, i.e. Marketing /Operations department and Finance /Administration department. A sample size of 25 respondents was selected as shown in Table 1.

Table 1: Distribution of Respondents

NCPB Departments	Population Size(N)	Sample size (10% of N)	% of Total Sample
Marketing and Operations	90	9	30
Finance and Administration	160	16	70
Total	250	25	100

Table 1 shows that study participants were: 9 marketing and operations officers, making 30% and 16 financial and administrative officers making a 70%, all drawn from NCPB in Nairobi. A sample was drawn from the total population using random sampling technique. The technique was essential since it fulfils the requirements of efficiency, representativeness, reliability and flexibility according to Kothari (2009). The choice for the case study was reached because it is the national food reserve, and is empowered to regulate and control the collection, movement, storage, sale, purchase, transportation, marketing, processing, distribution, importation, exportation, and supply of a variety of agricultural produce within the country.

Study findings

The researcher distributed 25 questionnaires all of which were declared fit for data analysis, thereby giving a response rate of 100%. The respondents were from two department levels in the cereals board's stratification, which were: Marketing and Operations, and Finance and Administration departments.

Objective 1 sought to determine the state of infrastructural facilities available for the agricultural food supply at the NCPB. It was evident from the study findings that the infrastructural facilities used by the board were of deplorable state and insufficient, thus of little help to manage food security in the country, especially when there is bumper harvest. The board has poor coordination of transport of procured produce from farmers, since it didn't have any transport means of its own, but relied mainly on the hired transport, middlemen and even farmers themselves to transport the food stuff to its warehouses countrywide. The grain handling machineries were inefficient, with frequent

breakdowns, leading to high grain wastage. The storage structures were defective to sustain safety of cereals for a longer period without being spoilt.

Objective 2 investigated the manner in which the management of food stock (inventory) is organized along the supply chain by the NCPB. From the study, the researcher drew several observations. The inventory management system at the board was very inefficient to manage the food security in the country, with many respondents attesting the need for better methods of managing the food stock in the warehouses.

Objective 3 investigated how NCPB coordinate the information along the supply chain. It was found that there is little exchange of information since the board does not have up-to-date data on the current food security in the country. Therefore; the moderate information shared is mainly when need arises, like when there is a crisis on food shortage in the country. It was also observed that, although information sharing was necessary, the coordination of this information was lacking in the board's operations.

Objective 4 was to investigate the effects of agricultural food pricing by the NCPB on the food security in Kenya. The issue of food pricing at the board was studied, where it was revealed that the board does not put much interest to taking price opportunity. They therefore do not adhere to the market pricing policies despite the indication that, this can help the board in its vision to manage food security in the country.

In summary, the study findings show that: infrastructure was dilapidated, cereals warehouses lacked proper maintenance leading to food wastage. In addition, the institution lacked its own means of transport, grain management capacity, efficient communication and ability to procure food stock during high production periods.

Suggestions to better the situation at NCPB

On managing infrastructural facilities, the cereals warehouses should be well maintained to enable safety in food storage. The grain handling machineries should be well functional to eliminate excessive wastage of food stuff. Grain distribution should be enhanced by the board by having a reliable means of transport, either through contracting a third party, or having their own transport department. Integrating and coordinating food supply among the supply chain partners. This will help the board to determine ways to manage the available infrastructure countrywide. The board should consider construction of more Silos & depots countrywide and especially in every county to boost the capacity of food reserve in the country (expansion of infrastructures). All the NCPB Stores constructed to be fully utilized and be certified. Finally, the government should intervene and allocate some funds to allow the effective maintenance of the silos and warehouses for the board. On inventory management the board should develop grain management capacity. This should involve implementing warehouse Receipt System (WRS).

On coordination of communication along the supply chain, there is a need for the NCPB management to review means of coordination of relevant information about food security situation in the country, especially on areas with surplus against those areas with deficit. Collecting market data, generating information exchange and sharing regional expertise will be crucial for the board's ability to coordinate effective communication on food security in Kenya. This involves draught management systems, which the board can use to locate areas with great need for emergency food as well as the areas with more food produce. Creation of a large network between the food producers, the board and the distributors at the grass root to avail information on the surplus and also the deficit on food produce throughout the country, is highly recommended. Long chain of commercial decisions

(political interference) should be minimized. This could be solved by decentralizing management and creating viable semi-autonomous regional business units.

Efficient grain management is highly recommended. This should involve implementing Warehouse Receipt System (WRS), where farmers can deliver their food produce to the warehouses without rigorous bureaucracies and requirements by the board. Proper documentation should be institutionalized in the warehouse to enable track food stuff inflows and outflows from the stores. Inventory management techniques like 'first-in, first-out' can be employed in the warehouses to reduce cases of food stock spoilage and thus reduce food wastage. The board should enhance security measures at the warehouses to minimize food stock pilferage, where cases of bags of food stuff are reported stolen or lost. Installation of closed circuit television (CCTV) cameras can also help protect the warehouses from rogue visitors. On market pricing, intervention should be made for the board to undertake economical sourcing especially when importing the staple cereals to meet local demand. Efforts to procure all grain in surplus during high production should be focused. Market price surveys should always be done at the time of procuring food stuffs in order to save costs when purchasing from the farmers. The low cost can therefore be transferred to the consumers. The private sector should be incorporated in managing food security. This will reduce the cost of food in the country. In summary, it should be noted that not only greater availability of food which is needed, but also economical and physical accessibility. Therefore, the researcher suggests that there is need for NCPB to invest in the expansion of infrastructures, effective communication, efficient grain management and market price surveys. These activities will lead to the achievement of effective food supply resulting to food security in the country.

Conclusions

In general, the analysis depicts that the understanding of agricultural food supply chain concept at the NCPB's management seems to be low, thus hindering them from tapping up the advantages that supply chain management concept offer.

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