



FACTORS INFLUENCING PROCUREMENT IN THE OIL INDUSTRY IN KENYA

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ABSTRACT

Sound public procurement is among the essential elements of good governance. The general purpose of this study was to investigate the factors influencing procurement process in the oil Industries in Kenya with a specific look at National Oil Corporation in Kenya. The study also sought to find out whether company policies, availability of finances, ICT adoption and procurement competencies affect procurement process at National Oil Corporation of Kenya Ltd. The study used a descriptive research design. The target population of the study was the 245 staff of all departments (Finance & Administration, Operations, Supply Planning, Procurement, ICT, Human Resources) of the national oil corporation headquarters located at Mamlaka Road, Nairobi. The researcher therefore considered 30% of the total target population 245 as appropriate for the study which yields a sample size of 74 possible respondents who were randomly be picked. The methods of data collection were through questionnaires as the main data collection instrument. The questionnaires were distributed through drop and pick later method with an enclosed self-addressed return envelope to help increase response rate. This was followed by the personal visit and phone calls. Content analysis was used to test qualitative data. The information was displayed by use of bar charts, graphs and pie charts and in prose-form where appropriate for ease of understanding. Quantitative data was analyzed by use of SPSS (Statistical Package for Social Sciences) to depict variable characteristics. In addition, descriptive statistics and inferential statistics were used to analyze quantitative data. Descriptive statistics such as frequencies and percentages and augmented with measures of central tendency (means) and dispersion (standard deviation) were used. In addition, inferential statistics analysis was conducted. Pearson's product moment correlation analysis was used to assess the relationship between the variables while multiple regressions was used to determine the predictive power of the factors on the procurement process.

Key Words: Company Policies, Availability of Finances, ICT Adoption, Procurement Competencies, Procurement Process

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INTRODUCTION

Global business trends have led the oil and gas industry to seek better solutions to overcome the emerging challenges and critical issues, such as the need for procurement strategies based on new values and contextual factors including multi-cultural complexity (Chima, 2007). One way to overcome some of these critical issues is perhaps to adopt new innovative approaches to suit different locations, countries or regions while trying to incorporate the differences in business philosophy, culture or values within the oil and gas organization themselves into these approaches (Reinikka and Svensson 2002).

The National Oil Corporation of Kenya is a state corporation of Kenya founded by Act of Parliament in 1981, with a mandate of participating in all aspects of the Kenyan petroleum industry; it is 100% owned by the Kenyan government and governed by the Companies Act (Cap 486). The company's main objective then was to coordinate oil exploration (upstream) activities. In 1988 the company was mandated on behalf of the government to supply 30% of the country's crude oil requirements that would in turn be sold to oil marketing companies for refining and onward sale to consumers. National Oil became operational in 1984 and its initial operations were limited to exploration activities delegated from the Ministry of Energy. In 1988, National Oil went downstream and actively started participating in the importation and sale of petroleum products including crude oil, white fuels, lubricants and LPG.

The formation of National Oil was precipitated by the oil crisis of the 1970's (1973/74 and 1979/80) and the correspondent supply disruptions and price hikes which resulted in the country's oil bill comprising of almost one third of the total value of imports and therefore making petroleum the largest single drain of Kenya's foreign exchange earnings.

National Oil was therefore born out of a need by the Government of Kenya to have greater control of the petroleum sector which is a crucial determinant of the country's economic performance. National Oil

has since remained the Government's policy instrument in matters related to oil specifically in the upstream exploration of oil and gas, mid-stream development of petroleum infrastructure and downstream marketing of petroleum products including motor and industrial fuels, lubricants, LPG and related motor consumables and hardware.

However after the company de-regulation of the oil industry in 1994 lost that mandate, and had to formulate new survival strategies that saw its entry into downstream operations. National Oil offers a comprehensive range of passenger car motor oils covering the demands of all types of European, Japanese and American car Engines. They are tested against the most severe conditions of engines around the world. The Company's retail network comprises of 24 fully fledged service stations under the National brand name and truck loading facility.

All the procurement activities are guided by the Public Procurement and Disposal Act, 2005. The purpose of this Act which was revised in 2009 was to establish procedures for procurement and the disposal of un-serviceable, obsolete or surplus stores and equipment by public entities to achieve the following objectives; (a) to maximize economy and efficiency; (b) to promote competition and ensure that competitors are treated fairly; (c) to promote the integrity and fairness of those procedures; (d) to increase transparency and accountability in those procedures; and (e) to increase public confidence in those procedures.

Problem Statement

Kenya is an oil importing developing country with rapidly increasing commercial energy consumption whereas the oil industry is a very important sector in the economy (Mwarano, 2009). In addition, Kojima (2009) indicates that petroleum products are important in driving the economies of all countries in the world but despite this, petroleum products prices have been going through fluctuations and instability, often affecting the efficiency of the same in propelling growth. The importance of prices of oil products to the economy cannot be emphasized.

Increases in prices of oil products (especially those of automotive diesel) lead to general increases in prices of other essential commodities and services (Mecheo and Omiti, 2003).

According to Mwirichia (2011) pump prices of petroleum products have continued to rise unabated reaching a high of Shs 121.13 in May 2012 for a litre of gasoline compared to the price of Shs 94.03 before regulation in Dec 2010 (an increase of 28.8% in eighteen months). Over the same period, the price of automotive diesel (gasoil) rose from Shs 87.45 in December 2010 to Shs 108.44 in May 2012, an increase of 24% in eighteen months, despite a reduction of taxes on gasoil to cushion consumers and tame inflation. This trend has continued even after the introduction of a regulated pricing mechanism for specified oil products in December 2010.

The oil industry in Kenya has been faced by many challenges that can be attributed to procurement. In the oil and gas industry, delivering complex projects requires main contractors to purchase sub-projects and expertise from external suppliers. Companies in the industry spend around 80% to 90% of its costs on contractors, making it an interesting area of research (Olsen et al, 2005). The tendering processes have been marred by a lot of corruption which influences procurement negatively. In addition, these companies have failed to fully adopt ICT which can help in the improvement of the procurement.

In addition to the Triton scandal, the KPC is currently entangled in another controversy on its procurement and project management methods. This is specifically regarding the Line 1 (Mombasa – Nairobi) Capacity Enhancement Project aimed at increasing the oil pumping capacity between Mombasa and Nairobi depots at a cost of KES 6.5 billion. Due to a marginal variation of KES 2.1 Billion the cost variations of the project was raised current expenditure on the project to KES 8.6 billion. According to the Public Procurement and Oversight Authority (PPOA), between KES 2 and 3 billion will be lost by the time the project will be completed.

Companies in the oil industry have also been employing procurement staffs who are not qualified and experienced.

This study therefore sought to investigate the factors influencing procurement in the oil Industries in Kenya. The study focused on how company policies, availability of finances, ICT adoption and procurement competencies influence procurement at the National Oil Corporation.

Purpose of the Study

The general purpose was to investigate the factors influencing procurement in the oil Industries in Kenya with a specific look at National Oil Corporation in Kenya. The study was guided by the following specific objectives;

- To find out whether company policies affects procurement at the National Oil Corporation in Kenya
- To establish whether availability of finances affects procurement at the National Oil Corporation in Kenya
- To determine whether ICT adoption affects procurement at National Oil Corporation of Kenya Ltd
- To establish whether procurement competencies affects procurement at National Oil Corporation of Kenya Ltd

LITERATURE REVIEW

Theory of Reasoned Action in ICT adoption

The theory of reasoned action is a model for the prediction of behavioral intention, spanning predictions of attitude and predictions of behavior. The subsequent separation of behavioral intention from behavior allows for explanation of limiting factors on attitudinal influence. The Theory of Reasoned Action was developed by Fishbein and Ajzen (1975), derived from previous research that started out as the theory of attitude, which led to the study of attitude and behavior. The theory was "born largely out of frustration with traditional attitude-behavior research, much of which found weak correlations between attitude measures and performance of volitional behaviors (Hu, Lin, &

Chen, 2005). RA suggests that a person's behavioral intention depends on the person's attitude about the behavior and subjective norms. If a person intends to do a behavior then it is likely that the person will do it (Venkatesh & Davis, 2000).

This theory was useful in this study as the adoption of information technology in the Oil Industry is highly influenced by the users' attitude, management commitment, subjective norm, intentions as well as perceived usefulness of the adoption.

Modern Development Theory of Availability of Funds

Modern development theory developed by Demirguc-Kunt, Beck & Honohan (2008) studies the evolution of growth, relative income inequalities, and their persistence in unified models. In many of these models, financial market imperfections play a central role, influencing key decisions regarding human and physical capital accumulation and occupational choices (Chih-Yao, Yu-Teng & Kuo-Ting, 2012). For example, in theories stressing capital accumulation, financial market imperfections determine the extent to which the poor can borrow to invest. In theories stressing entrepreneurship, financial market imperfections determine the extent to which talented but poor individuals can raise external funds to initiate projects (Morey & Sweeney, 2001). Thus, the evolution of financial development, growth, and intergenerational income dynamics are closely intertwined. Finance influences not only the efficiency of resource allocation throughout the economy but also the comparative economic opportunities in the oil industry.

The allocation of resources and release of finance highly influences the procurement process in the oil industry in terms of time (when the tendering process and when to award a contract) and payment of employees.

Theory of experiential learning in Procurement competence

The theory of experiential learning by Kolb (1984) defines learning as a knowledge building process when the transformation of one's experience occurs. New knowledge is created when we combine our existing understanding and the transformed experience (Sutherland, 2005). The theory of experiential learning describes two dialectically related ways of understanding the experience (in other words, the search for meaning in experience): concrete experience and abstract reconceptualization; as well as two ways of transforming the experience: reflective observation and active experimentation) (Corina, 2011).

New information or knowledge expands human understanding and the space for reflective inquiry and in that way urges to ask the questions that make an individual to challenge the existing situation, the habitual ways of acting, attitudes or values (Resnick, 2004). In the procurement process knowledge, information and experience are very importance. This is because the competence of procurement officers highly determines the efficiency and effectiveness of the procurement process.

Public Interest Theory of Company Policies

The first group of regulation theories account for regulation from the point of view of aiming for public interest. This public interest can be further described as the best possible allocation of scarce resources for individual and collective goods. In western economies, the allocation of scarce resources is to a significant extent coordinated by the market mechanism (Diggs & Roman, 2012). In theory, it can even be demonstrated that, under certain circumstances, the allocation of resources by means of the market mechanism is optimal. Because these conditions are frequently not adhered to in practice, the allocation of resources is not optimal and a demand for methods for improving the allocation arises. According to Chih-Yao, Yu-Teng and Kuo-Ting (2012) one of the methods of achieving efficiency in the allocation of resources is government regulation. According to public interest theory, government

regulation is the instrument for overcoming the disadvantages of imperfect competition, unbalanced market operation, missing markets and undesirable market results.

Public interest theory explains regulation from viewpoints not restricted to imperfect competition

and unbalanced market operation which highly influences procurement processes which subsequently affects the cost of the products. For a number of reasons, markets may not exist for some goods for which the utility or the 'willingness to pay' exceeds the production costs.

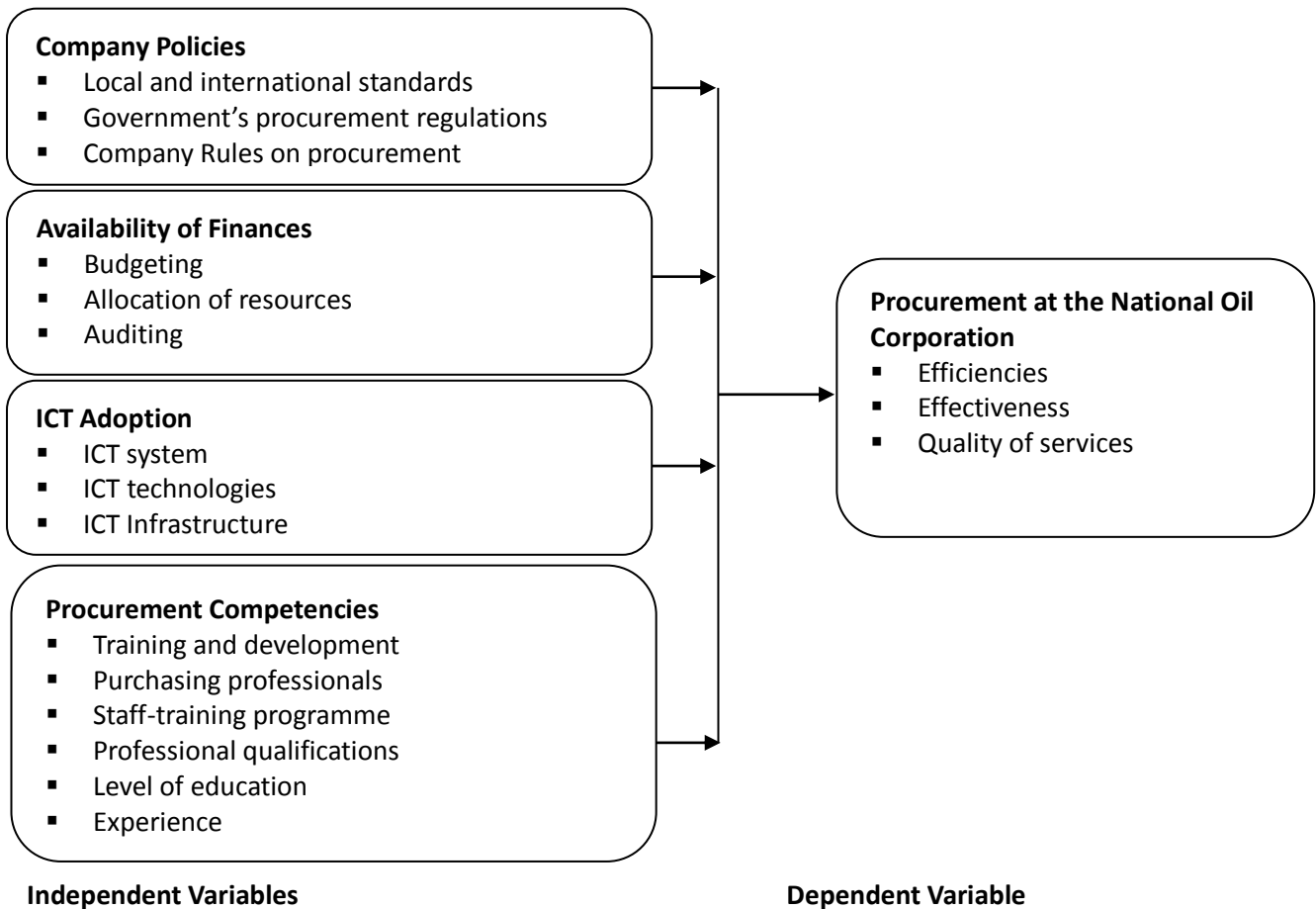


Figure 1: Conceptual Framework

Procurement

According to Christopher (1998) procurement is also referred to as purchasing and supply management and by a number of other names, includes activities such as supplier selection, negotiation of prices terms and qualities, supplier relationship. It also entails receiving of supply from the supplier to the store documentation are part of purchasing and supplies management (Baily et al, 2004). In some cases procurement is used instead of purchasing though these two terms are regarded to have same meaning. Procurement is the acquisition of goods or services at the best possible total cost of

ownership, in the right quality and quantity, at the right time, in the right place for the direct benefit or use of the governments, corporations, or individuals generally via, but purchasing has been retained since its commonly used (Dobler 2002).

According to Otieno (2004), an ideal procurement system should also focus on effectiveness, where procuring entities should meet the commercial, regulatory and socio-economic goals of government in a manner that is appropriate to the procurement requirement. Furthermore, a good procurement practice should embrace: efficiency, which requires

that procurement processes be carried out as cost effectively as possible; fair-dealing, where suppliers should be treated fairly, without discrimination or prejudice including protection of commercial confidentiality where necessary (Agere, 2001). The process should also uphold integrity by ensuring that there are no malpractices; informed decision-making, which requires public bodies to base decisions on accurate information and ensure that requirements are being met. More still, the Procurement practice should be responsive to aspirations, expectations and needs of the target society. Finally, there is need for transparency to enhance openness and clarity on procurement policy and its delivery (World Bank, 2003).

Availability of Finances

Any procurement process represents an investment with costs arising from the process itself and benefits in terms of the outcomes achieved. In this context consideration must be given to more than a narrow focus on the final deal achieved with a supplier. Rather, consideration should also incorporate features of the procurement process itself. For example, a highly attractive contract that is only achievable through a process that entails unreasonable risk or poor transparency would, in most circumstances, not represent value for money (Adjei, 2006).

A formal procurement audit is done to give assurance to management; to see if objectives are being achieved; it highlights deficiencies; ensures compliance with the Public Procurement Act 2005; ensures if the regulations are being followed to the latter and helps in the discovery of irregularities, fraud, and corruption (Taylor, 2003). A formal audit also helps in performance monitoring and improvement and in the enforcement of the rules and regulations and subsequent prosecution of those who are found culpable of non-compliance with the Act. A formal auditing of a procurement process has the following actors: auditors, the Public Procurement Board, Ministry of Finance, stores personnel or donor staff or consultants where donor financing is involved (GoK, 2005).

ICT Adoption

Government officials and elected leaders have increasingly come to realize that public agencies must utilize ICT in order to enhance the procurement processes in the public sector. Faced with tight budgets and a retiring workforce, today's government agencies are operating in an environment defined by the need to 'do more with less'. Public authorities are expected to provide excellent service to their constituents in an effective and transparent manner, all the while working under constant resource constraints by adopting ICT (Chin and Fairlie, 2004).

In order to meet today's operating challenges, regional and local governments are turning to ICT to enhance the services for residents, businesses and visitors, and improve internal efficiencies by lowering costs and increasing productivity. Public authorities are implementing scalable communication infrastructures to promote economic development, attract new businesses and residents, and above all, provide excellent service to constituents. From a business perspective, implementing scalable communication infrastructures such as wide area networks (WANs) accommodates the various types of services government agencies require on a day to day basis, including provision of broadband internet access for online services and internal collaboration, handling administrative data.

Company Policies

Many countries have moved to a regional and or global Economy, procurement practitioners face another challenge that is, How to comply with their government's procurement regulations and social and economic procurement goals without violating regional and/or International trade agreements (Diggs & Roman, 2012). For example, one should learn from other on how to comply with national Economic policies (in nurturing domestic firms), without dealing unfairly with foreign firms as provided in regional trade agreements and/or the World trade. Organization (WTO) agreements are not easy, which requires a careful study of trade

agreements in order to take advantages of special Provisions (Chih-Yao, Yu-Teng & Kuo-Ting, 2012). The WTO agreement on government procurement (GPA) Article xvi provides: “entities shall not, in the qualification and selection of suppliers, products or services, or in the evaluation of tenders and awards (Posner, 2003).

Apart from procurement regulations and rules, the legal environment refers to a broad legal framework that governs all business activities including research and development (regulations dealing with safety and health of new products), manufacturing (safety and health regulations at workplace and pollution control), finance (regulations dealing with disclosure of information), marketing (regulations dealing with deceptive advertising, disclosure of product characteristics), personnel (regulations dealing with equal opportunity for women and minorities), and contracts (Robertson, 2004; Smith, Bradley & Jarrell, 2005; Tullock, 2004). Indeed, most aspects of contracts public or private such as contract requirements, disputes, and breach of contract (Agere, 2001).

Procurement Competencies

In many countries public health officials have limited experience in designing an optimal procurement system to fit their market context (Corina, 2011). Regardless of whether they work in government or industry, the essence of the purchasing professional’s role and contribution to their organization is remarkably similar (Sutherland, 2005). But for a lack of greater mutual understanding, not to mention innovative employment interchange opportunities, purchasing within the two sectors is more similar than most realize or care to admit. Purchasing professionals in both sectors routinely deal with a wide variety of demands and constraints in their efforts to do their job and deliver value to their organizations (Dye & Stapenhurt, 1997).

Dye & Stapenhurt, (1997) asserts that while the source of these pressures may very well be different, the professional challenges they present

are not therefore training and development on procurement is essential in the organization. According to Resnick (2004) the level of qualification and experience which should be held by a purchasing staff in order to perform in a professional way on the purchasing function remains a major challenge since the qualifications held by the purchasing staff does not assist in application of strategic purchasing methods (Wagner, 2013). This is due to lack a continuous staff-training programme that equips the purchasing staffs with more skills. Most of these studies have focused in developed countries whose strategic approach is different from that of Kenya.

METHODOLOGY

The study used a descriptive research design. A descriptive study is concerned with determining the frequency with which something occurs or the relationship between variables (Bryman and Bell, 2003). The target population of this study was all the 245 staff of all departments (Finance & Administration, Operations, Supply Planning, Procurement, ICT, Human Resources) of the national oil corporation headquarters located at Mamlaka Road, Nairobi. The study employed stratified random sampling technique. The methods of data collection was through questionnaires as the main data collection instrument. Questionnaires were designed in a structured manner in which it captured all the variables under study. Quantitative data was analyzed by use of SPSS (Statistical Package for Social Sciences) to depict variable characteristics. In addition, descriptive statistics and inferential statistics were used to analyze quantitative data. The regression Model specification that was used is as presented below;

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$$

Where;

Y = Procurement

β_0 is the regression intercept

$\beta_1 - \beta_4$ are the regression coefficients

X_1 = Availability of Finances

X_2 = ICT Adoption

X_3 = Company policy/policies on procurement

X_4 = Procurement competences
 ε = Error term/Erroneous variables

FINDINGS AND DISCUSSION

Availability of Finances

The level of availability of finances within the organization is key towards assessing the level of procurement performance. Thus, the study sought to assess the level or degree of availability of finances by assessing the views of the procurement staff in the procurement related departments. Their views were measured using a 5-point Likert scale to determine the degree with which they agreed or disagreed with the various items concerning availability of finances. The findings were presented in Table 1.

The findings revealed that 39 (33.6%) and 39 (33.6%) of the respondents agreed and strongly agreed respectively that the organizations procurement funds were adequate to initiate procurement process was commendable while 6 (5.2%) and 32 (27.6%) of the procurement staff strongly disagreed and disagreed respectively thereby giving a mean response of 3.91 (SD = 1.04) indicating agreement by majority of the staff. Furthermore, the findings showed that 24 (20.7%) and 11 (9.5%) of the respondents agreed and strongly agreed respectively that the there was procurement budget reviewing to cater for changes in the economic environment while 20 (17.2%) and

61 (52.6%) of the staff strongly disagreed and disagreed with this respectively thus giving a mean response of 2.22 (SD = 0.850) showing disagreement by majority of the respondents.

The findings also showed that 36 (31%) and 12 (10.3%) of the respondents agreed and strongly agreed respectively that tender float is based on the financial resources availability and confirmation. However, 24 (20.7%) and 44 (37.9%) of the respondents strongly disagreed and disagreed respectively giving a mean response of 3.31 (SD = 0.92) indicating neutrality by majority of the respondents. Furthermore, it was revealed that 34 (29.3%) and 12 (10.3%) of tender award is based on the financial resources availability and confirmation while 1 (0.9%), 45 (38.8%) and 24 (20.7%) of the respondents strongly disagreed, disagreed and held a neutral view on this thus giving a mean response of 3.09 (SD = 1.06) showing neutrality by majority of the procurement staff.

The findings also showed that 55 (47.4%) and 24 (20.7%) of the procurement staff agreed and strongly agreed respectively that the coordination is achieved by means of output targets and specifications to the implementation of rules and regulations while 14 (12.1%) and 23 (19.8%) of the respondents strongly disagreed and disagreed respectively with this giving a mean response of 3.77 (SD = 0.92) showing agreement by majority of the staff.

Table 1: Availability of Finances

		SD	D	N	A	SA	Mean	SD
The organizations procurement funds are adequate to initiate procurement process is commendable	n	6	32	0	39	39	3.91	1.04
There is procurement budget reviewing to cater for changes in the economic environment	%	5.2	27.6	0	33.6	33.6		
Tender float is based on the financial resources availability and confirmation	n	20	61	0	24	11	2.22	0.85
	%	17.2	52.6		20.7	9.5		
Tender award is based on the financial resources availability and confirmation	%	16.4	22.4	0	44	17.2		
Availability of funds							3.41	0.50

Procurement Competency

Since the procurement department within any organization are critical to the overall running of

every other department, competency comes in as key in ensuring quality of the procurement process and better management of practices. Thus, the study

sought to assess the level of procurement competency to enhance procurement performance in the organization. This was done by assessing the perceptions of the respondents regarding various items of competency. Their responses were measured on a 5-point Likert scale to determine the degree of agreement or disagreement. The findings were presented in Table 2.

The findings showed that 70 (60.3%) and 46 (39.7%) of the respondents strongly disagreed and disagreed respectively that the organization ensure that there is continuous on job training to enhance cost reduction giving a mean response of 1.40 (SD = 0.49) indicating strongly disagreement with the item. Furthermore, 39 (33.6%) and 39 (33.6%) of the respondents agreed and strongly agreed respectively that there are periodic refresher courses offered to the procurement staff to enhance quality of services while 6 (5.2%) and 32 (27.6%) strongly disagreed and disagreed respectively with this giving a mean response of 3.91 (SD = 1.04) showing agreement by majority of the staff.

The findings further showed that 55 (47.4%) and 12 (10.3%) of the procurement staff agreed and strongly agreed respectively that the organization ensures that professional competence is uphold in order to foster quality of goods and services while 19 (16.4%) and 30 (25.9%) strongly disagreed and disagreed respectively regarding this giving a mean response of 3.52 (SD = 0.89) indicating agreement by majority of the respondents.

In addition, the findings showed that 32 (27.6%) and 21 (18.1%) of the procurement staff agreed and strongly agreed respectively that the formal courses

offered are fair and equitable to the staff thus enhanced quality improvement while 19 (16.4%) and 44 (37.9%) of the respondents strongly disagreed and disagreed respectively regarding this giving a mean response of 3.47 (SD = 0.97) showing neutrality by majority of the respondents.

The findings also showed that 54 (46.6%) and 31 (26.7%) of the respondents agreed and strongly agreed respectively that the training programs are periodically done to enhance procurement policies implementation in the organization while 6 (5.2%), 9 (7.8%) and 16 (13.8%) strongly disagreed, disagreed and held a neutral view regarding this respectively giving a mean response of 3.82 (SD = 1.08) indicating agreement by majority of the respondents regarding this.

Finally, the findings showed that 42 (36.2%) and 42 (36.2%) of the procurement staff agreed and strongly agreed respectively that there exist professional courses offered by the professional bodies to the staff to enhance implementation of rules and regulations while 2 (1.7%), 8 (6.9%) and 22 (19%) of the respondents strongly disagreed, disagreed and held a neutral view respectively giving a mean response of 3.98 (SD = 1.00) indicating agreement by majority of the respondents. The overall mean response for staff competency was 3.69 (SD = 0.62) showing agreement by majority of the respondents regarding the items on staff competency despite there being gaps in terms of the organization ensuring that there is continuous on job training to enhance implementation of rules and regulations and the fairness and equitableness of formal courses offered to the staff thus enhanced quality improvement.

Table 2: Procurement Competency

		SD	D	N	A	SA	Mean	SD
The organization ensure that there is continuous on job training to enhance implementation of rules and regulations	n	70	46	0	0	0	1.40	0.49
	%	60.3	39.7	0	0	0		
There are periodic refresher courses offered to the procurement staff to enhance implementation of rules and regulations.	n	6	32	0	39	39	3.91	1.04
	%	5.2	27.6	0	33.6	33.6		
The organization ensures that professional	n	19	30	0	55	12	3.52	0.89

competence is uphold in order to foster public procurement policies implementation	%	16.4	25.9	0	47.4	10.3		
The formal courses offered are fair and equitable to the staff thus enhanced quality improvement	n	19	44	0	32	21	3.47	0.97
The training programs are periodically done to enhance procurement policies implementation in the organization	%	16.4	37.9	0	27.6	18.1		
There exists professional courses offered by the professional bodies to the staff to enhance implementation of rules and regulations	n	6	9	16	54	31	3.82	1.08
	%	5.2	7.8	13.8	46.6	26.7		
	n	2	8	22	42	42	3.98	1.00
	%	1.7	6.9	19	36.2	36.2		
Staff Competency							3.69	0.62

ICT Adoption

Keeping with the pace in global practices in terms of the increasing use of technology capabilities especially in procurement to any organization especially when such technology capability is proven to improve procurement performance. Thus, the study sought to determine the degree of ICT adoption in the procurement department and more so in the implementation of procurement policies and how this might influence procurement performance. This section presented findings to survey questions asked with a view to establish the influence of ICT adoption on procurement performance in the oil industry Kenya. The data was collected from the different indicators of the ICT variable which was ordinally categorical. The data was therefore presented in frequency tables with the median being used as the appropriate measure of central tendency. Information Communication technology had the first indicator that required the institutions to state the percentage of employees in the firm who are computer literate, 53.30% of the respondents had 0-20% , 2.90% had 20-30% , 14.30% had 30-40% had 8.70%, 40-50% and 5.10% had over 50%. The modal class is of the respondents who had between 0 to 20% literacy. The mode was found to be 1 which implied that on average the respondents 0 to 20% of employees in the firm that are computer literacy.

When the respondents were asked in the second question what the firms' level of automation was, 2.90% of the respondents had 0-20%, 2.90% had 20-30%, 5.70% had 30-40%, 31.10% had 40-50% and

45.60% had over 50%. The mode was found to be 4 which implies that on average the firms have over 40%-50% level of automation. The next indicator asked the respondents what the level of procurement systems usage was in the institution, 0% of the respondents had 0-20%, 2.90% had 20-30% , 5.70% had 30-40% , 37% had 40-50%, 45.70% had over 50%. The mode class is of the respondents who had over 50% level of procurement usage. The mode was found to be 4 which imply that on average the firms had over 50% level of procurement systems usage.

When the respondents were asked what the level of ICT infrastructure was, 2.90% of the respondents had 0-20%, 2.90% had 20-30% 5.70% had 30-40% , 37.10% had 40%-50%, 51% had over 50% " The modal class is of the respondents who had over 50% level. The mode was found to be 5 which implied that on average the firms had over 50% level of ICT infrastructure. The last indicator for the variable ICT inquired what the firms level of embracement of E-procurement was 0% of the respondents 0-20%, 3% had 20-30% , 3% had 30-40% , 31% had 40-50% and 60% had over 50% " The modal class is of the respondents who had over 50%. The median was found to be 5 which imply that on average the firms have over 50% level of embracement of E-procurement. Information Communication Technology (IT) is a technology that involves use of computers, software and internet connections infrastructure for supporting information processing and communication functions (Crompton 2007).

Table 3: ICT Adoption

	0%-20%	20%-30%	30%-40%	40%-50%	Over 50%	Mode
What percentage of employees in the firm is computer literate?	53.30%	2.90%	14.30%	8.70%	5.10%	5
What is the firm's level of automation?	2.90%	2.90%	5.70%	31.70%	48.60%	4
What is the level of procurement systems usage?	0%	2.90%	5.70%	37.10%	45.70%	4
What is the level of ICT infrastructure?	2.90%	2.90%	5.70%	37.10%	48.60%	5
What is the firm's level of embracement of E-procurement?	0%	2.90%	2.90%	31.40%	60%	5

Procurement Performance

Finally, given the various perspectives on the various perceived determinants, the study assessed the level of procurement performance by assessing the views of the respondents on a 5-point Likert scale regarding various aspects of procurement performance. The findings showed that 88 (75.9%) and 28 (24.1%) of the respondents indicated that the level of procurement performance was 0 – 20% and 20 – 40% respectively on the level of implementation of procurement rules and regulations thus giving a mean of 1.24 (SD = 0.43) which was below average.

The findings further showed that regarding the level of procurement reduction costs, the level of implementation was 60 – 80% and 80 – 100% for 60 (51.7%) and 33 (28.4%) of the procurement staff respectively while 8 (6.9%) and 15 (12.9%) indicated that it was 0 – 20% and 40 – 60% respectively giving a mean response of 3.95 (SD = 1.02) which is above average. In addition, 68 (58.6%) and 33 (28.4%) of the respondents indicated that the level of implementation on transparency and accountability of procurement funds was 60 – 80% and 80 – 100% respectively while 15 (12.9%) indicated that the level of implementation was between 20 and 40%

giving a mean response of 4.03 (SD = 0.90) which is above average.

Furthermore, the findings showed that the level of implementation of the quality of goods procured and services offered was 60 – 80% and 80 – 100% by 35 (30.2%) and 40 (34.5%) of the respondents respectively while 4 (3.4%), 27 (23.3%) and 10 (8.6%) of the respondents indicated that it was 0 – 20%, 20 – 40% and 40 – 60% respectively giving a mean response of 3.69 (SD = 1.26) which was above average. Finally, the findings showed that the level of procurement performance in terms of timely delivery of goods and services was between 60 – 80% and 80 – 100% by 69 (59.5%) and 27 (23.3%) of the respondents while 4 (3.4%), 11 (9.5%) and 5 (4.3%) of the respondents indicated that it was 0 – 20%, 20 – 40% and 40 – 60% respectively giving a mean response of 3.90 (SD = 0.98) which was above average. The mean level of implementation of public procurement policies was 3.68 (SD = 0.68) which was above average for majority of the respondents. However, as indicated, the level of implementation of procurement rules and regulations is below par and this can be partly attributed to the gaps identified earlier.

Table 4: Procurement Performance

		0-20%	20-40%	40-60%	60-80%	80-100%	Mean	SD
What is the level of implementation of procurement rules and regulations?	n	88	28	0	0	0	1.24	0.43
	%	75.9	24.1	0	0	0		
What is the level of procurement reduction costs?	n	8	0	15	60	33	3.95	1.02
	%	6.9	0	12.9	51.7	28.4		

What is the level of transparency and accountability of procurement funds	n	0	15	68	33	4.03	0.90
	%	0	12.9	58.6	28.4		
What is the level of quality of procured goods and services offered?	n	4	27	10	35	40	3.69
	%	3.4	23.3	8.6	30.2	34.5	1.26
What is the timely delivery of goods and services?	n	4	11	5	69	27	3.90
	%	3.4	9.5	4.3	59.5	23.3	0.98
PP Implementation						3.68	0.68

Inferential Statistics

Correlation

From the findings in Table 5, organization policy has a positive and significant relationship with PP, $\rho = 0.506$, $p < 0.001$ meaning that there is a probability of 0.506 that PP will increase with increased level of organizational policy. Furthermore, the findings showed that procurement competency has a positive and significant relationship with PP, $\rho = 0.409$, $p < 0.001$ implying that there is a probability of 0.409 that PP will increase with increased

procurement competency. In addition, it was shown that ICT adoption has a positive and significant relationship with PP, $\rho = 0.377$, $p < 0.001$ such that there is a probability of 0.377 that PP will increase with increased ICT adoption. Finally, availability of finances has a positive and significant relationship with PP, $\rho = 0.511$, $p < 0.001$ meaning that there is a probability of 0.511 that PP will be enhanced with increased availability of finances. Also, the inter-factor relationships showed that there were significant and positive relationships.

Table 5: Correlation Analysis

		PP Implementation	Org. Structure	Staff Competency	Technology capabilities
Organizational Policy	ρ (rho)	0.506**	1		
	P value	0.000			
Procurement Competency	ρ (rho)	0.409**	0.110	1	
	P value	0.000	0.241		
ICT adoption	ρ (rho)	0.377**	0.500**	-0.001	1
	P value	0.000	0.000	0.989	
Availability of Finances	ρ (rho)	0.511**	0.189*	0.345**	0.109
	P value	0.000	0.043	0.000	0.244

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Regression Model

The findings in Table 6 revealed that that Organizational Policy, Procurement Competency, ICT adoption and Availability of finances account for 51% of the variation in PP (R -square = 0.51, adj. R -square = 0.493). It is notable that there exists a strong positive relationship between the independent variables and dependent variable as shown by R value (0.876). The coefficient of determination (R^2) explains the extent to which changes in the dependent variable can be explained

by the change in the independent variables or the percentage of variation in the dependent variable and the four independent variables that were studied explain 76.70% of the procurement performance as represented by the R^2 . This therefore means that other factors not studied in this research contribute 32.20% to the procurement performance. This implied that these variables are very significant therefore need to be considered in any effort to boost procurement performance in the oil industry in Kenya.

Table 6: Model Summary

R	R Square	Adj. R Square	SE of the Estimate
0.876	0.767	0.678	0.2363

Furthermore, the study revealed that the significance value is 0.000 which is less than 0.05 thus the model is statistically significant in predicting how Organization Policy, Procurement Competency, ICT adoption, Availability of Finances

affect procurement performance in the oil industry in Kenya. The F critical at 5% level of significance was 31.094. Since F calculated (31.094) is greater than the F critical (value = 14.876), this showed that the overall model was significant.

Table 7: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	35.820	4	8.955	31.094	.000b
Residual	17.012	59	0.288		
Total	52.832	63			

a Dependent Variable: PP

b Predictors: (Constant), Organization Policy, Procurement Competency, ICT adoption, Availability of Finances

The first specific objective of this study was to determine how organizational policy affects procurement performance in the oil industry in Kenya. This was through answering the research question that how does organizational policy affect procurement performance in the oil industry in Kenya? From the findings, organizational policy has a positive and significant effect on procurement performance in the oil industry in Kenya, $\beta_1 = 0.324$, $p < 0.001$ meaning that with each unit increase in the organizational policy, procurement performance in the oil industry would increase by 0.324 units and this effect is significant and over 4 times that attributed to the associated error, $t = 4.163$.

The second specific objective of the study was to assess how procurement competency affect procurement performance in the oil industry in Kenya by answering the research question that what is the effect of procurement competency on procurement performance in the oil industry in Kenya? The findings showed that procurement competency has a positive and significant effect on procurement performance, $\beta_2 = 0.255$, $p < 0.001$ and showing that with each unit increase in procurement competency, procurement performance in the oil industry in Kenya would increase by 0.255 units and this effect is over 3.5

times greater than that attributed to the associated error, $t = 3.594$.

In addition, the third specific objective of this study was to examine how adoption influence procurement performance in the oil industry in Kenya and this was through answering the research question that to what extent does ICT adoption affect procurement performance in the oil industry in Kenya? The findings revealed that Technology capabilities has a positive and significant effect on procurement performance in the oil industry in Kenya, $\beta_3 = 0.178$, $p = 0.023$ and shows that with each unit increase in ICT adoption, procurement performance in the oil industry in Kenya would increase by 0.178 units and is over 2 times greater than that attributed to the associated error, $t = 2.312$.

Finally, the fourth specific objective of this study was to establish how availability of finances influence procurement performance in the oil industry in Kenya by answering the specific research question that how does availability of finances affect procurement performance in the oil industry in Kenya? The findings showed that existence of a availability of finances has a positive and significant effect on procurement performance in the oil

industry in Kenya, $\beta_4 = 0.342$, $p < 0.001$ such that with each unit increase in the availability of finances, procurement performance in the oil

industry in Kenya would increase by 0.342 units which is over 4.7 times greater than that attributed to the associated error, $t = 4.768$.

Table 7: Regression Model Coefficients of Estimates

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	SE	Beta	t	Sig.	Tolerance	VIF
(Constant)	-1.362	0.564		-2.413	0.017		
Organizational Policy	0.439	0.106	0.324	4.163	0.000	0.728	1.374
Procurement Competency	0.28	0.078	0.255	3.594	0.000	0.874	1.144
ICT Adoption	0.345	0.149	0.178	2.312	0.023	0.746	1.341
Availability of Finances	0.329	0.069	0.342	4.768	0.000	0.856	1.168

a Dependent Variable: Procurement Performance

CONCLUSIONS AND RECOMMENDATIONS

The study concluded that organization policy is the first important factor that procurement performance in the oil industry in Kenya. The regression coefficients of the study show that organization policy has a positive significant influence on procurement performance in the oil industry in Kenya. This implies that increasing levels of organization policy would increase the levels of procurement performance in the oil industry in Kenya. This shows that organization policy has a positive influence on procurement performance in the oil industry in Kenya.

The study concluded that procurement competency is the second important factor that procurement performance in the oil industry in Kenya. The regression coefficients of the study show that procurement competency has a positive significant influence on procurement performance in the oil industry in Kenya. This implies that increasing levels of procurement competency would increase the levels of procurement performance in the oil industry in Kenya. This shows that procurement competency has a positive influence on procurement performance in the oil industry in Kenya.

The study concluded that procurement competency is the third important factor that procurement performance in the oil industry in Kenya. The regression coefficients of the study show that

procurement competency has a positive significant influence on procurement performance in the oil industry in Kenya. This implies that increasing levels of procurement competency would increase the levels of procurement performance in the oil industry in Kenya. This shows that procurement competency has a positive influence on procurement performance in the oil industry in Kenya.

The study concluded that availability of finances is the fourth important factor that procurement performance in the oil industry in Kenya. The regression coefficients of the study show that procurement competency has a positive significant influence on procurement performance in the oil industry in Kenya. This implies that increasing levels of procurement competency would increase the levels of procurement performance in the oil industry in Kenya. This shows that procurement competency has a positive influence on procurement performance in the oil industry in Kenya.

The study recommended that there was need to further put in place structures that would enable the full implementation of the laws and regulations regarding communication within the department which would lead in reduced lead time. Furthermore, enhanced coordination to improve quality through enabling structures that clearly define the roles and responsibilities of the staff is

critical. Also, a further relook into the standardization mechanisms would go a long way in plugging any gaps in order to reduce costs.

There was need for the organization to ensure that there is continuous on job training to enhance implementation of rules and regulations and the fairness and equitableness of formal courses offered to the staff thus enhanced quality improvement. Investing in IT infrastructure alone does not guarantee better implementation as a result of use of IT but there is need to invest in the training and capacity building of the staff to ensure that procurement staff are computer literate.

There was need to ensure full implementation of the Public Procurement and Disposal Asset Regulation Act (2015) and preparation or implementation of procurement plans annually. This call for collaboration among the different

departments to ensure that this Act is complied with and part of the strategies may involve capacity building and increasing monitoring of the same.

Areas for Future Research

This study could not exhaust all the determinants of procurement performance in the oil industry in Kenya. The four independent variables that were studied explained 67.80% of the procurement performance in the oil industry in Kenya. This therefore means that other factors not studied in this research contribute 32.20% to the procurement performance in the oil industry in Kenya. Therefore, other factors affecting procurement performance in the oil industry in Kenya need to be established. These may include the existing organization policy, procurement competency, ICT adoption; availability of finances among others needs further investigation.

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