

## **Factors Affecting Procurement Policy Compliance in Public Sector in Kenya: A Case of Ministry of Health**

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**Abstract:** Because of the critical role of public procurement, this study intended to establish the factors affecting procurement policy compliance in public sector in Kenya. The study specifically focused on the influence of organization culture, Institution enforcement mechanism, top management support, staff competence on procurement policy compliance in public sector in Kenya. This study adopted a descriptive survey design. The target respondents for this study was 138 employees that work in procurement, finance and legal matters divisions of the department of administrative services according to the ministry of health website. The study adopted random sampling technique with respect to the unit of analysis which was procurement, finance and legal matters divisions of the department of administrative services in the ministry of health. The study used primary data collected by the use of a semi-structured questionnaire. The questionnaires were self-administered with the help of two research assistants. The questionnaires were administered through a drop and pick method as well as through mail. A multiple linear regression model was used to test the significance of the influence of the independent variables on the dependent variable. Results were presented in form of tables and charts. The findings revealed that organisation culture; top management support and staff competence had a positive and significant influence with the Level of procurement compliance. On the other hand, regulation enforcement mechanism was found to have positive but insignificant effect on the procurement compliance. Based on these findings the study concluded that organisations culture both in private and public sector is very critical in procurement performance. The study concluded that increased enforcement actions and increased penalties could lead to greater levels of compliance with the procurement laws. The study also concluded that lack of a high degree of professionalism in public procurement lead to corruption, which ultimately impedes the level of compliance.

**Key Words:** *Organization Culture, Top Management Support, Staff Competence, Regulation Enforcement, Procurement Performance*

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## Introduction

Public procurement refers to the acquisition of goods and services by government or public sector organizations (Uyarra & Flagan, 2010) and is one of the governments' key activities (Thai, 2001; Stephen & Hellen, 2009). Kipchilat (2006) quoting a Comesa report (2004) noted that procurement absorbs 60 percent of government expenditure and this means that accountability at all levels is important. This figure, 60% indicates that public procurement is important in the economies of both developed and developing countries. According to Roodhooft and Abbeele (2006) and the World Bank (1995), public bodies have always been big purchasers, dealing with huge budgets. The nature and context of public sector purchasing differs from commercial practice. The public sector spends taxpayers' money and is subject to public review and needs to be transparent and accountable in its purchasing processes (Hellen & Stephen, 2011).

Compliance is a problem not only in the third world countries but also evident in the countries in the European Union (EU) (Eyaa & Oluka, 2011). This position is further supported by Gelderman et al., (2006) who contend that compliance in public procurement is still a major issue. The World Bank (2004) observes that even though several developing countries have taken steps to reform their public procurement systems, the process is still shrouded by secrecy, inefficiency, and corruption and undercutting. In all these cases, huge amounts of resources are wasted (Odhiambo & Kamau, 2013). The major obstacle however, has been inadequate compliance within the procurement process. Hui et al. (2011) while analyzing procurement issues in Malaysia establishes that procurement officers are blamed for malpractice and non-compliance to the procurement policies and procedures.

## Statement of the Problem

Public procurement systems are central to the effectiveness of development expenditure. Budgets get translated into services largely through the governments' purchases of goods, services and works (Ngugi & Mugo, 2014). In Kenya, the public sector spends huge budgets on procurement and up to 60 percent of public expenditure goes to public procurement (Kipkorir, 2013; Makabira & Waiganjo, 2014). Hence, transparency and accountability within their purchasing processes is critical and this had not been the case so far. The report by Ethics and Anti-Corruption Commission (EACC) (2010) points out that the country loses Kshs. 200 Billion annually, as a result of flaws in public procurement processes. Statistics available from Transparency International Report revealed that public procurement in Kenya is marred by high levels of non-compliance and inconsistencies especially with the procurement law, in particular the Public Procurement and Disposal Act (PPDA)-2005 (TI, 2009). Compliance levels were found to be 11% low in public entities in Kenya compared to South Africa despite efforts by the Public Procurement Oversight Authority (PPOA) to put in place measures to improve compliance (PPOA, 2011).

Procurement audits carried out in a number of state corporations and other government entities revealed levels of non-compliance for instance with the existing public procurement law. Audits carried out by the PPOA in the financial years 2007/2008 revealed that the levels of non-compliance with the regulations within the public sector were at highs of 23% and procurement regulations were being flouted (PPOA Audit Reports, 2006/2007).

According to the District Audit report 2010, 2011, it had been noted that tendering committees within parastatals distorted the regulations to restrict the participation of interested suppliers in procurement, or still direct the outcome of others (DAR, 2011). For instance, Gesuka and Namusonge (2013) investigated the factors affecting compliance of public procurement regulations in Kenya in the case of Butere District. The findings indicated that, there was some level of compliance to the legal requirements at the public procuring entity as officials endeavored to adhere to the legal requirements as revealed by the procurement record and respondents' perception of public procurement compliance/non-compliance. Ronoh, (2016) sought to find out the effect of organizational culture on procurement regulation compliance. The study findings indicated that organizational culture is a significant predictor of compliance to procurement regulations. In these studies, the focus was on state corporations where the issue of non-compliance was major. This study therefore sought to fill this gap by assessing factors affecting procurement policy compliance in public sector in Kenya

### **Objectives of the Study**

1. To establish the effect of organization culture on procurement policy compliance in public sector in Kenya
2. To determine the effect of regulation enforcement mechanism on procurement policy compliance in public sector in Kenya
3. To analyze the effect of top management support on procurement policy compliance in public sector in Kenya
4. To assess the effect of staff competence on procurement policy compliance in public sector in Kenya

### **Literature Review**

#### **Theoretical Review**

#### **Principal Agent Theory**

The theory deals with situations in which the principal is in a position to induce the agent, to perform some task in the principal's interest, but not necessarily the agent's. Accounting officers and procurement managers in state corporations play the agent role for the government and the organization stakeholders. Compliance with procurement rules and regulations may be as result of principal-agent problem (Langevoort, 2002). The PPDA, (2005) bestows the responsibility of compliance with PP legal framework on the Accounting Officers of the PEs. Theory will be useful in explaining the relationship between the government and the state corporations in compliance to the legal framework. Theory will explain how the actions of the agent affect the principal and other stakeholders for example making non-optimal decisions as far as the utilization of financial resources and non-financial resources are concerned. The Public sector represents a principal-agent relationship. The official acts as the principal's agent and must periodically account for their use and stewardship of resources and the extent to which the public's objectives have been accomplished.

#### **Upper Echelons Theory**

Upper-echelons theory has its roots in the behavioral theory of the firm (Cyert & March, 1963) and the notion of bounded rationality and more specifically selective perception. The nature of the issues that strategic decision-makers face voids the use of a rational economic model. Consequently the choices managers make contain a behavioral component which in some way reflects their own idiosyncrasies.

The Upper-echelons theory links top management support to with efficiency whereby it recognizes ingredients such as: commitment, frequency of attendance at meetings, level of involvement in information requirements analysis; and the level of involvement in decision-making. Overall it must be acknowledged that there is support for the basic premise of upper-echelons theory, that organizations (their strategies and performance) are a reflection of their top managers' idiosyncrasies and biases (Kingori & Ngugi, 2014). This theory provides the framework for analyzing how the top management support within the parastatals affects the level of procurement compliance in terms of providing direction and authority within the procurement function.

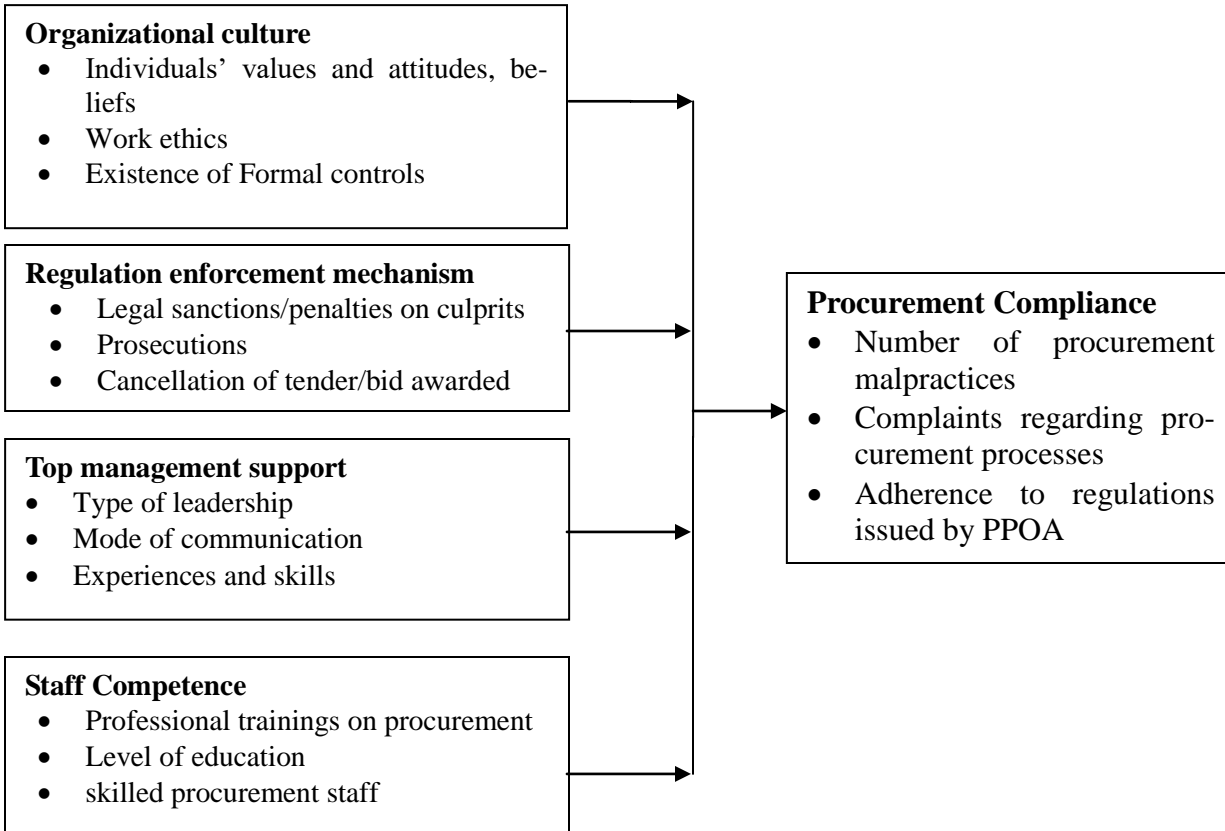
### **Social Learning Theory**

Atkinson (2003), emphasis that people learn by observing other people (models) whom they believe are credible and knowledgeable. Social learning theory also recognizes that a behavior that is rewarded tends to be repeated. The model's behavior or skill that is rewarded is adopted by observer. According to social learning theory, learning new skills or behaviors comes from directly experiencing the consequences of using that behavior skill, or the process of observing others and seeing the consequences of their behavior. According to social learning theory, learning is also influenced by a person's self-efficacy. Self-efficacy is an important factor to consider in the person analysis phase of need assessment, and it is one determinants of readiness to learn (Barret, 2012). A trainee with high self-efficacy will put forth efforts to learn in a training program and is most likely to persists in learning even if an environment is not conducive for learning ( for example, in a noisy training room).

### **Competency Theory**

According to Ryan, Emmerling & Spencer (2009), the global move to Competence Based Training has introduced a number of new concepts and chief among these concepts is the concept of competence. Maximum performance is believed to occur when the person's capability or competency is consistent with the needs of the job demands (roles and responsibilities) and the organizational environment, systems and structures (Ryan et al., 2009). Competencies are framed as abilities related to motive and personality constructs that influence the frequency and intrinsic affective value associated with the execution of specific behaviour and cognitive-affective processes. In this way, competencies not only imply what an individual is capable of doing but what they want to do. Thus for effective prediction of work performance, both of these factors have to be taken into account. This implies that competencies differ significantly from abilities, because motives form a critical element of the theoretical framework. In other words, abilities inform you about what a person can do, while competencies provide insight into what a person can and will do (Ryan, Emmerling & Spencer, 2009).

### Conceptual Framework



**Independent Variables**

**Dependent Variable**

**Figure 1 Conceptual Framework**

### Organization Culture

According to Lisa, (2010) culture plays a central role in the compliance process and associated outcomes based on a study conducted on culture in Uganda’s public sector and depicted culture as a hindrance to reforms. It is also contended that in a specific type of culture, characterized by specific values such as openness, trust and honesty (Arjoon, 2006) as cited in Lisa (2010) employees are more likely to engage in compliance behaviours, which collectively will contribute to organizational compliance. Parker and Bradley (2000) further indicated that awareness of the nature of public organizational culture is vital in explaining and assessing the appropriateness and outcome of the current reform process. This applies to developing countries where waves of procurement reforms have resulted into enactment of procurement rules and regulations.

## Regulation Enforcement Mechanism

According to Zubcic and Sims (2011), enforcement of regulations could be broadly viewed as any actions taken by the regulators to effect enforcement on compliance. Cunningham and Kagan (2007) also agree that enforcement also improves compliance. According to Zubcic and Sims (2007), enforcement actions and increased penalties lead to greater levels of compliance with the laws. According to Nwabuzor (2005), corruption among government procurement officials in developing countries have been linked to weak enforcement of the rule of law. In countries with strong bidding mechanisms, bidders are allowed to participate in all procurement process and can lodge review complaint if they deem the procurement process was not in consonance with the regulations. Such bidder participative mechanisms are a strong force for procurement officials to abide by the regulations (Hui et al, 2011). Gunningham and Kagan (2005) observes that the threat of legal sanctions is essential

## Staff Competence

According to Raymond (2008), professionalism in public procurement relates not only to the levels of education and qualifications of the workforce but also to the professional approach in the conduct of business activities. If the workforce is not adequately educated in procurement matters, serious consequences; including, breaches of codes of conduct occur. According to Atkinson (2003) cited in Raymond (2008), there are approximately 500,000 professional purchasing people in the United States and only 10 per cent of these have been members of a professional body and the rest are not even aware that there are ethical and legal standards involved in procurement. He also linked lack of a high degree of professionalism in public procurement to corruption, which ultimately impedes compliance.

## Research Methodology

This study adopted a descriptive survey design. Normally, the main objective of a descriptive research design is to describe the state of affairs as it is at the time. The target population comprised of employees working in the department of administrative services and specifically procurement, finance and legal matters. The ministry of health had 138 employees that work in procurement, finance and legal matters divisions of the department of administrative services according to the ministry of health website. A Fisher (1998) formula was used to determine sample size. Other studies that have used this formula include; Fostgate (2005), Georgiadis, Johnson and Gardner, (2005) who carried out studies in different fields.  $n = \frac{Z^2 * p * (1-p)}{d^2}$  Where: n = Sample size for large population, Z = Normal distribution Z value score, (1.96), p = Proportion of units in the sample size possessing the variables under study, where for this study it is set at 50% (0.5), d = Precision level desired or the significance level which is 0.1 for the study. The substituted values in determining the sample size for a large population are as follows.

$$n = \frac{(1.96)^2(0.5)(0.5)}{(0.1)^2} = 96$$

Hence, the sample size for this study was 96. Stratified sampling was used where 96 was sampled from a population of 138 employees. The study used quantitative primary data collected by use of structured questionnaires. After quantitative data is obtained through questionnaires, it was prepared in readiness for analysis by editing, handling blank responses, coding, categorizing and keyed into statistical package for social sciences (SPSS) computer software for analysis. A multiple linear regression model was used to test the relationship of the independent variables on the dependent variable. The equation below shows the multiple linear regression models of the independent variables against the dependent variable.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$ , Where: Y = level of Procurement Policy Compliance,  $\beta_0$  = Constant Term,  $X_1$  = Organizational Culture,  $X_2$  = Regulation Enforcement Mechanism,  $X_3$  = Top Management Support,  $X_4$  = Staff Competence

$\beta_1, \beta_2, \beta_3$  and  $\beta_4$  = Beta coefficients and  $\varepsilon$  = Error term

## RESEARCH FINDINGS

### Response Rate

A total of 96 questionnaires were administered to selected respondents. A response rate of 89 was recorded. This constituted 92.7% response rate. According to Mugenda and Mugenda (2003), a response rate of more than 50% is adequate for analysis.

### Demographic Characteristics of the Respondents

#### Gender of the Respondents

The findings of this study showed that 56% of the respondents were male while 44% of the respondents were female. The findings of this study implied that male employees still dominated the public sector in procurement; finance and legal matters divisions of the department of administrative services in the ministry of health were male. Escott and Whitfield (2002) also noted that there is gender disparity in public sectors where male still dominates over women.

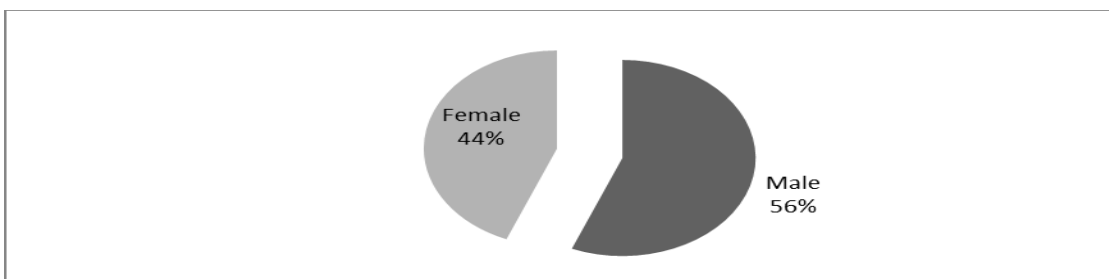


Figure 2 Gender of the Respondents

### Age Bracket of the Respondents

The findings showed that 29.1% of the respondents were between 36 and 45 years old. Those between 46 and 55 years were 28.1% while age bracket of above 55 years were also 28.1%. Respondents between 26 and 35 years were 11.2%. Those below 25 years were the least at 3.4%. The findings implied that majority of the employees in that work in procurement; finance and legal matters divisions of the department of administrative services in the ministry of health were above 36 years. This findings support the finding of Davidson, Lepeak and Newman (2007) who studied the impact of the aging workforce on public sector organizations and found that majority of public sectors have aging workforce.

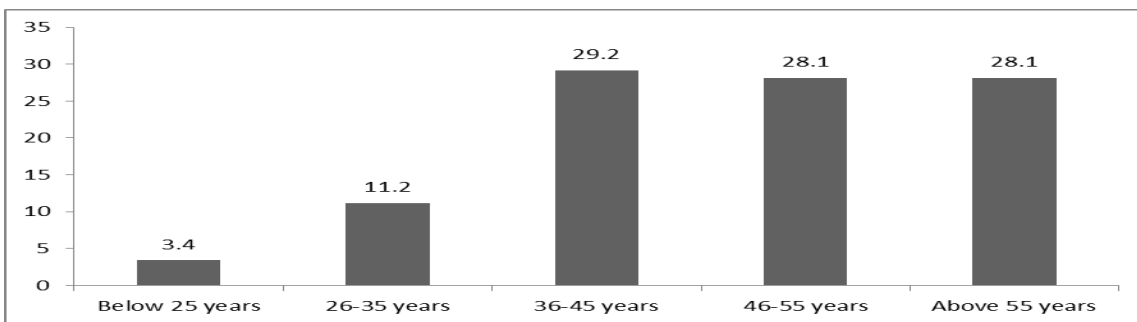


Figure 3 Age Bracket of the Respondents

### Work Experience of the Respondents

The study sought to establish the work experience of the respondents. the results showed that respondents with 5-7 years and above 7 years work experience were equal at 42.7%, those with 2-5 years were 7.9% while below 1 year work experience had the least at 6.7%. The findings implied that majority of the respondents had worked long enough in the ministry of health to provide the necessary information sought by the study. The findings also confirmed the notion of aging workforce since older employees also have many years of working experience (Davidson, Lepeak& Newman, 2007).

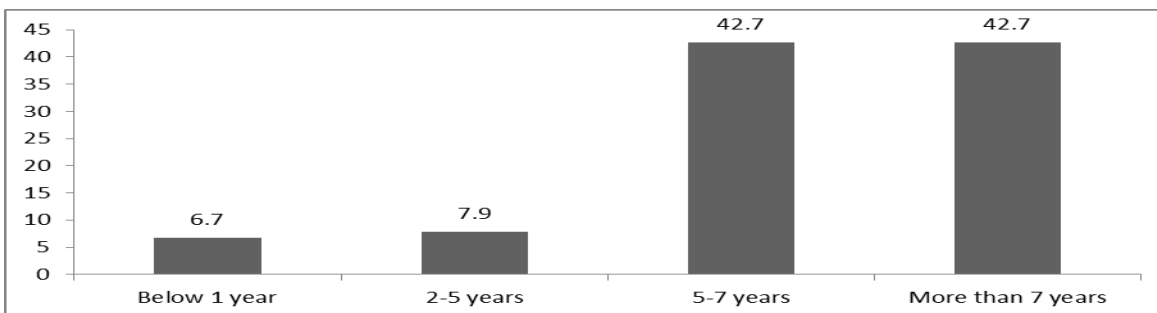


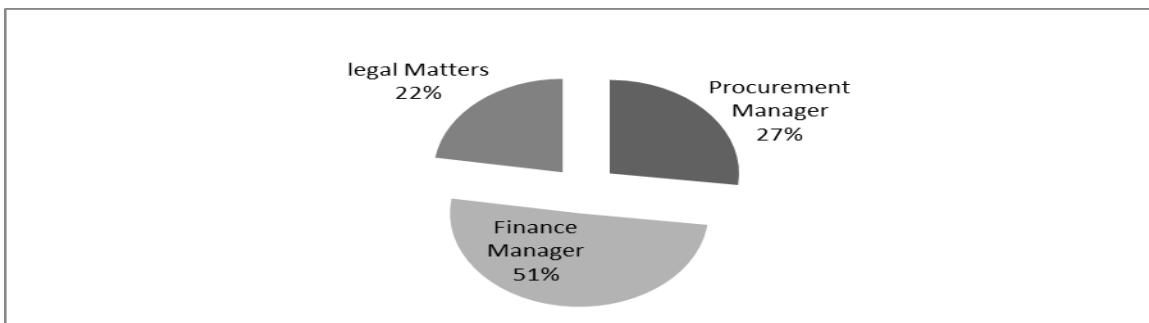
Figure 4 Work Experience of the Respondents



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## Department of the Respondents

The study also sought to determine the department held by the respondents. The finding showed that 51% of the respondents were from finance managers, 27% were procurement managers while 22% were from legal matters department. The findings implied that the respondents of this study were heterogeneous and the findings were representative.



**Figure 5 Department of the Respondents**

## Descriptive Results for Procurement Compliance

This section provides the descriptive findings on the respondents' opinion regarding the level of procurement compliance in the ministry of health. The study sought to establish whether the number of procurement malpractices had decreased. The results showed that 43.8% and 38.2% of the respondents agreed and strongly agreed. The statement had a mean response of 4.10 and a standard deviation of 0.95 which implied that majority of the respondents agreed and strong agreed and their response varied slightly from the mean. The study further sought to establish whether the number of complaints from the stakeholders regarding procurement process had decreased. The findings showed that 39.3% and 36.0% agreed and strongly agreed respectively. The results further showed that the statement had a mean of 3.96 which further confirmed that majority of the respondents agreed. The standard deviation of 1.09 also showed that the response varied slightly from the mean. The study also sought to establish whether public procurement and disposal of public assets act is observed within the ministry.

The results showed that the statement had a mean of 4.09 and standard deviation of 1.05 which implied that majority of the respondents was in agreement with the statement. The findings further showed that 38.2% and 36.0% of the respondents strongly agreed and agreed that PPOA price indices were referred to during procurement activities. The statement had a mean response of 3.96 that confirmed that majority of the respondents were agreement with the statement. Finally, the study sought to establish whether there was conformity or obedience to regulations and legislation in procurement process. The results showed that 43.8% and 38.2% of the respondents' agreed and strongly agreed with the statements. The statement had a mean and a standard deviation of 4.03 and 1.10 respectively which implied that majority of the respondents agreed with the statement.

**Table 1: Descriptive Results for Procurement Compliance**

	Strongly Dis- agree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
The number of procurement malpractices has decreased	2.2%	5.6%	10.1%	43.8%	38.2%	4.10	0.95
The number of complaints from the stakeholders regarding procurement process has decreased	4.5%	6.7%	13.5%	39.3%	36.0%	3.96	1.09
Public Procurement and Disposal of Public Assets Act is observed within the ministry	4.5%	3.4%	13.5%	36.0%	42.7%	4.09	1.05
PPOA price indices are referred to during procurement activities	5.6%	5.6%	14.6%	36.0%	38.2%	3.96	1.13
There is conformity or obedience to regulations and legislation in procurement process	6.7%	3.4%	7.9%	43.8%	38.2%	4.03	1.10

### Organisation Culture

The first objective of the study was to determine the influence of organisation culture on the level of procurement compliance in the ministry of health. The findings are presented in Table 2.

**Table 2: Descriptive Results for Organisation Culture**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Individual values, habits beliefs and attitudes plays a central role in procurement compliance process	7.9%	5.6%	13.5%	32.6%	40.4%	3.92	1.22
There is existence of work ethics within the entity's procurement processes	5.6%	7.9%	11.2%	30.3%	44.9%	4.01	1.18
The ministry has effective mechanism formerly stated rules, standards and procedures	7.9%	3.4%	10.1%	41.6%	37.1%	3.97	1.15
The organization culture affects the level of coordination of procurement activities among departments of the entity	4.5%	5.6%	12.4%	36.0%	41.6%	4.04	1.09
There is a there is hierarchical reporting mechanism in the ministry	6.7%	7.9%	12.4%	36.0%	37.1%	3.89	1.19
The organization culture within the ministry affects independence of the procurement contracts committee	4.5%	3.4%	16.9%	33.7%	41.6%	4.04	1.07

The study sought to determine whether individual values, habits beliefs and attitudes played a central role in procurement compliance process. The results showed that 40.4% and 32.6% of the respondents strongly agreed and agreed with the statement. The results further showed that the statement had a mean of 3.92 which confirmed that the respondents agreed. The results also showed that 44.9% and 30.3% of the respondents agreed that there was existence of work ethics within the entity's procurement processes at the ministry of health. The study also sought to determine whether the ministry had effective mechanism formerly stated rules, standards and procedures. The findings revealed that 41.6% and 37.1% agreed and strongly agreed with the statement. The results also showed that the statement had a mean and standard deviation of 3.97 and 1.15 respectively. These findings implied most of the respondents agreed with the statement and further the response varied slightly as indicated by the standard deviation of 1.15.

The study was also interested in finding out whether organization culture affected the level of coordination of procurement activities among departments of the entity. The results showed that 41.6% strongly agreed, 36.0% agreed, 5.6% disagreed while 4.5% strongly disagreed. The results further revealed that the statement had a mean of 4.04 which showed that most of the respondents agreed with the statement. The results also showed that 37.1% and 36.0% of the respondents strongly agreed and agreed that there was a hierarchical reporting mechanism in the ministry. The statement had a mean of 3.89 and a standard deviation of 1.09 which confirmed that most of the respondents agreed and that the responses varied slightly from the mean. Finally, the study intended to establish whether the organization culture within the ministry affected independence of the procurement contracts committee. The results revealed that 41.6% of the respondents strongly agreed, 33.7% agreed, 16.9% were neutral, 4.5% strongly disagreed while 3.4% disagreed. The results further showed that the statement had a mean of 4.04 and a standard deviation of 1.07. These finding implied that organization culture within the ministry affected independence of the procurement contracts committee. These findings implied that organisation culture played a significant role in procurement performance. The findings of this study concur with those of Matindi and Ngugi (2013) whoalso found out that the role of culture in organizational compliance has gained momentum; that awareness of the nature of public organizational culture is vital in explaining and assessing the appropriateness and outcome of the current reform process; that culture plays a central role in the compliance process and associated outcomes; that conformity and compliance are achieved through enforcement of formerly stated rules and procedures.

## Regulation Enforcement Mechanism

The second objective of the study was to determine the effect of regulation enforcement mechanism on the level of procurement policy compliance in the ministry of health. The findings are presented in Table 3.

**Table 3: Descriptive Results for Regulation Enforcement Mechanism**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Procurement regulation enforcement agencies in ministry of health are effective	2.2%	5.6%	15.7%	29.2%	47.2%	4.13	1.02
Offenders of procurement regulation face Legal sanctions and penalties	6.7%	3.4%	15.7%	28.1%	46.1%	4.03	1.17
Procurement officers who break the law are prosecuted	0.0%	4.5%	21.3%	37.1%	37.1%	4.07	0.88
Tender/bid that are found to be awarded outside the procurement law are cancelled	7.9%	7.9%	7.9%	36.0%	40.4%	3.93	1.23
Enforcement action has cumulative effect on the consciousness of procurement officers and it reminds of punishment	5.6%	4.5%	9.0%	44.9%	36.0%	4.01	1.07

The descriptive results showed that 47.2% and 29.2% of the respondents strongly agreed and agreed that procurement regulation enforcement agencies in ministry of health were effective. Similarly, that 46.1% and 28.1% of the respondents strongly agreed and agreed that offenders of procurement regulation face legal sanctions and penalties. The study further sought to determine whether procurement officers who broke the law were prosecuted. The findings showed that 37.1% strongly agreed, 37.1% agreed while 4.5% of the respondents disagreed. The statements had a mean of 4.07 which confirmed that most of the respondents agreed with the statement. The findings also revealed that 40.4% and 36.0% of the respondents strongly agreed and agreed that tender/bid that were found to be awarded outside the procurement law were cancelled. Those who disagreed were 15.8%. Finally, the study sought to find out whether enforcement action had cumulative effect on the consciousness of procurement officers and it reminded of punishment associated with lack of procurement. The findings showed that 44.9% agreed, 36.0% strongly agreed while 5.6% and 4.5% strongly agreed and agreed respectively. The results further revealed that the statement had a mean response of 4.01 and standard deviation of 1.07 which confirmed that most of the respondents agreed and that the response varied slightly from the mean as indicated by the standard deviation of 1.07. Gunningham and Kagan (2005) also observes that the threat of legal sanctions is essential to regulatory compliance and that enforcement action has cumulative effect on the consciousness of regulated companies and it reminds companies that circumvention of law will never go unpunished.

## Top Management Support

The third objective of the study was to determine the effect of top management support on the level of procurement compliance in the ministry of health. The findings are presented in Table 4.

**Table 4: Descriptive Results for Top Management Support**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Type of leadership at the influences procurement policy compliance	5.6%	3.4%	13.5%	39.3%	38.2%	4.01	1.08
Mode of communication by top management assist in enhancing procurement policy compliance	5.6%	4.5%	13.5%	43.8%	32.6%	3.93	1.07
Experience and skills of top management ensure there is effective controls and standards for procurement	3.4%	6.7%	11.2%	36.0%	42.7%	4.08	1.06
The top management frequently attend meetings to discuss pending and critical procurement decisions within the ministry	4.5%	4.5%	11.2%	37.1%	42.7%	4.09	1.06
The top management is actively involved in decision making concerning all procurement activities	5.6%	6.7%	12.4%	38.2%	37.1%	3.94	1.13

The results in table 4 showed that 39.3% and 38.2% agreed and strongly agreed that the type of leadership at the influenced procurement policy compliance. The results further showed that the statement had a mean of 4.01 and a standard deviation of 1.08 which further confirmed that that most of the respondents were in agreements with the statement. The finding also revealed that 43.8% and 32.6% agreed and strongly agreed that Mode of communication by top management in the ministry assisted in enhancing procurement policy compliance. On whether experience and skills of top management ensured there were effective controls and standards for procurement, the finding table 4.5 showed that 42.7% strongly agreed, 36.0% agreed while 6.7% and 3.4% of the respondents disagreed and strongly disagreed respectively. The study sought to establish whether top management frequently attended meetings to discuss pending and critical procurement decisions within the ministry. The results revealed that 42.7% and 37.1% of the respondents agreed and strongly agreed respectively. Those respondents who strongly disagreed were 9%.

The study finally sought to determine whether the top management was actively involved in decision making concerning all procurement activities. The finding showed that 40.4% of the respondents agreed with the statements while 34.8% strongly agreed. On the other hand 7.9% disagreed with 6.7% strongly disagreed. These finding generally implied that top management at the ministry of health was actively involved in the procurement process and their support influence the level of procurement compliance. Similarly, Kingori and Ngugi (2014) study found that management commitment; frequency of attendance of meeting; level of involvement in decision making and participation in decision making affected procurement performance.

## Staff Competence

The fourth objective of the study was to determine the effect of staff competence on the level of procurement compliance in the ministry of health. The findings are presented in Table 5.

**Table 5: Descriptive Results for Staff Competence**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
The procurement staff are adequately trained in procurement law and other procurement guidelines/standards	4.5%	5.6%	11.2%	34.8%	43.8%	4.08	1.09
Most of the employees in the procurement department have procurement experience	6.7%	3.4%	13.5%	41.6%	34.8%	3.94	1.11
The level of education possessed by employees enhance policy procurement compliance	2.2%	4.5%	14.6%	29.2%	49.4%	4.19	1.00
The skills possessed by employees enhance procurement policy compliance	5.6%	9.0%	6.7%	38.2%	40.4%	3.99	1.16
The level of staff competence affects the incidence of occurrence breaches of the law within the procurement process	6.7%	7.9%	10.1%	40.4%	34.8%	3.89	1.17

The results in Table 5 revealed that 43.8% and 34.8% strongly agreed and agreed respectively that the procurement staffs at the ministry of health were adequately trained in procurement law and other procurement guidelines/standards. The results further showed that the statement had a mean of 4.08 and standard deviation 1.09 which confirmed that most of the respondents agreed. The finding also showed that 41.6% and 34.8% agreed and strongly agreed that most of the employees in the procurement department had procurement experience while 49.4% and 29.2% further strongly agreed and agreed that the level of education possessed by employees enhanced policy procurement compliance. From the finding the statement had a mean response of 4.19 and standard deviation of 1.00 which also confirmed that majority of the respondents agreed with the statement.

The results further revealed that 40.4% and 38.2% strongly agreed and agreed that the skills possessed by employees enhanced procurement policy compliance. The statement had a mean of 3.99 which further confirmed that most of the respondents agreed with the statement with the responses slightly varying as indicated by the standard deviation of 1.16. The finding implied that procurement staff skills and experience was critical in ensuring high level of procurement compliance. The study also sought to establish whether the level of staff competence affected the incidence of occurrence breaches of the law within the procurement process. The findings showed that 40.4% agreed and 34.8% strongly agreed. On the other hand, 7.9% disagreed while 6.7% strongly disagreed. The statement had a mean of 3.87 which implied that most of the respondents were in agreement with the statement with slightly varying responses as indicated by the standard deviation of 1.17.

These findings implied that staff competence was very important in ensuring that there was compliance to procurement regulations. Onyinkwa (2014) findings also revealed that inadequate training of tendering committee members on procurement procedures has contributed to non-compliance of procurement regulations. Kiage (2013) findings also indicated that staff competence has a significant impact on procurement performance. According to Njeru (2015) investigated the causes of poor performance in procurement management and found out that inadequate skill was a major factor affecting performance of procurement management

### Correlation Tests Results

To further ascertain the association between the independent and dependent variable, the study employed correlation analysis. According to Kothari (2014), the correlation coefficient can range from -1 to +1, with -1 indicating a perfect negative correlation, +1 indicating a perfect positive correlation, and 0 indicating no correlation at all. A linearity test was conducted as evidenced by the Pearson correlation coefficient. The results of correlation are presented in Table 6.

**Table 6: Correlation Matrix**

		Organisation Cul- ture	regulation enforce- ment mechanism	top management support	Staff Competence	Level of procurement compliance
Organisation Culture	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	89				
regulation enforce- ment mechanism	Pearson Correlation	0.687	1			
	Sig. (2-tailed)	0.000				
	N	89	89			
top management support	Pearson Correlation	0.601	0.699	1		
	Sig. (2-tailed)	0.000	0.000			
	N	89	89	89		
Staff Competence	Pearson Correlation	0.693	0.521	0.688	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
	N	89	89	89	89	
Level of procure- ment compliance	Pearson Correlation	0.714	0.685	0.720	0.712	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	
	N	89	89	89	89	89

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

The study used correlation analysis to test the association between organization culture and the Level of procurement in the ministry of health, Kenya. The findings showed that organisation culture had a positive and significant association with the Level of procurement in the ministry of health, Kenya. The value of Pearson correlation was  $r=0.714$  with a  $p=0.000$  which was significant at 0.05 significance level.

The findings implied that an increase in organisation culture would lead to an increase in the level of procurement compliance. Matindi and Ngugi (2013) study also found out that the role of culture in organizational compliance has gained momentum; that awareness of the nature of public organizational culture is vital in explaining and assessing the appropriateness and outcome of the current reform process; that culture plays a central role in the compliance process and associated outcomes; that conformity and compliance are achieved through enforcement of formerly stated rules and procedures. Similarly, Basheka and Tumutegyereize (2010) study found organizational culture as statistically significant with regard to the causes of public procurement corruption. The correlation results further showed that regulation enforcement mechanism had a positive and significant association with the Level of procurement compliance in the ministry of health, Kenya. The value of Pearson correlation was  $r=0.686$  with a  $p=0.000$  which was significant at 0.05 significance level. Orobo and Muturi (2015) also concluded that enforcement mechanisms influenced the compliance of procurement and Disposal Regulations. Similarly, Sims (2011) contended that enforcement action and increased penalties lead to greater levels of compliance with laws.

The correlation results also revealed that top management support had a positive and significant association with the Level of procurement in the ministry of health, Kenya. The value of Pearson correlation was  $r=0.720$  with a  $p=0.000$  which was significant at 0.05 significance level. Kahiri, Arasa, Ngugi and Njeru (2015) study findings also showed that some of the procurement policies elements that influenced implementation of effective procurement practices in tertiary public training institutions in Kenya included lack of top management support and poor relationship between management and stakeholders. Similarly, Kingori and Ngugi (2014) study found that management commitment; frequency of attendance of meeting; level of involvement in decision making and participation in decision making affected procurement performance in RBA. The study concluded that top management support needed top management support is important for accomplishing procurement goals and objectives and aligning these with strategic business goals. The correlation results also revealed that Staff Competence had a positive and significant association with the Level of procurement in the ministry of health, Kenya. The value of Pearson correlation was  $r=0.712$  with a  $p=0.000$  which was significant at 0.05 significance level. Onyinkwa (2014) findings also revealed that inadequate training of tendering committee members on procurement procedures has contributed to non-compliance of procurement regulations in public secondary schools.

## **Regression Results**

Regression was adapted to further test the nature of relationship between independent variables and dependent. The result showed that staff competence, organisation culture, regulation enforcement mechanism and top management support had a significant association with level of procurement compliance at the ministry of health ( $R=0.779$ ). The results further revealed that staff competence, organisation culture, regulation enforcement mechanism and top management support jointly accounted for 60.6% of the variation in level of procurement compliance at the Ministry of Health in Kenya.



**Table 7 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.779 <sup>a</sup>	.606	.588	.48299

a. Predictors: (Constant), Staff Competence, Organisation Culture, regulation enforcement mechanism, Top management support

The results of ANOVA indicate that staff competence, organisation culture, regulation enforcement mechanism and top management support were significant predictor variables of level of procurement compliance at the Ministry of Health in Kenya. This was indicated by the F-statistics results ( $F=32.342$ ,  $p=0.000$ ) indicating that the model used to link the independent variables and dependent variable was statistically significant. Similarly, the ANOVA statistics at 5% level of significance shows that the value of F calculated (F computed) is 45.77 and the value of F critical (F tabulated) at 3 degrees of freedom and 84 degrees of freedom at 5% level of significance is 2.48. Since F calculated (F computed) is greater than the F critical (F tabulated) ( $45.77 > 2.48$ ), this further showed that the overall model was significant at the 5% significance level.

**Table 8 ANOVA Results**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.179	4	7.545	32.342	.000 <sup>b</sup>
	Residual	19.596	84	.233		
	Total	49.775	88			

a. Dependent Variable: Level of procurement

b. Predictors: (Constant), Staff Competence, Organisation Culture, regulation enforcement mechanism, top management support

**Table 9 Regression Coefficient**

	B	Std. Error	Beta	t	Sig.
(Constant)	0.621	0.313		1.988	0.050
Organisation Culture	0.162	0.057	0.219	2.841	0.006
Top management support	0.238	0.08	0.261	2.968	0.004
Staff Competence	0.459	0.093	0.464	4.949	0.000
Regulation enforcement mechanism	0.001	0.056	0.001	0.019	0.985

a Dependent Variable: Level of procurement compliance

**Optimal Model**

$$\text{Level of Procurement Compliance} = 0.621 + 0.162 (\text{Organisation Culture}) + 0.238 (\text{Top Management Support}) + 0.459 (\text{Staff Competence}) + \varepsilon$$

The study used regression analysis to test the relationship between organisation culture and the Level of procurement in the ministry of health, Kenya. The findings showed that organisation culture had a positive and significant relationship with the Level of procurement in the ministry of health, Kenya as shown by  $\beta=0.162$ , and  $p=0.006$ . The findings implied that a unit increase in organisation culture would result to an increase of 0.162 units in the level of procurement compliance other factors held constant.

The findings of this study concur with those of Matindi and Ngugi (2013) who also found out that the role of culture in organizational compliance has gained momentum; that awareness of the nature of public organizational culture is vital in explaining and assessing the appropriateness and outcome of the current reform process; that culture plays a central role in the compliance process and associated outcomes; that conformity and compliance are achieved through enforcement of formerly stated rules and procedures. Similarly, Basheka and Tumutegyereize (2010) study found organizational culture as statistically significant with regard to the causes of public procurement corruption

The second objective of the study was to test the relationship between Regulation Enforcement Mechanism and the Level of procurement in the ministry of health, Kenya. The findings showed that Regulation Enforcement Mechanism had a positive and insignificant relationship with the Level of procurement in the ministry of health, Kenya as shown by  $\beta=0.001$ , and  $p=0.985$ . The findings implied that a unit increase in Regulation Enforcement Mechanism would result to an increase of 0.001 units in the level of procurement compliance other factors held constant. Cunningham and Kagan (2007) also agree that enforcement also improves compliance. According to Zubcic and Sims (2007), enforcement actions and increased penalties lead to greater levels of compliance with the laws. Gunningham and Kagan (2005) also observes that the threat of legal sanctions is essential to regulatory compliance and that enforcement action has cumulative effect on the consciousness of regulated companies and it reminds companies that circumvention of law will never go unpunished.

The further sought to determine the effects of top management support on procurement compliance at the Ministry of Health, Kenya. The finding of regression analysis showed that top management support had a positive and significant relationship with the Level of procurement in the ministry of health, Kenya as shown by  $\beta=0.238$ , and  $p=0.004$ . The findings implied that a unit increase in top management support would result to an increase of 0.238 units in the level of procurement compliance other factors held constant. The finding of this study concurs with the Upper-echelons theory that links top management support to with efficiency whereby it recognizes ingredients such as: commitment, frequency of attendance at meetings, level of involvement in information requirements analysis; and the level of involvement in decision-making. Similarly, Kingori and Ngugi (2014) study found that management commitment; frequency of attendance of meeting; level of involvement in decision making and participation in decision making affected procurement performance.

The final objective of the study was of determine the effects of Staff Competence on procurement compliance at the Ministry of Health, Kenya. The finding of regression analysis showed that Staff Competence had a positive and significant relationship with the Level of procurement in the ministry of health, Kenya as shown by  $\beta=0.459$ , and  $p=0.000$ . The findings implied that a unit increase in Staff Competence would result to an increase of 0.459 units in the level of procurement compliance other factors held constant. The findings of this study concur with competence theory that indicates that better performance can be achieved if employee's competency is consistent with the job's needs. Onyinkwa (2014) findings also revealed that inadequate training of tendering committee members on procurement procedures has contributed to non-compliance of procurement regulations.

## Conclusion

This study sought to establish the factors affecting procurement policy compliance in public sector in Kenya. The result showed that organisation culture, top management supports and staff competence had a significant positive relationship with the level of procurement compliance. The influence of regulation enforcement mechanism was found to be positive but insignificant. Based on these findings the study concluded that organisations culture both in private and public sector is very critical in procurement performance. It is also concluded that in a specific type of culture, characterized by specific values such as openness, trust and honesty employees are more likely to engage in compliance behaviours, which collectively will contribute to procurement compliance. Similarly, the type of regulation enforcement mechanism in place has a role to play in ensuring that procurement officers adhere to stipulated regulations. The study concluded that increased enforcement actions and increased penalties could lead to greater levels of compliance with the procurement laws. On the influence of top management support, the study concluded that the type of leadership, experience and skills of the top management could go a long way in ensuring that there is effective compliance to procurement regulations. The study finally concluded that professional trainings on procurement, level of education and skilled procurement staff play a significant role in ensuring procurement compliance. If the workforce is not adequately educated in procurement matters, serious consequences; including, breaches of codes of conduct occur. The study also concluded that lack of a high degree of professionalism in public procurement lead to corruption, which ultimately impedes the level of compliance.

## Recommendations

The study recommended that the ministry should instill specific values of openness, trust and honesty in their employees to improve their engagement in compliance behaviours. The study further recommended that ministries should have their internal regulation enforcement mechanism whose main agenda is to enforce compliance to procurement law and regulation within the ministry. The study also recommended that officers that go against the procurement regulation should be forwarded to the Ethics and Anti -corruption Commission and the Kenya national Audit office (KENAO) for investigation and possible prosecution. The study recommended that the ministry of health should ensure that individuals occupying top position in procurement department and related departments are of integrity, professionally trained in matters of procurement and have vast experience in procurement.

## Conflict of Interest

No potential conflict of interest was reported by the authors.

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