

**ANTECEDENTS OF PROCUREMENT REGULATORY
COMPLIANCE LEVEL IN PUBLIC UNIVERSITIES IN
KENYA**

DUNCAN NDUNG'U NDERUI

DOCTOR OF PHILOSOPHY

(Supply Chain Management)

**JOMO KENYATTA UNIVERSITY OF
AGRICULTURE AND TECHNOLOGY**

2022

**Antecedents of Procurement Regulatory Compliance Level in Public
Universities in Kenya**

Duncan Ndung'u Nderui

**A Thesis Submitted in Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy in Supply Chain Management of the
Jomo Kenyatta University of Agriculture and Technology**

2022

DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

Signature..... Date.....

Duncan Ndung'u Nderui

This thesis has been submitted for examination with our approval as the university supervisors.

Signature..... Date.....

Dr. Susan Were, PhD

JKUAT, Kenya

Signature..... Date.....

Dr. Patrick Mwangangi, PhD (Deceased)

JKUAT, Kenya

DEDICATION

To my family members, clan and friends who supported my endeavor towards this noble achievement. I dedicate this work to my father Nderui Gakuya my late mother Wangeci Nderui and my brothers Nderui Ndirangu and Nderui Waciuri. I sincerely thank them and appreciate their love and encouragement they offered me during my study period.

ACKNOWLEDGEMENT

Special thank goes to my supervisors Dr. Were and Dr. Mwangangi whose no nonsense approach and relentless guidance kept me in the library throughout the period of my study. I am also grateful to my classmates whose critique provided various corrections, encouragement and motivation. I extend a hand of appreciation to my parents for helping me accomplish this milestone through financial and moral support.

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LIST OF ABBREVIATIONS AND ACRONYMS

DGPO	Dutch Government Procurement Organization
GNP	Gross National Product
ICPAK	Institute of certified Public Accountants of Kenya
ICT	Information and Communication Technology
JOOUST	Jaramogi Oginga Odinga University of Science and Technology
KeNAO	Kenya National Audit Office
KENGEN	Kenya Electricity Generating Company
MOE	Ministry of Education
NACOSTI	National Council for Science Technology and Innovation
PP	Public Procurement
PPDR	Public Procurement and Disposal Regulations
RD	Research and Development
SVO	Social Value Orientation
WB	World Bank

OPERATIONAL DEFINITION OF TERMS

- Antecedents** In the field of statistics, an antecedent is a variable that explains the behavior of another subsequent variable, in the context of simple regression, antecedents would be the determinants of dependent variable in a research study (Cameon & Trivedi, 2015)
- Information and Communication Technology** It involves the development, maintenance and use of computer system, software and networks for the processing and distribution of transactional data (Cohen *et al.*, 2017).
- Organizational Culture** Refers to the set of principles, standards, and procedures that shape and guide all group members' activities The set of characteristics that define a firm; the fundamental values, perceptions, beliefs, and modes of interaction that make a contribution to a firm's distinct social and psychological setting (Paracha *et al.*, 2019).
- Procurement ethical standards** Implies being as per the guidelines or standard for right direct or rehearse, particularly the gauges of a calling as contained in the firmcode of conduct and regulation. For instance, procurement is involved in supplier selection, evaluation, negotiation, contracts sign off and awarding businesses to supplier, which should be conducted with fairness (Perry, 2017).
- Procurement Expertise** Is the ability to manage supplier risk, optimize

spending, increase supplier value, improve supplier communication, optimize supplier portfolio and improve supplier performance while complying with the procurement regulations (Roodhooft & Abbeele, 2016).

Procurement regulatory Compliance level Is the extent of the standards set in place to govern the process of acquiring goods and services by an entity. That is, an organizations' adherence to laws, regulations, guidelines and procedures relevant to its business (Findlay, 2018).

Public Procurement Is a public policy tool for translating development finance into pre-determined economic and social outcomes (Gelderman *et al.*, 2016).

Public University It is the highest institution of learning in a country that is predominantly funded by public means through a national or sub-national government (Commission of University Education, 2018).

Regulation Is an administrative legislation that constitutes or limits rights and also allocates responsibilities (Liu & Hui, 2016).

Top management support Is the tenacious engaging of representatives in lower framework through legitimate coordination and association of the exercises of an undertaking as per certain arrangements and in accomplishment of obviously kept destinations (Victor, 2015).

ABSTRACT

Public procurement has always been a big part of the developing countries economy accounting for 30-60% of their GDPs. The general issue in this thesis is that in spite of the way that there has been changes in activity of the general population acquirement framework in Kenya since mid1990s, the government still loss billions of cash through acquisition abnormalities with the Ministry of Education driving by 45% of the announced cases in 2017/2018 and 35% in 2015/2016. PPOA is in charge of guaranteeing that the acquisition systems built up under the Act are consented with but very little evidence is available to support this compliance to these regulations. Procurement departments in universities are often involved in the procurement of goods and services such as purchase of photocopiers, computers, stationary, uniforms and university buses among others. This study considered the antecedents of procurement regulatory compliance level in public universities in Kenya namely, procurement expertise, Information and communication technology, procurement ethical standards and top management support. The dependent variable was procurement regulatory compliance level in public universities in Kenya while the moderating variable was organizational culture. A pilot study was done at Jomo Kenyatta University embracing a 10% of the objective populace. The study applied the census sampling method to choose the sample size of 31 state funded universities and 333 respondents. The research was informed by the following theories, Skills theory, Convergence theory, Ethical climate theory, Principal –agent theory, bureaucracy theory and Legitimacy theory. The study used Ex-post facto design, the research design was chosen because the study aimed at investigating the causal relationship on variables, which cannot be controlled by the researcher. Primary data was collected through the use of questionnaires issued to the procurement staffs in the sampled universities. Procurement expertise, information and communication technology, top management support and organizational culture were found to be satisfactory significant in contribution as a factor to procurement regulatory compliance level. The study found that there was an insignificant influence of procurement ethical standards to the procurement regulatory compliance level. The study concluded that procurement expertise prompts consistency and influence making the right and strategic purchasing decision. Overreliance on older and more labor-intensive technologies in ICT have an adverse effect on employees' morale. Inspiration and awards to staff can be utilized as a system to battle the individual interest that emerge in inclination to satisfy their obligations and tasks. The executives goes about as the system to the usefulness of the obtainment division and exercises thereof. Inadequate checking and evaluation of the working in an association is associated with the non-participation to a controllable circumstance. Modern technology in ICT regarding procurement such as e-procurement should be implemented across the procurement departments. The study recommended that e-procurement should be used in the tendering process and customization of transactions. The universities should increase the number of ICT specialists in procurement field. Deficiency of ICT apparatuses and programming in acquirement ought to be eliminated. Disciplinary advances should be taken on staff with improper for practices in work to maintain moral practice. Top

administration rather should deal with inspiring the staff separately for excellent execution. There ought to be opportunity of staff to release their obligations as allocated to them by the top administration.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

This Chapter introduces the study by giving the background information about procurement regulatory compliance level in public universities in Kenya, statement of the problem, general objectives and specific objectives, inquire about hypothesis, justification of the study, and the extent of the scope of the study.

Kipchilat (2017) referring to a COMESA report (2016) saw that obtaining spend in excess of 60% of government use and this calls for commitment in all aspects as a fundamental step. These figure 60% shows that open obtainment is central in the economies of both make and smallest made countries. Open acquisition has transformed into a significant issue of open concern and thought in both made and making countries, and attempts have been facilitated to its changes, revamping, rules and guidelines (Public Procurement and Regulatory Authority, 2017).

Open procurement is the purchasing of products, administrations and works by an obtaining unit utilizing citizens cash (World Bank, 2016). Mahmood (2017) noticed that open acquirement represents 18.42% of the world GDP. Roodhooft and Abbeele (2016), battles that open areas have dependably been the greatest clients, managing gigantic spending plans. Thus, different nations both in created and creating nations have taken walks in acquirement changes including laws and directions (Munene, 2017).

1.1.1 Global perspective of Procurement regulatory compliance level in public institutions

Universally, public acquisition has turned into a noteworthy subject issue for open concern and discourse, and has been looked with changes, rebuilding, rules, and regulations (Hui *et al.*, 2017). This argument is additionally held by Gelderman *et al.* (2016) who underscores that consistence out in the open acquisition is so far a significant subject for talk. Hui *et al.* (2017) while breaking down securing issues in

Malaysia found that obtainment officers were blameworthy of misbehavior and resistance in following with acquisition approaches and techniques. Obtainment in England is currently undertaking reforms with a view of significantly bringing down the procurement spending over the coming years (Victor, 2015).

Growing degrees of acquisitions centralization is an essential for this change especially with the presentation of Efficiency and Reform Group inside the bureau secretaries' office in 2010 (Perry, 2017). England schools get funding from the government and are independent in deciding how their budgets will be used (Thai, 2017). These schools have significant choice and flexibility about the services they wish to purchase in order to improve the outcomes for their pupils (Onyinkwa, Munene & Iravo, 2012). England tertiary institutions are the second most autonomous in the countries that form the European Union in terms of decision making (Organization for Economic Cooperation and Development report, 2017). Many schools establish systems to support their work, including access to local and national sources of information (Odhiambo & Kamau, 2015).

National Audit Office (2016) procurement has been identified by the British Government as a key driver for making efficiency savings and it has been suggested that schools could save up to one billion sterling pounds through proper procurements and back-office spending (Perry, 2017). In Wales, schools can buy goods and services directly from vendors or through regional or national framework (Basheka, 2018). Procurement services provided for schools in Wales allow schools to trade electronically with registered suppliers through the National exchange Wales e-procurement program. Schools may also use the Welsh purchasing card is a business payment card used by public sector organizations across Wales (De Boer, 2016).

The Department of Education often uses Public Private Partnerships for large capital schemes Department of (Education and Science Smart schools, 2017). In USA, there is the Federal Acquisition Regulation system which is created for the codification and publication of uniform policies and procedures for procuring by all executive agencies (Daniel, 2017). It is mandatory for public schools to meet both the federal

and the state procurement requirements. Where the federal and the state law conflict the stricter requirements must be followed (Healy & Perry, 2018).

1.1.2 Regional perspective of procurement regulatory compliance level in public institutions

In state institution in creating nations, open acquirement is picking up confidence as a necessary part in administration conveyance as per (Basheka & Bisangabasaija, 2017), and it represents a major degree of total consumption. For instance, public acquirement represents 60% of the aggregate spending plan in Kenya (Akech, 2015), 40% in Malawi, 58% in Angola and 70% of Uganda open use (Wittig, 2017). This is enormous when contrasted with a worldwide normal of 12-20 % (Froystad, 2016). Because of the extensive measure of cash engaged with government obtainment and the way that such cash originates from the citizens, there is interest for responsibility and straight forwardness (Hui *et al.*, 2017).

The genuine obstruction regardless, has been insufficient authoritative consistence level (De Boer, 2017), Telgen *et al.* (2017), acquisition authoritative insubordination issue impacts the immature countries just as countries in the European Union (Onyinkwa, 2015). In Uganda, a progression of acquirement changes and rebuilding that began in 1997, delivered the assertion of the Public Procurement and Disposal of Public Assets Act 2000, and course, 2003. Shockingly, different association organizations and affiliations have from now on neglected to watch recommended procurement regulations and practices (Agaba & Shipman, 2017).

Obtaining reviews did by the Public Procurement and Oversight Authority, uncovered that out of 322 arrangements examined only 7 (2%) were studied and ensured as unsurprising (Public Procurement and Oversight Authority, 2016). Other moderate acquisition checks show that consistence level in open securing in Uganda is at this point lacking and requiring (Public Procurement and Disposal Act consistence reports, 2016). This is additionally supported by the African Peer Review Mechanism Country Review Report (2017), which uncovers that obtainment rebelliousness is high in Uganda. Regardless of this evident, of low open obtainment consistence level, next to no effort has been put on clarifying

rebelliousness with open acquisition directions in Uganda (Eyaa & Oluka, 2017).

In Tanzania, the Public Procurement Act No 3 of 2001 and in light of the fact that, Tanzania presents an exhaustive coverage of all regulatory compliance level aspects crucial to public procurements including public schools (Engkinga, 2016). The government through education ministry, in South Africa has formulated a fundamental financial manual for public education institution. This provides the regulations that should be strictly observed by all schools in their procurement system (Western Cape Education Department report, 2016).

Based on the aforementioned information it is evident that governments all over the world are focusing towards ensuring that there is effective, efficient and transparent procurement process in their public institutions including schools so that they can obtain value for their money (De Boer,2017). It is from this background that I found it necessary to establish the antecedents of procurement regulatory compliance level in public universities in Kenya which will be the basis of future decision making in streamlining procurements in public sectors.

1.1.3 Local perspective of Procurement regulatory Compliance level in Kenya public institutions

Consistence level reviews and checks are viewed as worth expansion excessive for profiling and uncovering executed exercises but rather essentially and preferably by being proactive, distinguishing illustrations learnt and dispersing best practice(Mapesa, 2016).Further the consistence level checks and reviews affect the manner in which establishments and staffs in the public assistance execute their obligations and obligations to individuals who are eventually the clients and advantageously of a given system,(Mapesa, 2016).

Empirical studies by woolf (2015), Namusonge (2016), Manasseh (2017) have agreed that compliance level review is viewed as powerful in the event that it accomplishes the planned reason for supporting great administration and successful responsibility in the administration of public assets. This is just genuine whenever done, opportune, with insignificant expense, and creates quality reports with clear

control holes and proposals, cures and not to be done in a non-reasonable way. Such consistence level reviews ought to likewise deliver obstruction measures to misrepresentation.

1.14 Public Universities in Kenya

University training is a standout amongst the most quickly extending sub-segment of the Education areas in Kenya (Ministry of Education, 2018). The desire for university preparing has continued to extend with various students of the individuals who can't put resources into Kenyan Universities searching for affirmation in colleges abroad (Commission of University Education, 2018). The quantity of understudies enlistment in the college over the most recent 14 years has considerably expanded, the enlistment developed from 30,000 of every 2005 to north of 100,000 understudies in 2018 (Basic training Act, 2019). The goal of the Ministry of Education Act (2015), is arrangement, advancement, and coordination of long haul instruction, preparing, innovative work, for reasonable turn of events. From, 2003 the public authority of Kenya, presented different changes in training area including foundation of free essential instruction, for every single Kenyan youngster. In, 2006 saw the Government of Kenya, through the Ministry of Education consistently increment its help to the state funded colleges and further asset consumption for the improvement to guarantee manageability. Thusly, starting around 2005 the Government of Kenya has been hoisting various specialized schools to college status to oblige the developing enlistment (Ministry of Education, 2017).

1.2 Statement of the Problem

Public acquirement in Kenya is facing a lot of challenges today and it represents 60% of the aggregate spending plan in Kenya (Akech, 2015). Public procurement assumes a key job in the age of nation riches as it represents around 60% of most nations GDPs (Akech, 2015). With the end goal to enhance administration of open acquirement tasks, numerous nations concocted changes activities in the most recent years of the twentieth century (Agaba & Shipman, 2017; Eyaaet al., 2016).

Ethics and Anti-Corruption Commission (2016) bears witness in that everyone part free over Kshs. 8 billion yearly because of low consistence levels with acquisition essentials. Notwithstanding, as shown by the Ethics and Anti-Corruption Commission (2018) report, government lost over Ksh. 23 billion through scorned securing undertakings with the Ministry of Education representing 45% of the nitty gritty cases. Public Procurement and Oversight Authority report (2017) note that obtained products and sevices in the public area was under 30% consistence level with the Ministry of Education addressing 10% under the Ministries of Youth and Gender at 15% and Ministry of Transport at 20%. Njeru *et al.* (2016) believes that low consistence levels in by and large talking obtaining practices in most state supported schools in Kenya adds to a deficiency of over Kshs.80 million yearly and this has stayed generally unaltered starting around 2006.

Concentrates on drove on acquirement consistence level in the public area join, Gelderman *et al.* (2017), Onyinkwa *et al.* (2016), Getuno *et al.* (2015). Be that as it may, none explains why the changes began way back in the latest ten years of the 20th century have forgotten to pay and arise (Migosi *et al.*, 2015). Odhiambo and Kamau (2015) suggest that adverse consequences on changes may be explained, somewhat, by the going with forerunners of obtaining consistence level, shortfall of mastery, lacking data and correspondence innovation, helpless top administration support, needing acquirement moral norms and weak use of the current hierarchical culture. This concentrate consequently was embraced to fill this gap, in response to emerging global disruptions in supply chains by the highly infectious Covid-19 that is ravaging the whole universe (KEMRI, 2021).

1.3 Objectives of the study

The study had the following research objectives obtained from past empirical studies.

1.3.1 General Objective

To find out the antecedents of procurement regulatory compliance level in public universities in Kenya.

1.3.2 Specific Objectives

- i. To determine the influence of procurement expertise on procurement regulatory compliance level in public universities in Kenya.
- ii. To establish the influence of information and communication technology on procurement regulatory compliance level in public universities in Kenya.
- iii. To determine the influence of procurement ethical standards on procurement regulatory compliance level in public universities in Kenya.
- iv. To establish the influence of top management support on procurement regulatory compliance level in public universities in Kenya.
- v. To find out the moderating effect of organizational culture on the antecedents of procurement regulatory compliance level in public universities in Kenya.

1.4 Research Hypotheses

The following research hypotheses were formulated and tested

- H₀₁:** There is no significant relationship between procurement expertise and procurement regulatory compliance level in public universities in Kenya.
- H₀₂:** There is no significant relationship between information and communication technology and procurement regulatory compliance level in public universities in Kenya.
- H₀₃:** There is no significant relationship between procurement ethical standards and procurement regulatory compliance level in public universities in Kenya.
- H₀₄:** There is no significant relationship between top management support and procurement regulatory compliance level in public universities in Kenya.
- H₀₅:** There is no significant moderating effect of organizational culture on the antecedents of procurement regulatory compliance level in public universities in Kenya.

1.5 Justification of the study

Amayi and Ngugi (2014) asserts that huge losses of public funds through integrity failures in Procuring entities has led to a nose dive in public trust and dedication on the nature of foundation administrations advertised. Robert (2013) takes note of that obtaining regulatory consistence with the present Public Procurement and Disposal Act principles and direction may reestablish open certainty and is significantly felt in the accompanying gatherings.

1.5.1 Management in Public Universities

The findings of this study are useful in influencing decision making in the areas of acquisition in state funded universities with the thought process of guaranteeing that consistence level with Public Procurement and Disposal Act, 2005 is tended to decisively. The discoveries might impact strategy making on the administration of different organizations of learning.

1.5.2 Republic of Kenya

The realization of the country vision 2030 depends on how effectively and efficiently loss of funds through corrupt deals will be sealed seamlessly by finding mitigations and addressing weaknesses identified. Specifically Open Procurement and Oversight Authority may be impelled to finish securing reviews to each open foundation. The disclosures of the investigation will benefit the lawmaking body of Kenya in executing the Public Procurement and Disposal Act.

1.5.3 Researchers and Academicians

This study is useful to researchers as a basis for further look into. The discoveries of this examination might be valuable as far as benefiting writing survey as it adds to the assortment of existing information on hypothesis and sustainable procurement practices. The findings offer room for extrapolation to further studies where scholars and researchers can add more knowledge in acquirement administration consistence level in state funded colleges in Kenya as well in different settings. The discoveries will give premise of giving further wells of information to hypothesis, practice and

examination.

1.6 Scope of the study

The focus of this study was on the antecedents of procurement regulatory compliance level in public universities in Kenya. The research investigated four independent variables namely, procurement expertise, information and communication technology, procurement ethical standards and top management support, and one dependent variable, public procurement regulatory compliance level in public universities in Kenya with organizational culture as the moderating variable. State funded universities has gigantic spending plan with a major effect to the economy given that they represent the biggest bit of the 149 state corporations in Kenya. Those variables that informed the research objectives are the primary antecedents of acquisition administrative compliance level out in the public sector in developing countries.

There are numerous different antecedents of procurement administrative Limitations to the study because of the classification of the sensitive data being looked for by the examination, the study encountered the absence of eagerness by the respondents to provide the relevant data. Also, the institutions were found to have severe policy limitations to maintain secrecy. The study, however, provided the respondents with an introduction letter got from the college and an accreditation letter from the National Council for Science Technology and Innovation (NACOSTI) so as to keep away from doubt and empower the administration/s to reveal the data that is looked for consistence level in public areas however the review zeroed in on the significant predecessors as it were. The review designated 333 acquisition staffs working in 31 state funded colleges in Kenya. Acquisition staffs are associated with carrying out and executing acquirement choices and along these lines have wanted information and specialized abilities on the precursors of obtainment administrative consistence level. Jomo Kenyatta University was utilized as a pilot study, for it is known to be the principal college in Kenya to offer post alumni programs in acquirement and coordinated operations courses consequently the establishment has broad admittance to information and specialists. This study covered acquisition

administrative consistence level in state funded colleges in Kenya throughout a period of five years from 2017-2021.

1.7 Limitations of the study

Limitation faced was fear of some respondents in giving confidential information about their institutions thinking that it may be used against them. The researcher overcame this by assuring the respondents that the information gathered is purely for academic purposes and produced an introductory letter from the university as well as an accreditation letter from the National Council for Science Technology and Innovation to empower them provide the relevant data sought.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section presents the investigation by giving a survey of the review of hypothetical writing through relevant theories related to the study conceptual framework, empirical literature, critique of existing literature emanating from the empirical literature, summary of literature review and research gaps envisaged.

2.2 Theoretical Review

Neuman (2016) defines a theory as a system of interconnected ideas that condense and organize knowledge about the world. Theoretical review refers to putting forward opinions of theories to give good understanding of previous research work and help to identify and analyze important factors and relationships within envisaged situations (Simons, 2015). Defee *et al.* (2014), a great research paper ought to be grounded on a basic level (Mentzer *et al.*, 2015). This examination was founded on the Skills hypothesis, The Convergence hypothesis, Principal-Agency hypothesis, Ethical climate hypothesis, and Legitimacy hypothesis which has their roots in Procurement and supply chain performance (Croom & Brandon, 2017).

2.2.1 Skills Theory

It was postulated by Robert Katz (1955), to investigate the variable, procurement expertise. The study adopted the Skill theory since it was considered relevant in understanding the impact of acquirement ability of staffs on execution of acquisition guideline in state funded colleges in Kenya and hence provided the theoretical background for this study. The finding corroborates with Harvard Business Review article (2017), which observed that professional expertise are quite different from traits/qualities of leaders. Expertise are what leaders can accomplish, whereas traits are who leaders are such as their innate characteristics, as echoed by (Millerson *et al.*, 2017). Leadership skills or expertise are defined as the ability to use one knowledge and competencies to accomplish a set of goals or objectives (Dobler &

Burt, 2017).

This leadership expertise can be acquired and leaders can be trained to develop them. Skills theorists sought to discover the skills and abilities that made leaders effective. Similar to trait theory, skills theories are leader-centric, focused on what characteristics make leaders more powerful. The two essential speculations to create from an aptitudes approach were Katz's three-ability approach and Mumford's abilities model of initiative (Yang, Lu, Haider & Marlow, 2017). The three-ability approach contended that powerful and able initiative required three masteries. Technical expertise refers to proficiency in a specific activity or type of work.

Human expertise refers to being able to work with people and conceptual expertise refers to the ability to work with broad concepts and ideas (Wanyama, 2017). The three-skill approach concurs that, while all expertise were important for leaders, their level of importance varies contingent upon the levels of authoritative of pioneers which incorporate key, strategic and operational. As pioneers travel through the levels of the organization (from lower to upper), expertise importance moves from technical to human to conceptual (Miles, Huberman & Saldaña, 2018).

Procurement required by obtainment proficient have changed because of the job move of the acquisition work itself (Daniel, 2016). The job has transformed from that of a purchaser to that of an expert supervisor directing long term, key and complex understanding between inward partners and providers (Carr & Smeltzer, 2016). Subsequently, acquisition experts require an unpredictable arrangement of administrative and specialized proficient ability. These job shifts influence experts in focal and neighborhood government frameworks and in addition those in people in general and private area situations. For acquisition to be at a vital level, obtaining experts need to represents an arrangement of skill, capacities and capabilities (Burkus, 2018; Carr & Smeltzer, 2016). Skills theory supported the variable procurement expertise because it seeks to discover the five components that make leaders more effective and proficient in a specific activity (competencies, career experiences, individual attributes, outcomes and environmental influences) or type of work. This theory therefore, strongly and instrumentally informs the link between

procurement expertise and regulatory compliance level in public universities in Kenya.

2.2.2 The Convergence Theory.

Convergence theory was formulated by Clark Kerr (1959). It is also known as catch-up effect and also, states that as countries travel from the earliest starting point phases of industrialization to very industrialized countries, the equivalent societal examples will develop, in the end making a worldwide culture. Assembly scholars have guessed that as countries create, they combined or to build up specific qualities or attributes of other created countries. They trust that we are entering a period in which most countries will be industrialized, associated, and have comparative culture (Bayton & Choi, 2017). Promoters of combination hypothesis, for example, Andrei Sakharov, a Russian nonconformist pushed the improvement of intermingling hypothesis as an approach to diminish strains between Russia and United states.

The combination hypothesis is viewed as significant in understanding the impact of Information and correspondence innovation on acquirement administrative consistence in broad daylight establishments in Kenya since it looks at the connection between monetary improvement and society change. The zone of data and correspondence Technology, and its interaction with social changes on organizational, individual and societal levels has, in the 21st century attracted increasing attention, due to the depth also, wide utilization of Information and correspondence innovation. The attention on Information and correspondence innovation (Trionfetti, 2015).

The attention on Information and correspondence innovation related disciplines has zeroed in to an extreme degree a lot on the innovation push as opposed to human necessities additionally, requirements of the progression, show and use of Information and correspondence advancement (Defee *et al.*, 2014; Taylor, 2017). This speculation upheld the variable Information and Communication Technology since Technology lead us to make arranges in which we are penniless upon others for our survivor as a country, establishment or association. This

hypothesis accordingly, illuminates the connection among data and correspondence innovation and administrative consistence level in state funded colleges in Kenya.

2.2.3 Ethical Climate Theory

This theory was first proposed by Bentham (1748). The theory has been useful in increasing our knowledge on a variety of organizational outcomes such as workplace bullying, organization commitment, ethical behavior, job satisfaction, and turnover intentions (Guy, 2016). Ethical climate theory plays a critical role in understanding the operations of organizations. Ethical climate is the shared perceptions of what is ethically correct behavior and how ethical issues should be handled (Victor & Cullen, 2017). Ethical climate has the potential to influence rule bending by acting as an informal code of conduct that guides the decision to follow or bend rules. Depending on the behavior perceived as ethically correct, ethical climates may vary in the extent to which they favor rule bending versus rule following (Eyaa *et al.*, 2016).

Wee *et al.* (2016), opine that ethical climate theory characterizes how ethical decisions should be made within an organization according to employee perception of the norm. While ethics vary from person to person, they can be influenced by one environment. Thought of differently, an ethical climate is a way of labeling the ethics of an association. Managers have an extensive variety of intentions past a straightforward self-intrigue, for example, accomplishment, acknowledgment and obligation needs, inherent fulfillment and delight of effective execution, regard to power, class, and work morals. Committed, vigorous, and moral workers are in every case hard to discover, and procuring people with these exceptional capacities is even difficult (Ian, Riley & Cayer, 2016). The need to instruct experts and outfit them with higher-level of moral norms get, consequently urgent (Sauber *et al.*, 2017). This theory supported the variable procurement ethical standards as it gives an analyses of ethical climate perceptions and individual level work outcomes. This theory therefore, informs the link between procurement ethical standards and regulatory compliance level in public universities in Kenya.

2.2.4 Principal-Agent Theory

Ross and Mitnick (1973) put forward the agency theory also called principal-agent theory. The researchers places that the chief representatives works to his agent,(procurement director) through common participation to follow up for his sake (Zubcic & Sims, 2014).In this case, two potential objectives struggle are probably going to occur, that of organization issue and hazard sharing issue, as each party pulls to its personal matters (Xingxing & Kaynak,2017). In our unique situation, Supply chain officials what is more, securing chiefs without trying to hide division expect the expert work for the governing body and the affiliation accomplices (Transparency International, 2017).The principal administrator speculation is an association show created by market analysts that game plans with conditions in which the fundamental is ready to affect the trained professional, to do a couple of activities to the premier benefit, but not actually the administrator (Health & Norman, 2017).

Donahue (2018) explains that securing chiefs including all creation network officials, stressed over open acquisition should expect the administrator work for their supervisors. As alluded to by Tom (2017), obtaining managerial insubordination might show an essential expert issue (Langevoort, 2017). The Public Procurement and Disposal Act (2005) gives the obligation of consistence with obtaining legitimate framework on the accounting officials of the Public Entity (Getuno *et al.*, 2015). Davis *et al.* (2016) attests that head/specialist relationship is one among the possible perils by which obtaining chiefs express their absence of worry towards fundamentals leaned toward results or regardless supplanting of the key's inclinations that then, at that point, results into rebelliousness.

The postulators of association theory ground their conflicts totally on the monetary issues elements of the model in exploring the connection between firm directors and firm owners (Arrowsmith, 2015; Davis & Canes, 2017). This speculation will help us with researching the effect of best organization reinforce transparently the obtainment consistence level as securing chairmen is seen as administrators for the affiliation along these lines the theory upholds the variable top administration

support in that it is underlying the suspicion that in procurement work, the issue is one of picking a legitimate structure that will convey lead by the administrator unsurprising with the Manager tendencies. This hypothesis consequently, illuminates the connection between top administration support and administrative consistence level in state funded colleges in Kenya.

2.2.5 Bureaucracy theory

The Bureaucracy theory developed by Max Weber argues that the most efficient way that human activity can be organized is through hierarchies commonly known as bureaucracy. Further, bureaucracy consists of three precepts: hierarchical advisory, employment specialization and the formal guidelines and regulation (Marx, 1970; Lipsky, 2010). That is, a bureaucratic organization is the one that has a hierarchy of authority, specialized work force, standardized principles, rules and regulations, trained administrative personnel, etc. (Ferdous, 2017). It is one of the organizational Theories which presents a set of interrelated concepts, definitions that explain the behavior of individuals or groups or subgroups, who interacts with each other to perform the activities intended towards the accomplishment of a common goal. It studies the social relationships between the individuals within the organization along with their actions on the organization as a whole. As per the bureaucracy theory, structure, motivation, employee commitment and standardized principles help in improving the efficiency of the operations of the organization towards its success (Isa *et al.*, 2016).

This theory therefore, strongly and instrumentally informs the link between organizational culture and regulatory compliance level in public universities in Kenya. In essence, organizational culture is made up of a system of shared assumptions, beliefs, and values that governs how people in organizations behave and act (Vasyakin *et al.*, 2016). In organizations, shared values and beliefs that evolve over time strongly influence how members function and perform their duties and tasks in the organization. The above are in line with the principles of the bureaucracy theory. Therefore, an organization with optimized organizational culture, develops and maintains a specific unique culture that acts as a guide and molds the

behaviour and roles of the members of the organization.

2.5.6 Legitimacy Theory

Dowling and Pfeffer (1975) developed Legitimacy theory. As echoed by, Wilmshurst and Frost (2016), legitimacy hypothesis declares that the acquisition chief is in charge of uncovering the association practices to the partners, particularly to people in general and legitimize its reality inside the limits of society. This hypothesis, which centers around the store network relationship and collaboration between an association and the general public, gives an adequate and predominant focal point for understanding government acquisition framework (Hui *et al.*, 2017). From this hypothesis, the apparent procurement regulatory compliance level might be achievable in all public and private institutions.

Legitimacy is a generalized perception and assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions (Saunders, 2017). Legitimacy theory has been received by various scientists as of late (Kiarie & Wainaina, 2017). The hypothesis is some of the time alluded to as frameworks arranged hypothesis, where in a frameworks based viewpoint, the substance is thought to be affected by and thus to have impact upon the general public in which it operates (Lagat *et al.*, 2016).

Legitimacy theory on procurement compliance level with regulations and policies is considered to constitute a strategy to influence the organization relations with other parties it interacts with (Wanyama, 2017). Inversely, public procurement can be influenced by the society in which it operates. Clearly, this brings out a symbiotic relationship. Public procurement has to be open and transparent to avoid loopholes associated with corruption (Ethics and Anti-corruption Commission, 2018). Corruption in procurement is induced by opaque and unaccountable regulations (Akech, 2015). Corruption in broad daylight acquisition in Kenya in the previous years was encouraged by lacking straight forwardness in obtainment process, the applicable procedures and regulations were deliberately made inaccessible to the public, (Public Procurement and Oversight Authority, 2017).

In every society, individual action influences another and this clarifies why a few laws and directions set up to control the acquisition work are now and again come guaranteed (Odhiambo & Kamau, 2015). Lindblom (2016) addresses four blueprints that an association can build up to get and hold authenticity. These incorporate, endeavoring to instruct and advise its pertinent publics about the adjustments in the association execution and exercises, attempting to change the

impression of the important publics, purposing to control acknowledgment by possessing thought from the issue of stress to other related issues through an intrigue to emotive images and endeavoring to change outer desires for its performance (Getuno *et al.*, 2015). Public procurement and disposal Act (2014) area 39 has an arrangement for inclinations and reservations especially for bidders from minority bunches in the general public, for example, nearby bidders, the adolescent, ladies and people living with incapacities (Getuno *et al.*, 2015).

This can be interpreted to mean skewed discrimination for the most disadvantaged members of the society and the long-term impact associated with the expected earnings from the contracts awarded (Thuo & Njeru, 2016). This theory supported the variable, procurement regulatory compliance level since it is strongly anchored on laws, policies and regulations governing the interactions between organizations and societies (Staples *et al.*, 2017).

2.3 Conceptual Framework

Conceptual framework structure is a compact portrayal of the marvel under investigation joined by a graphical or visual delineation of the significant factors of the examination (Mugenda, 2013). Chakraborty (2017), characterizes a conceptual framework system as a diagrammatical portrayal that demonstrates the connection between independent variables and dependent variable. In the examination, the conceptual framework will cover the antecedents of procurement regulatory compliance level in public universities in Kenya.

Based on the analysis of the above theories, it becomes clear to extract the independent, moderating and resulting dependent variables. Figure 2.1 presents a

conceptual framework deemed fit for this study. This conceptual framework has been adopted from a study referred to as Fighting Corruption in Tactical Procurement (Chakraborty, 2017).

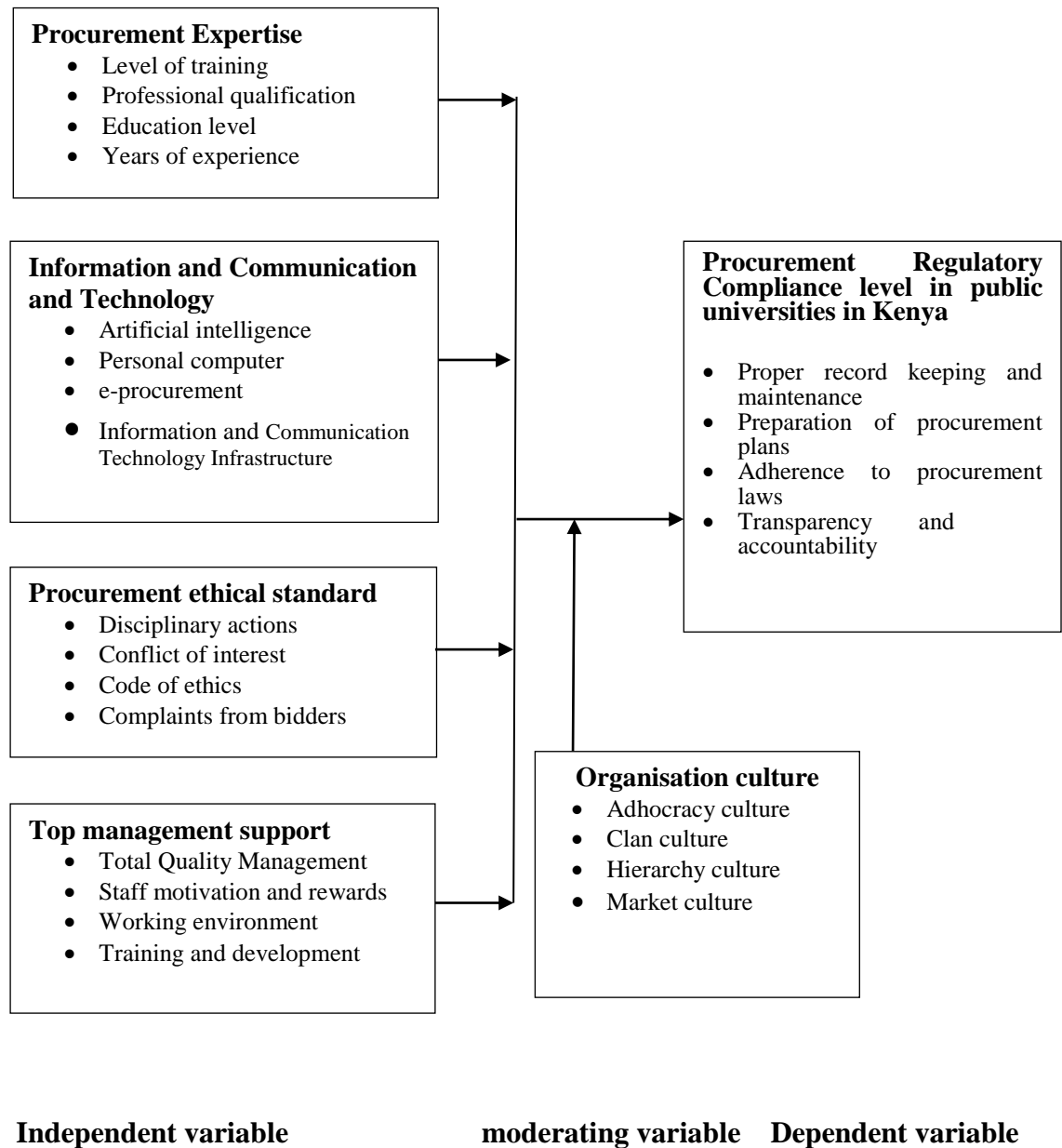


Figure 2.1: Conceptual Framework

2.4 Empirical Review

2.4.1 Procurement Expertise

Procurement regulations ascertain that procurement professionals are equipped with appropriate training so as to serve effectively and efficiently in procurement, as cited by a (Public Procurement and Oversight Authority, 2017). Procurement staffs have two major tasks namely, making sure that their organization comply with rules and regulations guiding procurement practices and participate in procurement activities of their agencies according to the approved budgets (Obanda, 2017). As cited by Lysons and Farrington (2016) procurement expertise is a necessary requisite in procurement as it influences making the right and strategic purchasing decision with confidence and within a short time.

A study by Public Procurement and Oversight Authority (2014) found a scaring deficit in procurement expertise in most public entities despite sound strides for building up an expert acquisition workforce (Onyinkwa, Charles & Iravo, 2015). Njeru (2015), takes note of that acquisition procedure has been debilitated by the general absence of acquirement learning. Public procurement still undergoes fraud and misconduct, in spite of the intense procurement reforms rolled by the government (Ethics and Anti-Corruption Commission, 2017).

Ethics and Anti-Corruption Commission (2016) study revealed that procurement officials' flouts purchasing rules and regulations in order to limit the contribution of intrigued firms in acquirement. The examination likewise revealed that fleeting preparing and workshops on acquisition aptitude were deficient in spite of the fact that it was noticed that Public Procurement and Oversight Authority was on a strong campaign to sensitize PEs to facilitate workshops and seminars for purchasing officers (Ethics and Anti-Corruption Commission, 2016).

2.4.2 Information and Communication Technology

Information and communication technology is an umbrella term which is collective for all hardware's, software's and networks used in the company and realized

through its integrated use in the various core and support function of an organization as well as with the external business partners (Dobler *et al.*, 2017). It involves the development, maintenance and use of computer systems, software's and networks for the processing and distribution of data (Nderui & Were, 2016). It gives a strong job to human exercises to improve authoritative or individual productivity and viability in acquirement work (Cohen *et al.*, 2016). Information and Communication Technology help with facilitating exercises quicker, bolster independent basic leadership forms and empower distributive activities with the end goal to accomplish higher acquisition efficiency, (Faber *et al.*, 2017).

Majority of procurement specialists experience shortage of general information about procurement regulatory compliance, principles, framework, procedures and procurement process, Public Procurement and Oversight Authority (2017). The use of Information and Communication Technology in public procurement has not fully been implemented since most of the procurement functions are subjected to manual procedures prone to manipulations by procurement managers (Shale, Iravo & Guyo, 2014).

2.4.3 Procurement ethical standards

Unethical behavior exhibited by procurement professionals can have a damaging effect on acquirement execution, aggressiveness and additionally consistence (Hui *et al.*, 2017). The view is likewise validated by Saini (2017) who opines those morals are for all procurement staffs and obligatory in consistence to open acquirement controls. Hunja (2017) refers to that preparation on polished skill to people who are occupied with open acquirement is a key in guaranteeing adherence to moral standards. Gelderman *et al.* (2016) concurs that ethical standards plays a huge job in guaranteeing consistence inside open obtainment framework. The contention is likewise held by Basheka and Mugabira (2017) who attests that low compliance levels in the open obtainment frameworks.

The argument is also held by Basheka and Mugabira (2017) who asserts that low compliance levels in public procurement systems is due to inadequate profession ethics among procurement officials. In the same breath, Getuno, Ngugi, Awino and

Ondiek (2015) report that the way toward finding, enlisting and holding submitted, powerful, and moral representatives is a test. The creators express that moral practices is a key fixing in tending to institutional change in broad daylight obtainment and the specialists in this examination trust that procurement ethical standards influences procurement regulatory compliance level but it remains under-researched in our context which is public universities.

2.4.4 Top management support

Hui *et al.* (2017) specifies that appropriate assignment of obligations and obligations is the procedure for advancing responsibility and straightforwardness and gives grounds to the degree of consistence to rules and guidelines relating a specific association and industry in general. Rossi (2017) declares that conventional commitments ought to at first be described clearly, settled upon, and associated best down inside and inside a relationship if they are to be fruitful and capable. Open substance with open promise to public acquisition consistence level is revealed by best organization obligation to principled corporate execution (Tom, 2017).

As alluded to by Geo (2017) consistence culture in an affiliation should start in the gathering room and should be reflected, vested and affirm in leaders have practices and mindsets In a connected report Obanda (2016) tended to that versatile institutional help by high levels the executives is needed by acquirement workers to invigorate genuineness, trustworthiness, screen the public acquisition process and apply obtainment guidelines accurately. To guarantee that successful consistence with obtainment administrative standards is drilled and acquirement rebelliousness are kept away from, customary oversight and organization should be shielded (Odhiambo & Kamau, 2016).

2.4.5 Organizational Culture

Cultural change typically refers to radical versus limited change. It is not easy to achieve; it is a difficult, complicated, demanding effort that can take several years to accomplish. There are three basic types of cultural change (Trice & Beyer, 2011). These are revolutionary and comprehensive efforts to change the culture of the entire

organization, Efforts that are gradual and incremental but nevertheless are designed to cumulate so as to produce a comprehensive reshaping of the entire organizational culture and Efforts confined to radically change specific subcultures or cultural components of the overall differentiated culture (Trice & Beyer, 2011).

Joseph and Kibera (2019) demonstrate that organizational culture has a significant influence on non-market performance and a major source of sustainable competitive advantage in the microfinance industry. Paracha *et al.* (2019) indicate that organizational culture is most important to deliver the higher outcomes. In this modern era of constantly changing environment, organization must ensure higher level of technological resource and external knowledge necessary to develop and nurture the high skilled and competent employees. Muchenje and Sifile (2020) indicate that organization's culture is important since it influences how well the company performs. It also determines the firm's connection with its workers. According to Wierenga and Kamsteeg (2018) culture is learned in a variety of methods, including sharing of information, ideas, norms, and justifications by managers and other individuals living in a specific society at a given period. Personnel of the organization must learn and share the organization's culture.

Therefore, implementing culture change needs people involvement through the key phases; 'unfreezing' existing culture and 'refreezing' the new. Human Resource function needs to be aligned and reinforce recruitment, performance appraisal, career development, recognition and incentives, and compensation mechanisms while examining the challenges of each. Internal communication is also vital in delivering culture change message throughout the organization.

The current study therefore, holds the same principal and seeks to investigate how, organization norms change, HRM and crisis management moderate the relationship between organizational culture and procurement regulatory compliance level in public universities in Kenya.

2.4.6 Procurement regulatory compliance level

Implementation is seen as any moves made by controllers to guarantee consistence (Zubic & Sims, 2014). Viable arrangement making requires data whether open divisions are doing things right and whether they accomplish the outcomes proposed (Basheka & Mugabira, 2017). Solid observing and assessment frameworks give the way to incorporate and coordinate this profitable data into strategy cycle, consequently giving the premise to sound administration and responsible public arrangements.

Deficient checking and assessment are connected to the nonattendance or poor nearness of a control situation, and government elements are set in a troublesome position to offer impact to or execute procurement as required by law (Imperato, 2015). There is absence of legitimate checking and assessment as required (Geo, 2017). Thus, deviation or resistance goes undetected or is recognized sometime later by low compliance level. There are blended conclusions with respect to the impact of requirement on compliance level, Arrowsmith (2015), contends that authorization may make violators more modern in how to avert, and hide identification by the authority. Be that as it may, Imperato (2015) concurs that authorization enhances compliance level. As indicated by Zubic and Sims (2014), requirement activity and expanded punishments prompt more prominent dimensions of compliance with laws.

Low compliance levels among government procurement authorities in developing nations has been connected to a powerless implementation of the standard of law (Raymond, 2008). In nations with complaints and survey instruments, bidders are permitted to check whether the obtainment forms adjust to the endorsed methods. The likelihood of survey is likewise a solid impetus for procurement authorities to comply with the guidelines (Hui *et al.*, 2017). Collier (2013), authorization has a more noteworthy administrative effect past the violators and reminds staffs and others associated with procurement duties of the dangers appended to an inability to satisfy those obligations. Imperato (2015) likewise notes that requirement activity going for guaranteeing high compliance level assumes an essential job in procurement administration.

Execution of authoritative exercises is hierarchical. One approach to clarify the impact on execution of hierarchical exercises is the foremost organization hypothesis. Government delegates specialist to the state funded universities, the chiefs thus delegate the expert to the procurement staffs who executes obtainment capacities (Eyaa & Oluka, 2016).

2.5 Critique of the literature review

A study by Tadeo, Karuhanga and Mukokoma (2017) on causes and outcomes of public acquirement compliance and resistance conduct in Local legislature of Uganda particularly looked to discover the reasons for obtainment rebelliousness and consistence conduct. They formulated a conceptualization of the causes and consequences of low compliance level and non-compliance behavior in public procurement. They included, Procurement expertise, information and communication technology, procurement ethical standards and top management support as causes. While cognitive dissonance delivery was identified as consequences. However this study was basically theoretical and did not empirically test the factors. The examination discovered that data and correspondence innovation was the most critical variable in deciding acquisition administrative consistence level.

2.5.1 Procurement Expertise and procurement regulatory compliance level

A study by Raymond (2018) in USA Health sector asserts that lack of procurement expertise and ethics in broad daylight acquisition prompts defilement which eventually blocks consistence level. Procurement officers must be prepared and made mindful of all the Procurement mastery and morals, and directions in connection to obtainment and related methods (Hui *et al.*, 2017). The moral code is not just the hindrance of erroneous conduct yet in addition an empowering agent for all individuals from the association to protect the moral heritage of the firm (Rossi, 2017).

A work team that is not satisfactorily taught in procurement matters will prompt hindering results including rupture of the set of principles (victor, 2015).

Demonstrable skill openly acquirement identifies with not just training level and capabilities of the workforce yet in addition to the expert gauges in the lead of business movement (Raymond, 2018). Raymond also that there are around 500,000 expert obtaining individuals in the United States and just about 10% of these are enrolled individuals from expert bodies and the rest over 90% are not in any case mindful that there are moral and legitimate norms associated with acquisition.

2.5.2 Information and communication technology on procurement regulatory compliance level

An examination by Osei, Tutu, Mensah and Ameyaw (2017) in Ghana on the dimension of compliance level with the overall public acquisition Act out in the public sector, uncovered a general compliance dimension of 19.58% and 17.8% in the Ashanti and Brong-Ahafo territories. Discoveries showed facilitate that the general reason for low consistence level with the obtainment

Act was because of absence of infrastructure which limited information and communication sharing as well as low top management support which killed employees' morale as a major factor affecting procurement regulation compliance level (Getuno, Ngugi, Awino & Ondieki, 2015).

It was found that there was extensive overreliance on older and more labor-intensive technologies (Bukhalo, 2017). It was established that due to procurement functions such as advertisement, enterprises spent more money on manual mechanisms than they would on technology and often faced difficulties of high procurement costs (Shale, Iravo & Guyo, 2014). Liu (2016) uncovers that Information and Communication Technology frameworks gives the ability to joint effort and trade of exchanges among authoritative associated with acquirement exercises just as production network capacities.

2.5.3 Procurement ethical standards and procurement regulatory compliance level

An examination by Ojo and Gbadebo (2017), on purposes behind rebelliousness in the acquirement of works in Nigeria referred to unscrupulous practices as a main consideration contributing towards failures in open acquisition administrative resistance in open foundation in Nigeria consequently prompting wasting of public assets through extortion, bias and lavishness. They utilized a surveys and meeting manual for gather information from 100 respondents. As per Mathenge (2017) the current Kenya obtainment the board is lacking of moral tendency and should utilize moral contemplations to re-create itself.

Lagat *et al.* (2016) noticed that the most relentless hindrance to fighting debasement is the way of life of mystery in open acquisition and related government capacities. Unscrupulous conduct in open acquisition, which incorporates irreconcilable situation and defilement, is an issue since they might harm relations inside the acquirement division, the relationship with different offices in the organization, and with providers (Nderui & Were, 2016).

2.5.4 Top management support and procurement regulatory compliance level

A concentrate by Etse, and Asenso-Boakye (2017) completed on the parts influencing consistence level with individuals overall obtainment law in Ghana set up that feeble best organization reinforce in securing system has a quantifiably basic impact on consistence level. It likewise found that helpless record organization practices impact acquisition capability in relationship in a manner of speaking. The examination endorses that the organization's acceptable controls should be set up by show of helping strong best organization reinforce and having set up a data organization programming for regulating records in touch with these the two internal and outside accomplices should be related with the electronic data programming for Transparency and adequacy.

The supervisor job in making and coordinating innovative conduct is vital. Essentially, supervisors can give offices and activate hierarchical asset to accomplish

undeniable degree of authoritative execution (Were, 2017). Supervisors can address various styles which include a quick adaption and acknowledgment of representatives significant conclusions, advocating thoughts, people groups affirmation to do and finish forward thoughts, giving important assets, or presenting business in various angles like habits, methods and cycles in the firm (Antoncic & Hisrich, 2016).

2.5.5 Organizational culture and procurement regulatory compliance level

Vasyakin *et al.* (2016) conducted an analysis on the influence of organizational culture on performance of higher education institutions (Plekhanov Russian University of Economics). The study focused on the students' involvement in this culture and used survey methodology. The study concluded that, in the students' opinion, a hierarchy culture prevails at the university and that the students potentially expect some changes in the style of that organizational culture; it should be pointed out that this piece of diagnostics sets the direction for further development in terms of which the progress of the university's organizational culture will have to be consistently adjusted and stimulated.

Ndumbi and Okello (2015) investigated the effect of staff training (as a factor of organizational culture) on compliance to PPADR 2005. Descriptive research design was used where all staff members at KenGen's procurement department were targeted by use of a census (via structured questionnaires). The study established a positive significant relationship between staff training and the level of compliance to PPADR. The study concluded that staff training influences compliance to PPADR.

According to Mwangi (2017) who studied the determinants of consistence with admittance to government acquisition open doors guidelines for extraordinary gatherings by state funded colleges in Kenya, culture assumes a focal part in the consistence interaction and related results. Nonetheless, culture can be an impediment to changes it is likewise fought that a particular kind of culture, portrayed by explicit qualities, for example, transparency, trust and genuineness can influence consistence. Moreover, representatives are bound to participate in consistence practices, which on the whole will add to hierarchical consistence. The

concentrate additionally demonstrated that consciousness of the idea of public hierarchical culture is imperative in clarifying and surveying the suitability and result of the current change process.

Chogo *et al.* (2016) sought to investigate the effect of organizational culture as a factor influencing acquisition low consistency in Public Secondary Schools in Kenya. The audit used quantitative audit plan where portrayed and fundamental sporadic looking at was used to accumulate fundamental data from 70 respondents using gatherings and reviews. The audit deduced that organizational Culture, in a general sense impacts acquisition regulation consistency in the public assistant schools in Kwale County. Basing on the contending esteems model (various leveled culture), which includes the implementation of rules, congruity and thoughtfulness regarding specialized issues, individual similarity and consistency are accomplished through requirement of previously expressed guidelines and methodology. Thus, a particular kind of culture, described by explicit qualities, for example, receptiveness, trust and trustworthiness lead to representatives being bound to participate in consistency practices, which on the whole will add to organizational consistency.

Adil *et al.* (2019) investigated the moderating effect of organizational culture in the relationship between strategic alliance and organizational performance, by adopting the positivism approach using 100 respondents, and through PLS-model fitness test analysis, discovered that the connection between essential coalition and authoritative execution is significant and positive.

Cho and Khoe (2018) examined the moderating effects of organizational culture on the relationship among open information innovation, strategic alliance and export performance of SMEs. The study empirically analyzed six hypotheses in 201 sample using the PLS (Partial Least Square) of the structural equation model to verify the moderating effects of organizational culture on the relationship among open information innovation, strategic alliance and export performance. As a result, external technology acquisition does not affect strategic alliances. On the other hand, external technology exploitation has a positive impact on strategic alliances. Strategic alliances also have a positive impact on export performance. As a result of

the moderating effect analysis, the interaction between organizational culture and external technology acquisition has positively influenced strategic alliances. In addition, the moderating effect of organizational culture and external technology exploitation has a significant effect on strategic alliances. However, moderating effect of organizational culture and strategic alliance does not affect export performance.

2.5.6 Procurement regulatory compliance level

According to a study by Price Water House Coopers (2016), over 50% of public entities in Kenya do not comply with procurement regulations and this has created corruption loopholes and other malpractices on procurement processes. According to Public Procurement and Oversight Authority (2016), the current public obtaining structure in Kenya has actually been invigorated of respects.

With the underpinning of the Public Procurement and Disposal Act and Regulations, Kenya today has set up a sound and clearing lawful system for public securing with a reasonable different evened out capacity. The Public Procurement and Disposal Act unquestionably builds up the procuring techniques to be connected, publicizing tenets and time constrains, the substance of delicate records and specialized determinations, delicate assessment and grant criteria, methodology for accommodation, receipt and opening of tenders, and the protests framework structure and arrangement.

2.6 Summary of the literature reviewed

A research study carried by Onyinkwa (2016) on the environmental components affecting compliance level of acquisition controls in open auxiliary schools in Nyamache sub-county. The consider zeroed in on three variables, work ethics in the open securing act, acquisition data and correspondence innovation and sheets help as components respected to affect consistence level of acquisition bearings out in the government funded schools in Nyamache sub-locale. The example included 15 public schools in the sub-area. The examination was guided by research addresses dependent on the factors aforementioned. Information was gathered by utilization of

questionnaires.

The unwavering quality of research instruments was tried utilizing test-retest method and approved by specialists in scholarly research. Stratified arbitrary testing and was utilized to choose the sample size of 130 respondents. From the exploration discoveries, it was reasoned that morals, mindfulness and preparing impacts the obtainment directions consistence level out in the open optional schools. The accompanying proposals were made, it is imperative to offer morals instruction to class offering board of trustee individuals with the end goal to guarantee they serve in extreme objectivity, responsibility, and non-segregation.

It was additionally prescribed that another exploration ought to be embraced on the accompanying zones, impacts of data and correspondence innovation on administrative consistence level out in the open optional schools, challenges confronting the requirement of open obtainment directions in broad daylight auxiliary schools and difficulties confronting e-acquisition out in the open auxiliary schools some on environmental factor affecting procurement administrative compliance level in public secondary schools, the investigation missed the mark on explaining the degree of impacts from every one of the components under examination.

One similarity between the two studies is that both studies were conducted in education sector. However secondary schools are classified or categorized in Public Procurement and Disposal Regulation as class C and while public universities are class B and in fact some of the universities such as university of Nairobi are in class A. The university has annual budget of over Ksh 10 billion. Public Entities are classified based on the budgetary allocation and ability to spend.

A further departure between the two studies is that while the aforementioned study considered only 15 secondary schools from the same sub-county and a sample size with 130 respondents, the current examination considered 31 state funded colleges with an objective populace of 333 respondents which is a countrywide portrayal. The current investigation was facilitated by use of persons correlation analysis to bring out the influence of each of the components under study which then enables

policy makers to make decisions on resources allocation more prudently.

In a similar study Gelderman *et al.* (2017) looks at non-compliance of European Union tendering directives and further elaborated on a survey study on the impact of these reasons on compliance level with the directives. He points out at four potential reasons for (non-) compliance, the purchaser procurement ethical standards, the perceived procurement expertise, information and communication technology and the expected top management support and readiness of suppliers to take action in case of non-compliance. This study was done in Europe on trade sector however the current study was done in Kenya in the education sector. Furthermore, that research fell short of a better clarification of the example measure. It did not feature whether the example was illustrative of the neighborhood government offices to empower speculation of findings.

Gelderman *et al.* (2017) met 150 acquiring expert's specialists of the Dutch Ministry of Defense to find the explanations behind securing resistance. The disclosures of this think about shown that both buyers obtainment morals and hierarchical administration bolster have a positive, factually critical effect on rebelliousness. Then again, as indicated by this examination wastefulness of the mandates and provider opposition did not impact the consistence with the orders. Major weakness displayed in this study is that it would be very expensive in terms of time and money to interview many interviewees. In the present study, the researcher used 333 questionnaires administered to all procurement staffs in 31 public universities spread across the country.

A study by Robert (2013) notes that in China, many public institutions lack effective procurement policies and this greatly hinders effective execution of maintainable obtainment rehearses. Be that as it may, the review neglected to recommend how associations should plan and execute compelling acquirement strategies for supporting execution of reasonable obtainment rehearses.

2.7 Research Gaps

From the analysis of the literature review on determinants affecting compliance level with procurement regulations in public universities, the researcher identified that there was a need for research on antecedents of procurement regulatory compliance level and how such antecedents impact procurement process. Previous research studies on procurement compliance level restricted their research undertakings on ethical perspective on procurement regulatory compliance level, missing on procurement expertise, information and communication technology, and top management support as other antecedents influencing procurement regulatory compliance level, Akech (2015).

Few studies have been conducted on procurement compliance level in the public sector incorporate in Kenyan public universities. For instance, by Gelderman *et al.* (2017), Onyinkwa *et al.* (2016), Getuno *et al.* (2015). Only few of them clarify why the reforms started way back in the most recent decade of the twentieth century have neglected to pay and emerge (Migosi *et al.*, 2015). Odhiambo and Kamau (2015) recommend that negative effects on reforms might be clarified, to some degree, by the accompanying precursors of acquisition compliance level, absence of expertise, deficient information and communication technology, poor top management support, wanting procurement ethical standards and feeble usage of the current organizational culture.

The point of the general population acquirement and transfer direction is to guarantee an incentive for cash, advance fairness, straightforwardness and non-segregation in broad daylight foundations with the cardinal point of guaranteeing effective use of exchequer subsidize. In any case, investigate contemplates uncovers that even after the approval of the Public Procurement and Disposal Regulation, there are still loses of open subsidizes that can be credited to rebelliousness out in the open acquirement directions (Kimani, 2017).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research design, research philosophy, target population, sampling size and technique, data collection instruments, data collection procedure, pilot study, data analysis and presentation methods. Kothari (2016) defines methodology as a way to systematically solve the research problem. It is a stepwise approach adopted by researcher in studying a specific problem along with the logic behind them (Zinbarg, 2016).

3.2 Research Design

Green and Tull (2017) observe that a research design is the specification of methods and procedures for obtaining the information required. It is the overall operational pattern or framework of the project that stipulates what information is to be collected from which source and by what procedures. The scholars assert that research design is important as it prepares proper framework within which the research work/activity is actually carried out. This research study applied the ex-post facto research design since the research expected to accumulate both quantitative and subjective information that portrayed the nature and qualities of the antecedents of procurement regulatory compliance level in state funded universities in Kenya.

The research thought about this plan fitting since as per Dempsey (2017) it works with towards get-together of dependable information portraying the genuine attributes of the precursors of acquirement administrative consistence level in state funded universities in Kenya. Further, the vital qualities of ex post facto research configuration incorporate the capacity to sum up the enormous populace by utilization of the results so acquired (Cooper and Schindler, 2016). The discoveries acquired from this study was hence summed up. In particular, this study took on the ex-post facto overview research plan. The Ex-post facto plan empowered the researcher to examine cause-and-effect relationship(s) where it was illegal,

impossible, or unethical to manipulate the independent variable(s) (Cohen & Morison, 2017). In this perspective independent and dependent variables was identified within a sample and was drawn from the population of interest, the purpose of which was to search backward from consequent data (dependent variable) to antecedent causes (independent variable or variables). Attribution was based on logical analysis and the accumulated body of evidence (Simon & Goes, 2013).

A strategy for conducting ex-post facto research, is to identify a sample on a given dependent variable for example procurement compliance and then to sort (or divide) the sample into relevant sub-groups, by key independent variables (for example late bids are acceptable, wrong procurement methods, committees recommendations not followed and lack of committees). It may be necessary to match participants or adjust statistically for differences between and among groups as necessary to ensure that the sub-groups are representative of the sample, except on the independent variable(s) of interest (Sharma, 2019).

The casual comparative method or ex post facto method of research seek to establish casual relationships between events and circumstances. In other words, it finds out the causes of certain occurrences or non-occurrences. This was achieved by comparing the circumstances associated with observed effects for examples where the procurement officer recommends the award of contract to a supplier who is not lowest evaluated supplier by comparing the factors present in the instances where a given effect occurs and where it does not occur (where this contractor eventually is awarded the contact at overall price that is more than the most responsive bidder) (Salkind, 2010).

3.2.1 Research Philosophy

A research philosophy is a perspective about research held by a community of researchers that is based on a set of shared perceptions, concepts, values, and practices (Saunders, 2017). More simply, it is an approach to thinking about and doing research (Patton, 2017). The general approach to research philosophy is known as the research paradigm as cited by Kuhn (2016) who also proposed the concept of the paradigm as the overarching set of beliefs a social scientist takes (Crotty, 2017).

A paradigm is the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria (Crotty, 2017). There has been ongoing debate in the literature as to the available number of paradigms. Two broad overarching research paradigms or philosophies are proposed, positivism (quantitative) and interpretive (qualitative). Qualitative researchers have emphasized the need to understand processes at the organizational level and have argued that survey-based methods are unable to probe these processes effectively (Stake, 2015; Smith, 2016). Creswell and Clark (2017) further articulate four paradigms that inform qualitative research, post-positivism, social constructivism, advocacy/participatory pragmatism.

Quantitative research is affected by the empiricist worldview, which implies that it is worried about circumstances and end results of social marvels and uses the information which depends on exact perception and their basic elucidation. This study adopted Positivism paradigm since it predominates in science and assumes that science quantitatively measures independent facts about a single apprehensible reality without bias and is closely associated with objectivity (Healy *et al.*, 2018).

3.3 Target Population

According to Kothari (2017) a Population is defined as the entire set of units from which the investigation information is to be utilized to make derivations. Target population characterizes those units for which the discoveries of the investigation are implied to be generalized from, as cited by Dempsey (2016). The objective populace was a sum of 31 contracted state funded universities in Kenya which went about as the unit of examination while the acquirement staffs were the unit of perception. Public universities were selected since they have a well structure of administration, coupled with an adequate financial resource from the taxpayers. They also target and maintains high quality academic excellence and standards (Ministry of Education, 2017). According to Commission for University Education (2017), Kenya has 31 chartered public universities.

According to Ngechu (2017), a populace is a distinct arrangement of individuals, administrations, components, occasion, and gathering of things or families that are

being explored. This selection is deemed as a reliable representative of the public universities in Kenya. Public universities are one of the subsectors in education and training that has a well structure of governance with immense support from the government in form of funding through infrastructural integration (Eyaa *et al.*, 2016).

3.4 Sampling frame, Technique and Size

A sampling frame is the source material or gadget from which a representative is drawn (Cooper & Schindler, 2016). It is a rundown of all those within a population who can be sampled, and may include individuals, households or institutions (Kraus *et al.*, 2017). Kothari (2017) argues that a sampling frame is a physical representation of all the elements in the population from which the sample is drawn (Gall & Borg, 2017). The number of procurement staffs was obtained from the payroll department through the Integrated Personnel Payroll Data. A sample was drawn from this sampling frame which comprised of 31 public universities. The 31 contracted state funded universities in Kenya which went about as the unit of examination while the acquisition staffs were the unit of perception.

Sampling refers to the procedure a researcher uses to gather people, places or things to study (Kombo *et al.*, 2016). The study employed probability sampling technique. This owes to the randomized approach of the study as it was an ex-post facto research design study. The study give each subject in the target populace an equivalent possibility being chosen as it intend to reach inferences influencing the populace in general unpredictably. Kombo et al. (2016) contend that if the reason for the research is to draw conclusions or make predictions affecting the whole population, probability sampling is appropriate. Cooper & Schindler (2016) assert that a sample is a subset of a population. The study purposively selected 333 respondents, that is 31 chief procurement officers, 31 Principal procurement officers, 31 Senior procurement officers and 240 procurement officers in 31 Kenya state funded universities.

The research just considered procurement staffs since they are the ones responsible for accelerating key obtainment choices and in this way copiously provided with

needed specific data and aptitudes on the antecedents of acquirement administrative consistence level in state funded universities in Kenya. This study applied statistics examining procedure to choose all the 31 public universities.

A Census is an attempt to gather information about every member of some group, called the population (Raymond, 2016). This study undertook a census because the sample size is small and according to Orodho (2018) a census contribute towards gathering unbiased data since all the respondents are given equal chances of representation. Census method is also appropriate because it provides a reliable measurement of the population since there is no sampling errors hence more and detailed information about the problem is revealed (Sakaran & Bougie, 2017). Census method is also deemed suitable as it increases the responses rate, thus the response rate expected to be 100 percent (Epstein, 2016). Mugenda and Mugenda (2013), demonstrates that the sample size of the objective populace ought to be sufficiently huge so it considers solid information examination and permits testing for importanceof contrasts between gauges.

As cited by Zikmund (2018) when a target population size is less than 10,000, this formulae can be used to arrive at the sample size, Taro Yamane (1967) formula. $Sample\ size(n) = \frac{N}{1 + (N)(e)^2}$ Where N is the total populace (2000), e is the level of significance, $\frac{2000}{1 + (2000)(0.05 \times 0.05)} = 333$. The size can be calculated using any of these 3%, 5%, 7% and 10% precision level, (e). By using the above formulae to get the sample size with an error of 5% and 95% confidence coefficient, the calculation from an objective populace of 2000 respondents from 31 state funded universities gives a sample size of 333 respondents who was randomly selected. This formed a 16% of the aggregate number of target population and as per Mugenda and Mugenda (2003), 10% of the aggregate number of objects of research quantitatively is enough for sampling.

The sample size therefore become 333 and was composed of 23 procurement staffs from Jomo Kenyatta University of Agriculture and Technology, 12 procurement staffs from each of the five universities established before 2000 and 10 procurement staffs from each of the remaining 25 public universities. The sample distribution is

given as shown.

Table 3.1: Target population

Department	Population	Percentage
Chief procurement officers	31	9
Principal procurement officers	31	9
Senior procurement officers	31	9
Procurement officers	240	73
Total	333	100

3.5 Data Collection Instruments

With respect to antecedents of procurement regulatory compliance level in public universities in Kenya, this study utilized questionnaires to collect primary data as used in various previous research projects. Primary data is reliable since its free from bias (Creswel, 2016). A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents (Tom, 2017). Questionnaires containing closed and open-ended questions was issued to procurement staffs in the university.

The study adopted a questionnaire since they are modest, don't need as much exertion from the examiner as verbal or phone reviews, and regularly have normalized answers that make it easy to compile data (Tom, 2017). On the other hand, secondary data was obtained from published documents or materials such as journals, periodicals, magazines and reports obtained from the universities, internet and government reports and websites. These supplements the primary data received from questionnaires.

The coding for the independent variables was as follows: Strongly Agree (SA)=5, Agree(A)=4, Undecided (U)=3, Disagree(D)=2, and Strongly Disagree (SD)=1 while the coding for the dependent variable took the form of 0% - 19% compliance level to correspond to 1, 20% - 39% compliance level to correspond to 2, 40% - 59% compliance level to correspond to 3, 60% - 79% compliance level to correspond to 4 and 80% - 100% compliance level to correspond to 5.

3.6 Data Collection Procedure

The data collection procedure for this study began by acquiring an introductory letter from the Department of Entrepreneurship and Procurement of Jomo Kenyatta University of Agriculture and Technology acquainting the scientist with National Council for Science, Technology and Innovation who thus give an exploration permission. The permission got went with the questionnaires. Before the questionnaires were administered to the respondents through drop and pick, a trial runs (pilot study) were completed to determine that the questions were relevant, plainly understandable and includes esteem and were in match with the objectives of study. The pilot test goes for deciding the unwavering quality and legitimacy of the survey including the wording, structure and sequence of the questions (Cooper & Schindler, 2016).

The respondents were assured of confidentiality of their names, responses and that the responses were not going to be handled by any other person and would only to be used purely for academic purposes. Every questionnaire was coded and only the researcher knew which individual responded. The coding system was utilized in matching returned, completed questionnaires with those delivered to the respondents.

3.7 Pilot Study

The research ran a trial run to test the unwavering quality (reliability) and legitimacy (validity) of the surveys. Attainability contemplate is vital for testing the dependability and legitimacy of information gathering instruments (Sekeran, 2016). The study piloted the tools with Jomo Kenyatta University where a pilot study sample of 34 respondents was selected. This translated to 10% of the total population under study and according to Connelly (2018), extant literature suggest that a pilot study sample should be 10% of the sample projected for the larger parent study. Nevertheless, Issac and Micheal (2015) suggested 10-35 participants for pilot in survey research. It should be noted that there was a question on whether the participants felt that procurement expertise, Information and communication technology, procurement ethical standards, and Top management support influences

procurement regulatory compliance level in public universities in Kenya.

This was a leading question and therefore it was deleted from the questionnaires. Joppe (2017) clarifies unwavering quality of research instruments as deciding if the exploration instruments really measure what it was planned to quantify or how honest the examination results are. Pilot study was in this manner directed to identify shortcoming in structure and instrumentation and to give precise information to determination of an example (Cooper & Schindler, 2018). The validity of the questionnaires was determined using Construct validity method. Construct validity is the degree to which a test measures an intended hypothetical construct (Crozby, 2017). Using a panel of experts familiar with the construct is a way in which this type of validity can be assessed, the experts can examine the items and decide what that specific item is intended to measure (Crozby, 2017).

The researcher obtained a consent from Jomo Kenyatta University of Science and Technology and the NACOSTI to conduct this study. Permission to carry out the research was sought from the management of each individual public university where the researcher presented an authority letter from the University outlining the academic purpose and intention of the study. The transmittal letter informed the participants that no one would be coerced to fill the questionnaires. The researcher compiled all ethical consideration for this study. To ensure confidentiality and privacy of the universities as optimized by the researcher to the respondents, this study assigned letters, A-Z to typify a university.

3.7.1 Reliability of the Instruments

Reliability refers to the consistence, stability, or dependability of the data (Joppe, 2017). A reliable measurement is one that if repeated a second time gives the same results as it did the first time. If the results are different, then the measurement is unreliable (Mugenda & Mugenda, 2013). To measure the dependability of the information assortment instruments an internal consistency framework using Cronbach's alpha was associated (Mugenda, 2013). Cronbach's alpha is a coefficient of unwavering quality that gives a fair-minded gauge of information generalizability (Zinbarg, 2016). Subsequent to guiding, the outcomes was given an alpha

coefficient. An alpha coefficient of 0.75 or higher demonstrates that the accumulated information is dependable as it has a moderately high inward consistency and can be summed up to reflect conclusions of all respondents in the goal people (Zinbarg, 2016).

Subsequent to steering, the outcomes was given an alpha coefficient. An alpha coefficient of 0.75 or higher shows that the assembled information is solid as it has a somewhat high inside consistency and can be summed up to reflect assessments of all respondents in the objective populace (Zinbarg, 2016). Kirk and Miller (2016) identify three types of reliability referred to in quantitative research, which relates to the degree to which a measurement, given repeatedly, remains the same the stability of a measurement over time, and the similarity of measurements within a given time period.

Charles (2015) adheres to the notions that consistency with which questionnaire items are answered or individual scores remain relatively the same can be determined through the test-retest method at two different times. This attribute of the instrument is actually referred to as stability. If we are dealing with a stable measure, then the results should be similar. A high degree of stability indicates a high degree of reliability, which means the results are repeatable. A commonly accepted rule of thumb for describing internal consistency using Cronbach's alpha is as follows.

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

3.7.2 Validity of the Instruments

Validity alludes to the degree to which an instrument estimates what it should measure. Information require not exclusively to be dependable yet in addition genuine and precise. On the off chance that an estimation is legitimate, it is likewise solid (Joppe, 2017). The substance legitimacy of the information research instruments was resolved through discussing about the research instrument with the exploration specialists in the branch of EPD of the college. The profitable remarks, amendments, proposals given by the research experts aided in the validation and approval of the research instruments.

The variables in this study was validated using principal component analysis (PCA) with varimax rotation from exploratory factor analysis. Before performing the analysis, the appropriateness of the information was evaluated through two tests, Kaiser-Meyer-Olkin proportion of inspecting sufficiency (KMO) and Bartlett's Test of Sphericity. The KMO has to be more than 0.50 and Bartlett's Test of Sphericity has to be significant (Kaiser, 2014). From factor analyses, it was suggested that items which had a factor loadings lower than 0.50 was eliminated (Hair *et al.*, 2016).

3.8 Data Analysis and Presentation

According to Tromp (2017), regression analysis is used to show the connection between the dependent variable and the independent factors. Information gathered from the field was coded and cleaned to eliminate exceptions or missing qualities and ordered physically as indicated by the survey things utilizing recurrence dispersion tables and rates. The scientist utilized both enlightening and inferential insights with the assistance of factual bundle of Social Science (SPSS) rendition 24 to examine the information.

The results of different variables was then presented in form of frequency tables, graphs and pie- charts. Simple percentages and means was calculated and tabulated for use in describing the antecedents of procurement regulatory compliance level in public universities in Kenya. Descriptive statistics was used to analyze all objectives while multi-collinearity was used in hypothesis testing. The results of the data gave

the researcher the basis to make conclusion about the study. According to Cooper and Schindler (2016), a descriptive report is worried about discovering the what, where and how of a peculiarity. Descriptive statistics was chosen because it enabled the researcher to generalize the findings to a larger population.

On the other hand multiple regression analysis was utilized to break down the commitment of every independent variable to the dependent variable. In the process each factor loading was evaluated. Likewise, the coefficient of assurance was determined to decide the strength of the model in clarifying the capacity of the model to clarify the commitment of the independent factors to the dependent variable. The various regression model was in the structure.

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + e$$

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5 X_5 + B_M M + e$$

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_M M + B_{M1}MX_1 + B_{M2}MX_2 + B_{M3}MX_3 + B_{M4}MX_4 + e$$

Where:

Y= Procurement Regulatory Compliance level

X₁= Procurement Expertise

X₂= Information and Communication technology

X₃= Procurement ethical standards

X₄= Top Management Support

X₅= Organizational culture

B_M=Coefficient of moderator

M=Moderator Variable

B₀= Constant of regression

β₁, β₂, β₃, β₄, and β₅ = Beta coefficients

e= error term of prediction

Table 3.2: Operationalization of Variables

Variable	Category	Measurement	Statistical test	Hypothesized Relationship
Procurement Regulatory Compliance level	Dependent variable	Proper record keeping and maintenance Preparation of procurement plans Adherence to procurement laws Transparency	p- values, F-tests and t statistic	Low compliance
Procurement Expertise	Independent variable	Level of training Professional qualification Education level Years of experience	p- values, F-tests and t statistic	Negative Relationship
Information and Communication technology	Independent variable	Internet and extranet e-procurement ICT Infrastructure	p- values, F-tests and t statistic	Negative Relationship
Procurement ethical standards	Independent variable	Disciplinary actions done Conflict of interest Code of Ethics Accountability and transparency	p- values, F-tests and t statistic	Negative Relationship
Top Management Support	Independent variable	Staff motivation and rewards Work place environment Training and coaching Leadership	p- values, F-tests and t statistic	Negative Relationship
Organizational culture	Moderating variable	Adhocracy culture Clan culture Hierarchy culture Market culture	p- values, F-tests and t statistic	No significant moderation

3.8.1 Factor Analysis

The Factor Analysis is an explorative examination. Much like the bunch examination gathering comparable cases, the factor investigation gatherings comparative factors into measurements. This procedure is additionally called distinguishing dormant factors. Factor Analysis lessens the data in a model by decreasing the measurements of the perceptions (Inkpen *et al.*, 2017). This examination applied factor investigation to disentangle the information, for instance by diminishing the quantity of factors in prescient relapse models. In the event that factor investigation is utilized for these reasons, regularly factors are pivoted after extraction. Factor investigation has a few distinctive turn strategies some of them guarantee that the variables are symmetrical. At that point the relationship coefficient between two elements is zero, which kills issues of in regression analysis (Lee, 2016).

Numerous observational, researches completed in this space have used this method to delineate the qualities of each element to the dependent variable. This method seeks values of the loading that bring the estimate of the total communality as close as possible to the total of the observed variances. Qualitative data was drawn from open-ended questions. This was analyzed through summarizing the set of observations drawn from the respondents. Common set of observation was assigned numerical value and entered into the SPSS version 24 computer system. The analyzed findings was then presented in form of frequency tables, pie charts and bar charts.

3.8.2 Descriptive Statistics

To gather information for any measurable examination, a populace should initially be characterized, Population shows a gathering that has been assigned for get-together information from (Babbie, 2014). The information was data gathered from the populace. Illustrative insights give data that depicts the information in some way (Braxton, 2015). Some different estimations inelucidating measurements answer the inquiries, for example, how broadly scattered is this data? Are there many qualities? Or on the other hand are a large number of the qualities the same? What esteem is amidst this this data?

3.8.3 Inferential Statistics

Inferential measurements makes derivations about populaces utilizing information from the populace as opposed to utilizing the whole populace to accumulate the information, the analyst gathers an example or tests from the a huge number of occupants and make inductions about the whole populace utilizing the example (Barbara & Fidel,2016).The test is an arrangement of information taken from the populace to speak to the populace (Cohen,2015).Correlation examination, relapse investigation and ANOVA investigation all fall under the class of inferential statistics.

i. Correlation Analysis

Correlation Analysis is the statistical tool used to study the closeness of the relationship between two or more variables, it is denoted by a small r (Chakraborty, 2017). The variables are said to be correlated when the movement of one variable is accompanied by the movement of another variable (Glantz, 2017). The correlation analysis was used to determine the possible association between the variables.

In the correlation analysis, there are two types of variables, dependent and independent. The purpose of such analysis is to find out if any change in the independent variable results in the change in the dependent variable or not (Lomax, 2014). Now the question arises that what is the need to study the correlation?

ii. Regression Analysis

Regression is a statistical measure used in finance, investment and other disciplines that attempt to determine the strength of the relationship between one dependent variable (usually denoted by Y) and a series of other changing variables (known as independent variables) (Cameon & Trivedi, 2015). The regression is described by a capital R^2 statistics (coefficient of determination). The two basic types of regression are linear regression and multiple linear regressions. Linear regression uses one independent variable to explain or predict the outcome of the dependent variable Y , while multiple regression uses two or more independent variables to predict this regression analysis is a statistical approach to forecasting change in a dependent variable (Defee *et al.*, 2014).

iii. ANOVA Analysis

Analysis of variance (ANOVA) can determine whether the means of three or more groups are different (Kline, 2014). ANOVA uses F-tests to statistically test the equality of means. The reason why analysis of variance is used is to determine whether means are different, also it shows how variances provide information about means (Anderson, 2016).

3.9 Hypothesis Testing

Multiple regression analysis was undertaken in four stages using the Baron and Kenny (1986) model of the form.

$$Y = \beta_0 + \beta_1 M + \beta_2 X_4 + \beta_3 X_4 \cdot M$$

Where;

Y = the dependent variable (procurement regulatory compliance level)

M = Moderating variable (organizational culture)

X₄ = variable composite $\{(X_1 + X_2 + X_3 + X_4)/4\}$

X₄ .M = Interaction term

$\beta_1, \beta_2, \beta_3$ = Change in Y with respect to a unit change in M.

The model was used to test alternative hypothesis. Cooper & Schindler (2016) posits that multiple regression analysis indicate whether the individual hypothesis is statistically supported or not. T- test was also used to test the significance of y on the influence of independent variables, X₁, X₂, X₃, X₄

The following test was applied in conducting t-test.

$$H_0: \beta_j = 0 \quad j=1, 2, 3, 4$$

For the hypothesis to be accepted or rejected comparison was done between the critical t-values and the calculated t-values. If the calculated values was to be greater than the critical t, the alternative hypothesis was accepted. The study also used correlation coefficient r to determine the strength and direction of relationship between two variables. A correlation greater than 0.8 is generally described as strong, whereas a correlation less than 0.5 is described as weak (Teddlie & Tashakori, 2011).

3.10 Test of Assumptions/Diagnostic Tests

In this study most of the statistical tests that was performed was based on a set of assumptions. Allparametric tests assumed some certain characteristic about the data, also known as assumptions. When the assumptions are disregarded the aftereffects of the investigation can be misdirecting or totally wrong and this would change the finish of the examination and understanding of the outcomes. In this manner all exploration, regardless of whether for a diary article, theory, or thesis, must pursue these presumptions for precise translation relying upon the parametric investigation and the assumption (De Boer, 2017).

i. Normality Test

Parametric tests necessitated the suspicion of typicality that must be met. Typicality implies that the dissemination of the test is ordinarily conveyed (or chime formed) with 0 mean, with 1 standard deviation and a symmetric ringer molded bend (Alberto *et al.*, 2016). To test the suspicion of ordinariness, the accompanying measures and tests was applied. Skewness and Kurtosis. To test the supposition of ordinary conveyance, Skewness ought to be inside the range ± 2 . Kurtosis esteems ought to be inside scope of ± 7 .

ii. Linearity

De Boer (2016) states that linearity is the connection among dependent and independent variablesthat is the point at which the normal estimation of dependent variable is a straight line capacity of every independent variable, holding the others constant. What's more, the incline of that line does not rely upon the estimations of interchange factors. Accordingly, the effects of different self- governing variable on the typical estimation of the independent variable on the normal estimation of the dependent variable are addictive (Cooper & Schindler, 2016). Statistical freedom of the errors (in specific, no connection between back to back blunders if there should be an occurrence of time arrangement data). Homoscedasticity (constant variance) of the mistakes versus time, (in instance of time arrangement information, versus the forecasts and versus any independent variable.

Normality of the error distribution may happen. In the event that any of these assumptions is violated (i.e., if there are nonlinear connections among dependent and independent variables or the blunders show relationship, heteroscedasticity, or non-typicality), at that point the figures, confidence interval, forecasts and logical bits of knowledge yielded by a regression model might be wasteful or genuinely one-sided or misdirecting (Allen & Reser, 2017). In an ideal world, factual programming consequently give diagrams and insights that test whether these presumptions are fulfilled for any given model.

iii. Multicollinearity

In statistics, multicollinearity is a wonder in which one indicator variable in a different relapse model can be straightly anticipated from the others with a considerable level of precision (William, 2015). In this circumstance the coefficient appraisals of the different relapses may change inconsistently in light of little changes in the model or the information. Multicollinearity does not decrease the prescient power or unwavering quality of the model all in all, at any rate inside the example informational index, it just influences counts with respect to singular indicators (Taylor, 016). That is, a different relapse show with collinear indicators can demonstrate how well the whole heap of indicators predicts the result variable.

On account of flawless multicollinearity (in which one independent variable is a correct straight blend of the others) the plan grid has not exactly full rank, and in this way the minute framework can not be reversed. Under these conditions, for a general straight model, the normal minimum squares estimator does not exist. Note that n articulations of the presumptions hidden relapse examinations, for example, customary slightest squares. The state of no multicollinearity is at times used to mean the non-attendance of impeccable multicollinearity, which is a correct (non-stochastic) straight connection among the repressor (Araujo, 2016). Collinearity is a direct relationship between two logical factors. Two factors are splendidly collinear if there is a correct direct connection between them. For instance, the variable is splendidly collinear if there exist parameters and with the end goal that, for all observations.

iv. Heteroscedasticity

The word heteroscedasticity originates from the Greek, and actually implies information with an alternate (hetero) scattering (skedasis) (Taylor, 2016). In straightforward terms, heteroscedasticity is any arrangement of information that is not homoscedastic. All the more actually, it alludes to information with unequal variability (scatter) over an arrangement of second, indicator factors. Heteroscedastic information has a tendency to pursue a cone shape on a dissipate chart. A lingeringplot can propose heteroscedasticity. Lingering plots are made by ascertaining the square leftover.

One of the key assumptions of regression is that the variance of the errors is constant across observations (Krause *et al.*, 2017). If the errors have constant variance, the errors are called homoscedastic. Typically, in this study all residuals were plotted to assess this assumption. Standard estimation methods are inefficient when the errors are heteroscedastic or have non- constant variance.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Provided in this section are the findings and descriptions of the data collected through questionnaires given to procurement staffs working in all public universities. The chapter is divided into various sub-sections based on the study specific objectives. The aim of this study was to find out the main antecedents of procurement regulatory compliance level in public universities in Kenya. A brief summary and cross-examination with existing literature are provided to accompany each of the findings for better understanding. The chapter contains instrument response rate, analysis and discussions of findings and research objectives, presentations of results, contextdiagnostic tests and hypothesis testing.

4.2 Response Rate

The selected size of the sample was 333 respondents working in the procurement department from 31 public universities. The study distributed a total of 333 questionnaires which was the sample size of the study. A total of 309 questionnaires were completed and returned from the 333 questionnaires sent to the respondents representing 93% of the response rate. The response rate of more than 70 percent is ideal for evaluating, according, (Mugenda, 2008). Babie (2016) opines that a return pace of half is okay to examine and distribute, 60% is great or more than 70% is evaluated generally excellent. A 93% response rate for evaluation was thus considered sufficient. As analyzed in table 4.1 below, the response rate data are provided.

Table 4.1: Response rate

Questionnaires	Number	Percentage
Duly filled and returned	309	93
Uncollected/ unfilled	24	7
Total	333	100

4.3 Pilot study Results

The Pilot study was conducted to establish legitimacy and unwavering quality of information assortment instruments. Pilot testing was done utilizing 10 surveys directed to procurement divisions of Jomo Kenyatta University in Kenya.

4.3.1 Reliability of the Instruments

Each section addresses the methods used to verify that the results are reliable and general. The sample size must be appropriate, representative and accurate for generalizable data analysis. The following discussions show that every variable was systematically and exclusively checked in this chapter. Zinbarg (2016) says that a 0.70 or higher alpha coefficient means that data are accurate and generalizable. The baseline value of alpha was 0.7 in this analysis. All the variables have a value of more than 0.7 for Cronbach Alpha. This meant that the analysis was consistent and reliable. Table 4.2 below shows the results of the study.

Table 4.2: Reliability results

Scale	Number of Items in Cronbach's Alpha		Acceptability
	the Scale	Value	
procurement expertise	4	0.841	Acceptable
information and communication technology	6	0.908	Acceptable
Procurement ethical standards	9	0.872	Acceptable
top management support	6	0.761	Acceptable
organizational culture	6	0.962	Acceptable
Procurement regulatory compliance level	4	0.862	Acceptable

4.3.2 Validity of the research instruments

Research instruments were checked whether they were valid by use of content validity method. Researchers generally determine validity by asking a series of questions and the answers to such questions is often sought in the researches of others in related fields. The test for construct validity for the study is the Kaiser-Meyer-Olkin (KMO) test for construct validity which according to Field(2015), is per Table 4.2 which indicate the KMO and Bartlett’s test of construct validity for each of the dependent and independent variables.

Table 4.3: Validity results

Variables	KMO	Bartlett's Test of Sphericity			Validity
		Approx. Chi-Square	df	Sig.	
Procurement expertise	0.656	66.228	28	0.000	Valid
Information and communication technology	0.501	66.555	28	0.000	Valid
procurement ethical standards	0.593	41.516	28	0.048	Valid
Top management support	0.684	64.693	28	0.000	Valid
Organizational culture	0.541	47.775	28	0.011	Valid
Procurement regulatory compliance level	0.521	66.287	28	0.000	Valid

The values of the KMO Proportion of Sampling Adequacy for every one of the variable were above 0.5. The meaning of the KMO coefficient was assessed utilizing a Chi-Square test and a basic likelihood esteem (p-value) of 0.05. A Chi-Square coefficient going from 41.516 to 66.555 and a p-value of 0 imply that the coefficients were significant. The results further implies that there was a significant

correlation between procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture and procurement regulatory compliance level.

4.4 Demographic information

This section covers the background information of the individual respondents in an effort to understand the target population in a better way.

4.4.1 Gender

This study consisted of both male and female respondents who participated. The participation of male respondents was 75.1% whereas that of the female respondents was 21.2% as in table 4.3 below. The findings show that there is a higher representation ratio of males in comparison to the females. However, the females have a satisfactory representation as well. The findings are in line with Asongwa (2013) who conducted research on in this research on e-procurement in Nigeria and concluded that the findings may have resulted from the male gender dominance in the public area and business field. This infers that in the acquirement office in the state funded universities in Kenya are ruled male specialists who are associated with the acquisition exercises. Many studies have also shown that the employment dominance of the public sector by men contributes to gender disparity (Kenya constitution, 2010). The study findings suggest that, if the gender distribution is held to the same percentage of men and women at 50 percent, procurement performance in public Universities in Kenya can perhaps improve (Onyinkwa, 2015).

Table 4.4: Gender ratio

	Frequency	Percent
Male	241	75.1
Female	68	21.2
Total	309	96.3

4.4.2 Age of the Respondents

The target respondents who participated in this study were different stakeholders and they are staff. The employees were found useful in providing experience with procurement implementation in their respective areas of work (Akech *et al.*, 2015). According to table 4.4 below, majority of the staff members in the procurement field were aged between 41 to 50 years. Respondents below 30 years of age accounted for 4.4% of the staff in procurement. 17% of the respondents were aged between 31 to 40 years whereas above 50 years of age was 46%. The findings reveal that the staff in the procurement field are mostly above 30 years of age. Thus the high involvement of staff members across all the age groups was an avenue for the study to have reliable, enough, complete information and significant information for the study. The satisfactory representation of the age groups further gave them an opportunity to engage in the research and submit their views as well which is one of the focused goals.

Table 4.5: Age of the respondents

	Age group	Frequency	Percent
Valid responses	21 - 30 years	14	4.4
	31 - 40 years	55	17.4
	41 - 50 years	94	30.3
	51 - 54 years	84	26.2
	55 - 60 years	62	19.3
Total		321	100

4.4.3 Registration with Professional Body

The study assessed the status of registration of the procurement body in the public universities with any existing professional body in the nation. From the outcomes in Table 4.5 below, majority (84%) of the procurement departments in the public universities have not been registered with any professional body specialized in

procuring activities. The study agrees with Ngugi (2017) who indicated that professionalism in Kenya is defined by Supplies Management Act 2017 and PPRA 2015 which is indicated by existence of professional association.

Table 4.6: Registration with Professional Body

	Frequency	Percent
Yes	45	15.8
No	264	84.2
Total	309	100

4.4.4 Position in the Institution

The study sought to determine the position of the respondent in the respective university. The assessment is important in order to verify the reliability and accuracy of the information received from the respondents. From the outcomes revealed in Table 4.6, the majority of the respondents (56%) in the study were procurement officers. Other respondents (44%) in the field of procurement were in charge as seniors, principals and chief officers in the procurement fields.

Table 4.7: Position in the Institution

	Frequency	Percent
Procurement officer	177	56.1
Senior procurement officer	41	13.8
Principal procurement officer	53	17.5
Chief procurement officer	38	12.6
Total	309	100

4.5 Factor analysis

Hair *et al.* (2015) contends that factor investigation is a measurable methodology that includes observing an approach to gathering the data contained in various unique factors into a more modest arrangement of aspects with a base loss of data. The review utilized element examination to characterize hidden construction of the factors in the analysis. While factor analysis can be used in the confirmatory perspective, it was used in the study case for exploratory purposes, that is, to reduce the data that was analyzed. The condensation of the information into smaller sets is done with minimum loss of information. The study used communalities to determine the sub variables to be excluded in further analysis.

4.5.1 Factorability, reliability and communalities Test for Procurement Expertise

Measure of Sampling Adequacy for Procurement Expertise

To decide the amplex and adequate nature of the information gathered for inferential factual tests, for example, factor investigation, straight relapse examinations and other measurable tests. Two primary tests were performed specifically; Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. For an informational index to be viewed as satisfactory and proper for measurable examination, the worth of KMO ought to be more noteworthy than 0.5 (Field, 2000).

Table 4.8: KMO and Bartlett's Test for Procurement Expertise

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.579
Bartlett's Test of Sphericity	Approx. Chi-Square	28.553
	df	6
	Sig.	0.000

The results of Kaiser-Meyer-Olkin Measure of Sampling Adequacy as presented in Table presents a KMO statistic of 0.579 which was significant; that is greater than the critical level of significance of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square=28.553 with 6 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for Procurement Expertise

The study tested reliability for procurement expertise using Cronbach's Alpha test of reliability. The Cronbach's Alpha unwavering quality coefficient gauges inside consistency by deciding how all things on a test connect with any remaining things and to the absolute test-inward rationality of information. The unwavering quality idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach's Alpha above 0.7 indicates that the variable is reliable.

Table 4.9: Reliability Results for procurement expertise

Variable	Cronbach's Alpha
Procurement expertise	0.738

The value of Cronbach Alpha was 0.738 indicating that the variable constructs were reliable.

Table 4.10: Communalities for Procurement Expertise

Statements	Initial	Extraction
Procurement staffs miss deadlines in their schedule date	1.000	0.463
Procurement staffs lack adequate qualification in procurement matters	1.000	0.651
Procurement staffs have few years of experience	1.000	0.697
Very few procurement staffs are members of professional bodies	1.000	0.624

Extraction Method: Principal Component Analysis.

As per Kaiser (1974), factor-loading values that are more noteworthy than 0.4 ought to be acknowledged and esteems beneath 0.5 should prompt assortment of more information to assist scientist with deciding the qualities to incorporate. Values somewhere in the range of 0.5 and 0.7 are average, values somewhere in the range of 0.7 and 0.8 are great and values somewhere in the range of 0.8 and 0.9 are incredible, and values above 0.9 are heavenly. Factor analysis was conducted on statements regarding procurement expertise. It was found that all the statements had factor-loading values that are greater than 0.4.

4.5.2 Factorability, reliability and communalities Test for Information and Communication Technology

Measure of Sampling Adequacy for Information and Communication Technology

Table 4.11: KMO and Bartlett's Test for Information and Communication Technology

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.61
Bartlett's Test of Sphericity	Approx. Chi-Square	214.159
	Df	15
	Sig.	0.000

The aftereffects of Kaiser-Meyer-Olkin Measure of Sampling Adequacy presents a KMO measurement of 0.61 which was huge; that is more prominent than the basic degree of meaning of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square=214.159 with 15 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for Information and Communication Technology

The review tried dependability for Information and Communication Technology utilizing Cronbach's Alpha trial of unwavering quality. The Cronbach's Alpha unwavering quality coefficient gauges inside consistency by deciding how all things on a test connect with any remaining things and to the all out test-interior soundness of information. The unwavering quality idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach's Alpha above 0.7 indicates that the variable is reliable.

Table 4.12: Reliability Results for Information and Communication Technology

Variable	Cronbach's Alpha
Information and Communication Technology	0.766

The value of Cronbach Alpha was 0.766 indicating that the variable constructs were reliable.

Table 4.13: Communalities for Information and Communication Technology

Statement	Initial	Extraction
Tendering is partially done through e-procurement	1	0.448
All procurement transactions are not customized in e-procurement	1	0.455
Fibre connections inaccessible by staffs	1	0.597
Procurement department lack ICT specialists	1	0.734
ICT tools and softwares available are inadequate and should be improved	1	0.687
ICT infrastructure is haphazardly upgraded in the university	1	0.591

As indicated by Kaiser (1974), factor-loading values that are more prominent than 0.4 ought to be acknowledged and esteems underneath 0.5 should prompt assortment of more information to assist specialist with deciding the qualities to incorporate.

Values somewhere in the range of 0.5 and 0.7 are average, values somewhere in the range of 0.7 and 0.8 are great and values somewhere in the range of 0.8 and 0.9 are incredible, and values above 0.9 are wonderful. Factor analysis was conducted on statements regarding Information and Communication Technology all the statements had factor-loading values that are greater than 0.4.

4.5.3 Factorability, reliability and communalities Test for procurement ethical standards

Measure of Sampling Adequacy for procurement ethical standards

Table 4.14: KMO and Bartlett's Test for procurement ethical standards

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.79
Bartlett's Test of Sphericity	Approx. Chi-Square	460.48
	df	36
	Sig.	0.000

The aftereffects of Kaiser-Meyer-Olkin Measure of Sampling Adequacy presents a KMO measurement of 0.79 which was huge; that is more prominent than the basic degree of meaning of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square 460.48 with 36 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for procurement ethical standards

The study tested reliability for procurement ethical standards using Cronbach's Alpha test of reliability. The Cronbach's Alpha unwavering quality coefficient gauges inside consistency by deciding how all things on a test connect with any remaining things and to the absolute test-inner rationality of information. The dependability idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach's Alpha above 0.7 indicates that the variable is reliable.

Table 4.15: Reliability results for procurement ethical standards

Variable	Cronbach's Alpha
procurement ethical standards	0.729

The value of Cronbach Alpha was 0.729 indicating that the variable constructs were reliable.

Table 4.16: Communalities for procurement ethical standards

Statements	Initial	Extraction
Disciplinary actions are poorly conducted on procurement staffs	1	0.642
Victims of unbecoming behavior are given a biased hearing during disciplinary action proceedings	1	0.677
Staffs fail to stick to procurement code of ethics	1	0.405
Code of practice for department unavailable to all the staffs	1	0.525
Procurement staffs value personal interest in form of financial gain more than their performance	1	0.423
Procurement department is very insensitive to bidders complaints	1	0.543
Complaints received from prospective bidders is not acted upon	1	0.69
Some suppliers offer gifts to procurement staffs with the intention of compromising them to influence purchasing decisions	1	0.497
Presence of close personal relationship between suppliers and procurement managers	1	0.436

As indicated by Kaiser (1974), factor-loading values that are more noteworthy than 0.4 ought to be acknowledged and esteems underneath 0.5 should prompt assortment of more information to assist specialist with deciding the qualities to incorporate. Values somewhere in the range of 0.5 and 0.7 are fair, values somewhere in the range of 0.7 and 0.8 are great and values somewhere in the range of 0.8 and 0.9 are

incredible, and values above 0.9 are brilliant. Factor analysis was conducted on statements regarding procurement ethical standards all the statements had factor-loading values that are greater than 0.4.

4.5.4 Factorability, reliability and communalities Test for Top Management Support

Measure of Sampling Adequacy for Top Management Support

Table 4.17: KMO and Bartlett's Test for Top Management Support

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.769
Bartlett's Test of Sphericity	Approx. Chi-Square	593.704
	df	15
	Sig.	0.000

The aftereffects of Kaiser-Meyer-Olkin Measure of Sampling Adequacy presents a KMO measurement of 0.769 which was huge; that is more prominent than the basic degree of meaning of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square 593.704 with 15 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for Top Management Support

The study tested reliability for top management support using Cronbach's Alpha test of reliability. The Cronbach's Alpha unwavering quality coefficient gauges interior consistency by deciding how all things on a test connect with any remaining things and to the all out test-inner intelligibility of information. The unwavering quality idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach's Alpha above 0.7 indicates that the variable is reliable.

Table 4.18: Reliability Results for top management support

Variable	Cronbach's Alpha
Top Management Support	0.763

The value of Cronbach Alpha was 0.763 indicating that the variable constructs were reliable

Table 4.19: Communalities for Top Management Support

Statement	Initial	Extraction
Top management ignores the importance of implementation of TQM	1	0.637
Top management hinders procurement staffs to adopt TQM	1	0.572
Top management fails to motivate and reward staffs for their effective performance in quality provision	1	0.404
There is a poor working environment between the procurement staffs and the top management	1	0.534
Top management denies employees the required authority to do their work	1	0.552
Top management provides employees with the required resources to do their assigned duties	1	0.592

As per Kaiser (1974), factor-loading values that are more prominent than 0.4 ought to be acknowledged and esteems underneath 0.5 should prompt assortment of more information to assist scientist with deciding the qualities to incorporate. Values somewhere in the range of 0.5 and 0.7 are unremarkable, values somewhere in the range of 0.7 and 0.8 are great and values somewhere in the range of 0.8 and 0.9 are extraordinary, and values above 0.9 are magnificent. Factor analysis was conducted on statements regarding top management support all the statements had factor-loading values that are greater than 0.4.

4.5.5 Factorability, reliability and communalities Test for organizational culture
Measure of Sampling Adequacy for organizational culture

Table 4.20: KMO and Bartlett's Test results for organizational culture

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.62
Bartlett's Test of Sphericity	Approx. Chi-Square		41.797
	df		15
	Sig.		0.000

The aftereffects of Kaiser-Meyer-Olkin Measure of Sampling Adequacy presents a KMO measurement of 0.62 which was huge; that is more noteworthy than the basic degree of meaning of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square 41.797 with 15 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for organizational culture

The study tested reliability for organizational culture using Cronbach's Alpha test of reliability. The Cronbach's Alpha unwavering quality coefficient gauges interior consistency by deciding how all things on a test connect with any remaining things and to the absolute test-inner intelligibility of information. The dependability idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach's Alpha above 0.7 indicates that the variable is reliable.

Table 4.21: Reliability results for organizational culture

Variable	Cronbach's Alpha
organizational culture	0.787

The value of Cronbach Alpha was 0.787 indicating that the variable constructs were reliable

Table 4.22: Communalities for organizational culture

Statement	Initial	Extraction
PPOA have neglected supervision of overall functioning of the institution procurement system of the procured items	1	0.569
PPOA have abandoned supervision of the submissions of contract awards, and ensure returns by procuring entities is done	1	0.441
Procurement department is not obligated to adhere to the procurement Act and regulations	1	0.561
PPOA/PPRB does not conduct periodic procurement reviews and assessment of records and proceedings of the procuring entity	1	0.43
PPOA/PPRB avoids to ensure procurement procedures are complied with as established	1	0.579
The PPOA/PPRB does not carry compliance audits every month in the university	1	0.513

As per Kaiser (1974), factor-loading values that are more prominent than 0.4 ought to be acknowledged and esteems underneath 0.5 should prompt assortment of more information to assist specialist with deciding the qualities to incorporate. Values somewhere in the range of 0.5 and 0.7 are average, values somewhere in the range of 0.7 and 0.8 are great and values somewhere in the range of 0.8 and 0.9 are extraordinary, and values above 0.9 are eminent. Factor analysis was conducted on statements regarding organizational culture all the statements had factor-loading values that are greater than 0.4

4.5.6 Factorability, reliability and communalities Test for Procurement Regulatory Compliance Level Measure of Sampling Adequacy for Procurement Regulatory Compliance Level

To inspect whether the information gathered was sufficient and fitting for inferential factual tests, for example, the element investigation, numerous straight relapse examination and other measurable tests, two primary tests were performed in particular; Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Barlett's Test of Sphericity. For an informational index to be viewed as satisfactory and proper for measurable investigation, the worth of KMO ought to be more prominent than 0.5 (Field, 2000).

Table 4.23: KMO and Bartlett's Test results for Procurement Regulatory Compliance Level

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			0.659
Bartlett's Test of Sphericity	Approx. Chi-Square		87.129
	df		6
	Sig.		0.000

The aftereffects of Kaiser-Meyer-Olkin Measure of Sampling Adequacy presents a KMO measurement of 0.659 which was huge; that is more noteworthy than the basic degree of meaning of the test which was set at 0.5 (Field, 2000). The KMO test, the Bartlett's Test of Sphericity was significantly high (Chi-Square 87.129 with 6 degrees of freedom, at $p < 0.05$). These results provide an excellent justification for further statistical analysis to be conducted.

Reliability Test for Procurement Regulatory Compliance Level

The study tested reliability for civic education using Cronbach's Alpha test of reliability. The Cronbach's Alpha dependability coefficient gauges interior consistency by deciding how all things on a test connect with any remaining things

and to the complete test-inner lucidness of information. The dependability idea is communicated as a coefficient between 0.0 and 1.00. Values of Cronbach’s Alpha above indicates that the variable is reliable.

Table 4.24: Reliability results for Procurement Regulatory Compliance Level

Variable	Cronbach's Alpha
Procurement Regulatory Compliance Level	0.866

The value of Cronbach Alpha was 0.866 indicating that the variable constructs were reliable.

Table 4.25: Communalities for Procurement Regulatory Compliance Level

Statements	Initial	Extraction
All procurement records are poorly maintained in the 1 department files		0.726
Procurement department fails to prepares annual 1 procurement plans		0.925
Procurement department fails to adheres to the 1 PPOA/PPARB/PPOAB approved policies and rules		0.413
Procurement plan does not include the procurement 1 methods to be used hence no transparency		0.867

Factor-loading values that are more prominent than 0.4 ought to be acknowledged and esteems beneath 0.5 should prompt assortment of more information to assist specialist with deciding the qualities to incorporate (Kaiser, 1974). Values somewhere in the range of 0.5 and 0.7 are unremarkable, values somewhere in the range of 0.7 and 0.8 are great and values between 0.8 and 0.9 are incredible, and values above 0.9 are eminent. Factor analysis was conducted on statements regarding Procurement Regulatory Compliance Level. It was found that all the statements had factor-loading values that are greater than 0.4

4.6 Descriptive results

Descriptive statistics help to identify, demonstrate or summarize the data substantially from trends that can emerge without allowing the researcher to reach conclusions beyond the data being examined or to test any of the hypotheses for the analysis. It is difficult to visualize the value of raw data and descriptively to allow statistics and graphs to present the data more meaningfully.

The key tendency indicators which are mean, mode and median are the specific descriptive statistics, while the distribution measure of trend cover ranges, quartiles as well as standard deviations and variances. Descriptive results have been reported for the dependent, moderator and explanatory variables. The following descriptive results were collected in the analysis of the findings

4.6.1 Influence of procurement expertise on procurement regulatory compliance level

The study sought to find out the resultant impact of procurement expertise on the procurement regulatory compliance level. The specific elements that the study addressed were: employees' trainings and seminars on procurement ethical standards, professionals' qualifications of the employees, the level of education attained, meeting of deadlines of the dates scheduled, qualifications, experience of workers, membership of professional bodies and number of years in the field of procurement. The rates of the measures were assessed on the practice of the measures.

i. Employees trainings on procurement practices

The study sought to access how often the employees are trained on the necessary and vital procurement practices. As illustrated in Table 4.26, majority (75%) of the respondents indicated that the trainings on procurement never happen in the procurement departments in the public universities, 19% of the respondents indicated that the trainings happen but rarely. 2% indicated that the trainings happen often. The findings of this study concurs a study by Public Procurement and

Oversight Authority (2014) who ascertained that procurement professionals are equipped with appropriate training so as to serve effectively and efficiently in procurement.

The study is also in line with Raymond (2018), where in the study it was revealed that demonstrable skill openly acquirement identifies with training level and capabilities of the workforce in the lead of business movement. The findings indicate there have been a low number of training sessions conducted on procurement. In most instances, it was revealed that public universities they never do the trainings at all. By extension, the deficiency of these seminars to expertise the employees have violated the procurement regulatory compliance role. The study concurs with that of Getuno, Awino, Ngugi and Ondiek (2015) that looked into public organizational culture implementation and performance of State Corporation in Kenya. The study identified inadequate experience and ICT access as some of the impediment of procurement compliance.

Table 4.26: Trainings on procurement frequency

Statement	Frequency	Percent
Very often	4	1.2
Often	4	1.2
Rarely	61	19
Never	240	74.8
Total	309	96.3

ii. Professional qualification

The study focused to obtain the professionalism of the employees in procurement field. The illustrations are as given in Table 4.27. Majority (77%) of the respondents had no professionalism specialization in the field of procurement. The certificate holders were 1.3%, diploma holders were 2.6%, bachelors level holders were 3.2%, KISM holders were 7.4% whereas CIPS holders were 7.8%.

Table 4.27: Professionalism qualification

Qualification	Frequency	Percent
CIPS	24	7.8
KISM	23	7.4
Bachelor	10	3.2
Diploma	8	2.6
Certificate	4	1.3
None	240	77.7
Total	309	100

The findings concur with the research done by Harvard Business Review article (2017) and found out that professional expertise are quite different from traits/qualities of leaders where traits are acquired academically. The study further argued that the expertise are what leaders can accomplish, whereas traits are who leaders are such as their innate characteristics of the individual.

This implies that there is low level of professionalism in the procurement practices that are essential. The deficient professionals in the department may have contributed to the non-compliance to the regulatory of procurement and performance of procurement in the public universities.

iii. Education level

The research survey collected the education level details of the survey participants. This was in effort to reveal the qualification entities of the employees in the procurement department in public universities. The illustrations were given in Table 4.28. The findings reveal that majority (80%) of the employees had gone up to the university level in their education, 10% had gone up to college level, 9% were post graduates whereas less than 1% had attained a maximum of secondary school certificate qualification.

Table 4.28: Education level

Qualification	Frequency	Percent
Secondary Education	1	0.3
College level	31	10
University level	247	79.9
Post-graduate	30	9.7
Total	309	100

The findings are in line with a research by Western Cape Education Department (2016) on the government through education ministry. It was found that in South Africa, the government formulated a fundamental financial manual for public education institution. This provided the regulations that should be strictly observed by all schools in their procurement system.

The outcomes imply that the education level is averagely satisfactory in the procurement area in the universities. The majority of the workers have exceeded the bachelors' level in their education. The education of the employees guarantee that the procurement officers can read and understand the set guidelines in procurement in order to comply with the guidelines as set. The compliance to the regulatory can have an effect on the sustainability and development of procurement standards.

iv. Deadlines meeting and scheduling dates

The study sought to investigate on the compliance of the procurement department to meet the deadlines in their respective schedule dates and its impact on the compliance to the set regulatory of procurement. The outcomes were as shown in Table 4.29. The outcomes revealed that majority of the survey participants (97%) were in agreement, 1% were undecided whereas 2% disagreed with the statement that procurement staffs often fail to meet the set schedule dates of procurement activities. The mean of the assessment was high at 4.91 and the standard deviation was 0.55, which is low.

The findings imply that there are often occurrences of missed deadlines in the procurement department. The resultant effect is possibly attributed to by the deficiency in the expertise personnel in procurement.

v. Adequate qualification in procurement matters

The study assessed the qualification attainment of the staff in relation to the procurement matters. The results as shown in Table 4.29 revealed that more than 96% of the respondents were in agreement with the opinion that procurement staffs lack adequate qualification in procurement matters. 1% of the survey participants had a neutral opinion on the statement. The rest of the respondents (3%) disagreed with the statement. The mean of the opinion was 4.91 whereas the standard deviation was 0.55.

The results were found to concur with Hunja (2017) who concluded that preparation on polished skill to people working in an organization with open acquirement and qualifications is a key in guaranteeing adherence to moral standards and therefore skill on to do the assigned duties to boost performance.

The findings imply that in most of the universities, there is ignorance in recruitment of human resources in procurement matters. The findings reveal that there is an alarming deficiency in the skilled personnel to enforce the procurement compliance according to the regulatory. This may have a significant contribution to the current performance of the procurement departments in the public universities.

Vi. Years of experience

The study sought to assess the number of years that the working staff in the procurement department have been in operation in order to determine the experience that the workers have in their respective duties. An opinion poll was conducted on the statement that procurement staffs have few years of experience which was agreed on by most of the review members (89%). 3% of the review members had an impartial assessment over the proclamation. 8% of the members contradicted the explanation. The mean of the statement opinion was 4.58 while the standard deviation was low at 1.02.

Similar results were obtained in a study by Burkus (2018) who focused on procurement expertise to discover the five components that make leaders more effective and proficient in a specific activity competency, career experiences, individual attributes, outcomes and environmental influences. The study revealed that the experience in the procurement field is directly proportional to the legality of the procurement activities.

The findings imply that majority of the procurement staffs have few years in the operations of procurement. This implies that there can result to violation of the regulations of procurement which have an impact on the transparency in awarding of contracts and recording information on the contracts progress and completion.

vii. Membership with procurement bodies

The assessment of the membership registration of the staffs with the relevant professional bodies. The study findings revealed that majority (89%) strongly agreed to the statement that very few procurement staffs are members of professional bodies while further 7% agreed with the statement. 2% of the respondents had not made up their mind on their opinion whereas 2% of the respondents totally disagreed with the statement. The mean of the statement opinion was 4.83 and had a low standard deviation of 0.6.

The results were in contrary to the findings of a research by Public Procurement and Oversight Authority who revealed that procurement regulations ascertain that procurement professionals are equipped with appropriate training so as to serve effectively and efficiently in procurement by enjoining to their professional service providers (Public Procurement and Oversight Authority, 2017).

The findings imply that most of the staff are not certified to be procurement expertise through certification and registration with higher professional bodies who oversee the skills of the members and therefore ensure the members are well equipped with procurement knowledge. The freedom of the procurement officers from regulation by professional bodies is likely to have an impact on the compliance with the regulations.

Table 4.29: Procurement expertise

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean	Std Dev
Procurement staffs miss deadlines in their schedule date	1.62%	0.32%	0.65%	0.00%	97.41%	4.91	0.55
Procurement staffs lack adequate qualification in procurement matters	0.97%	1.94%	0.97%	3.24%	92.88%	4.85	0.62
Procurement staffs have few years of experience	4.21%	3.88%	3.24%	6.80%	81.88%	4.58	1.02
Very few procurement staffs are members of professional bodies	0.97%	0.97%	1.94%	6.47%	89.64%	4.83	0.6

i. Experience in Procurement Field

The study assessed the level of experience of the staff in the procurement by taking consideration the number of years they have been in procurement field. The results were presented as shown in Table 4.30. most of the staff members (65%) were in the field less than 5 years, 20% of the respondents had worked between 6 and 10 years in their working positions, 8% had worked between 11 to 15 years. 3% of the respondents had worked between 16 to 20 years whereas less than 1% of the respondents recorded that they have more than 21 years in the field of procurement. The study is in agreement with that of Ameyaw, Mensah and Osei-Tutu (2013) cited in (Basheka2015). They observed that procurement staffs mobilize various resources which are tangible and abstract and therefore require complex and advanced set of expertise to enable them make informed decision which reduce frauds to the entities.

Table 4.30: Experience in Procurement Field

Year of experience	Frequency	Percent
Less than 5 years	208	64.8
6 - 10 years	65	20.2
11 - 15 years	25	7.8
16 - 20 years	10	3.1
21 and above years	1	0.3
Total	309	100

In line results were found in a study by Raymond (2018) who concluded that demonstrable skill openly acquirement identifies with not just training level and capabilities of the workforce yet in addition to the expert gauges gained from the experience in the procurement field in the lead of business. The findings reveal that there is a deficient number of experienced personnel as illustrated by the number of years they have been in the procurement department work. The low experience in the staff has a contributive effect into the compliance level of the procurement departments of public universities to the relevant regulatory (Onyinkwa 2015).

4.6.2 Influence of information and communication technology on procurement regulatory compliance level

The study examined the effect that information and communication technology have on the compliance of procurement department to the regulatory level. The specific elements that the study addressed were: usage of internet and extranet, access to personal computers, e-procurement application, fiber connections accessibility, ICT specialists' availability, ICT tools and software availability and upgrading of ICT infrastructure. The rates of the measures were assessed on the practice of the relevant measures.

i. Internet and Extranet

The investment on installation of internet and extranet across the universities was examined in this study to determine the efficiency in communication within different

levels across the departments. The illustrations of the findings are as shown in Table 4.31. The findings reveal that the majority of the respondents (98%) agreed that there is no installation of intranet and extranet done in the procurement department while 1.3% of them recorded the installation is in place.

Table 4.31: Installation of internet and extranet

	Frequency	Percent
Yes	4	1.3
No	302	97.7
Missing	3	1.0
Total	309	100

Similar results were found in a study by Shale, Iravo and Guyo (2014) that the use of Information and Communication Technology in public procurement has not fully been implemented since most of the procurement functions are subjected to manual procedures prone to manipulations by procurement managers.

The findings revealed that the internet connection in the procurement departments in the public universities is poor. This is likely to have an overall effect on the communication and information relay across the necessary departments. Further, it feeble the research capability or needful clarifications that need research in procurement.

ii. Personal computers

The study assessed on the accessibility of staff to personal computers. This was done in order to assess the convenience of the staff in conducting the individual roles assigned to them. The illustration of the findings is shown in Table 4.32. Majority (98%) of the respondents replied that they have access to personal computers whereas 1.3 % indicated that they have no access to personalized computers. The findings show that there is adequate number of personal computers allocated to the staff in procurement.

Table 4.32: Access to personal computers

	Frequency	Valid Percent
Yes	305	98.7
No	4	1.3
Total	309	100

iii. Tendering through E-procurement

This study aimed at determining the practice frequency of tendering using e-procurement. The illustrations of the results are as shown in Table 4.33. The findings reveal that greater part of the respondents were in concurrence with the explanation that offering is somewhat done through e-procurement where 7% concurred while 82% unequivocally concurred. 3% of the respondents had an unbiased assessment over the assessment. 8% of the respondents couldn't help contradicting the assertion. The mean of the opinion was high at 4.58 while the standard deviation was at 1.04.

An in-line study was done by Gelderman *et al.* (2017) on non-compliance of European Union tendering directives and further elaborated on a survey study on the impact of these reasons on compliance level with the directives. He points out at potential reasons for (non-) compliance, which includes the purchaser procurement ethical standards, the perceived procurement expertise, information and communication technology and the expected top management support and readiness of suppliers to take action in case of non-compliance. The study concluded that the four factors are influential to modern tendering.

The findings show that e-procurement is partially used in the tendering process. This is likely to contribute to tender rules violation and missing follow-up on the ongoing tenders which is a violation on the regulatory of procurement ethical standards.

iii. Customization of procurement transactions in e-procurement

This study examined the customized use of e-procurement in transactions. The illustrations of the findings are as shown in Table 4.33. Majority of the respondents agreed to the statement all procurement transactions are not customized in e-procurement where 94% strongly agreed whereas 4% agreed. 0.3% of the respondents were undecided over the opinion whereas 1% totally disagreed with the statement. The mean of the statement response was very high at 4.91 and a low standard deviation of 0.45.

A study by Liu (2016) was similar to the findings of this study and revealed that Information and Communication Technology systems provides the capability for collaboration and exchange of transactions among organizational involved in procurement activities as well as supply chain functions in an easy way though e-procurement.

From the findings it's evident that there is low customization of transactions with the help of e-procurement. This may have an effect on the transactions transparency. The negative effect of missing transactions is as well likely to happen. The low usage and application of e-procurement is likely to block transparency and efficiency in tendering and transactions, the records are as well likely to be affected.

iv. Accessibility to Fibre connections

The study sought to determine whether there is accessibility to Fiber connections by the staff. This was done in order to assess the connectivity and speed of the information relay in the department of procurement. The illustrations are as in Table 4.33. Majority of the respondents agreed with the statement that Fiber connections inaccessible by staffs. 9% of the survey participants agreed to the statement and 88% strongly agreed. 1% were undecided whereas 2% of the respondents agreed with the statement. The mean of the statement response was 4.82 whereas the standard deviation was at 0.6.

The finds revealed that there is deficient fiber connections in the procurement offices which makes the process of information relay with the other relative departments slow and tedious. The slow information processing is often unreliable and easily tampered with. This may be a cause of violation of compliance to procurement regulatory.

v. Availability of ICT specialists

The study focused on assessing the specialists available in the procurement department to solve the ICT issues in this department. The results are as shown in Table 4.33. The findings show that majority were in agreement with the statement that procurement department lack ICT specialists. 10% of the survey participants agreed and 87% further strongly agreed to the statement. There were few respondents (0.3%) who had undecided opinion possibly as a result of unawareness on the possible task in procurement to be conducted by ICT specialists. Few more respondents (3%) disagreed with the statement. The mean response of the opinion statement was high and a low standard deviation which were 4.79 and 0.67 respectively.

A review by Public Procurement and Oversight Authority (2017) revealed that majority of procurement organisation's experience shortage in specialists of general information about procurement regulatory compliance, principles, framework, procedures and procurement process, which was found similar to the results of this study.

The findings reveal there is deficient number of ICT specialists in procurement filed in the public universities. This possibly is a result of low application on electronic means of information relay and recording such as e-procurement. This deficiency is impactful on the procurement regulatory procedures. The department moreover may be affected by low internet connection leading to low usage of modern procurement software.

vi. Adequacy of ICT tools and software

The study researched on the availability of the needful tools and software of ICT to aid in procurement activities and recording. The illustrations are as shown in Table 4.33. There was an agreement from most of the respondents with the statement that ICT tools and software available are inadequate and should be improved, 4% agreed and 92% strongly agreed. 1% of the respondents had a neutral opinion. However, a few respondents (3%) totally disagreed with the statement. The mean of the responses was high and the standard deviation was low with values 4.82 and 0.71 respectively.

Similar results were in a study by Nderui and Were (2016) on the development, maintenance and use of computer systems, software's and networks for the processing and distribution of data, and concluded that the inadequacy of ICT equipment is rampant and this inhibit data flow and processing in organizations. Further, the use of Information and Communication Technology and tools in public procurement has not fully been implemented since most of the procurement functions are subjected to manual procedures prone to manipulations by procurement managers (Shale, Iravo & Guyo, 2014).

The findings imply that there is inadequate ICT tools and software useful in procurement. This may be attributed to by the noted low specialists of ICT and a low internet connectivity in the department. There is need for improvement in the ICT tools useful in procurement as the respondents indicated.

vii. ICT infrastructure upgrade

The level of upgrade of ICT infrastructure following the principle of the universities was assessed in this study. This was to determine whether the stated universities standards are met in the procurement field. The illustrations of the findings are illustrated in Table 4.33. The greater part of the respondents were in concurrence with the explanation that ICT foundation is heedlessly overhauled in the college. 12% consented to the assertion and a further 85% unequivocally concurred. There was a couple of respondents (3%) who contradicted the proclamation. The responses

mean was 4.79 whereas the standard deviation was low at 0.63.

The results concurred with Getuno, Ngugi, Awino and Ondieki (2015) who showed that the general reason for low consistence level with the obtainment Act was because of absence of infrastructure which limited information and communication sharing as well as low top management support which killed employee’s morale as a major factor affecting procurement regulation compliance level. The findings implied that the overall infrastructure of ICT framework have not complied with the standards of the respective public universities. This is likely to cause poor ICT application procedures in procurement. The resultant effect is the violation of procurement regulatory. The further implication is the current ICT upgrade is haphazardly done.

Table 4.33: Information and communication technology

Statement					Strongly	Mean	Std Dev
	Strongly Disagree	Disagree	Undecided	Agree	Agree		
Tendering is partially done through e-procurement	4.53%	3.88%	2.91%	6.80%	81.88%	4.58	1.04
All procurement transactions are not customized in e-procurement	0.97%	0.00%	0.32%	4.53%	94.17%	4.91	0.45
Fibre connections inaccessible by staffs	1.29%	0.65%	0.65%	9.39%	88.03%	4.82	0.6
Procurement department lack ICT specialists	1.62%	1.29%	0.32%	10.03%	86.73%	4.79	0.67
ICT tools and software available are inadequate and should be improved	2.59%	0.65%	0.65%	4.21%	91.91%	4.82	0.71
ICT infrastructure is haphazardly upgraded in the university	1.29%	1.29%	0.00%	11.97%	85.44%	4.79	0.63
Aggregate						4.79	0.68

viii. Application of ICT infrastructure upgrade

The study sought the individual opinions of the respondents on how the application of ICT should be embraced. The responses were analyzed and opinions classified.

Most of the respondents recorded that attending ICT seminars, workshops and trainings would help the embracing of culture of applying the ICT skills in procurement. Other respondents suggested that the ICT department should be merged with the procurement department. Further, the respondents suggested that the public universities should recruit members with ICT skills to input their skills in procurement department. The ICT infrastructure of the public universities should be upgraded to the standard in the universities.

4.6.3 Influence of procurement ethical standards on procurement regulatory compliance level

The study examined the effect that procurement ethical standards have on the compliance of procurement department to the regulatory level. The specific elements that the study addressed were: disciplinary actions and proceedings on staff, codes of ethics and practice, response to complaints, personal interests' value and relationships of staffs and suppliers.

i. Disciplinary actions on procurement staffs

The study focused on examining whether there exist disciplinary actions on staff who don't follow the set standards of procurement. The results were analyzed in Table 4.34. Larger part of the respondents consented to the explanation that disciplinary activities are inadequately directed on acquisition staffs. 4% consented to the assertion and a further 91% unequivocally concurred. Notwithstanding, 2% of the respondents had an unbiased assessment though 3% of the respondents totally disagreed with the statement. The mean of the response was high and a low standard deviation at values 4.82 and 0.67 respectively.

The results concur with research done by Hui *et al.* (2017) and revealed that the creator's expresses that moral practices is a key fixing in tending to institutional change in broad daylight obtainment. Unethical behavior exhibited by procurement professionals can have a damaging effect on acquirement execution, aggressiveness and additionally consistence and failure to action on the unbecoming actions by staff have led to poor practices in procurement.

The findings imply that staff who violate the procurement regulations are not taken responsible of their actions and there is no follow up on the actions. The poor responsibility take up of the staff deteriorate the actions of staff of failure to observe the rules of procurement as stated by the professional procurement bodies and the university.

ii. Biasness in proceedings of disciplinary action

The study assessed whether there is biasness in hearings and proceedings of disciplinary actions on the staff with irregular behaviours. The results if the responses were presented in Table 4.34. Most of the respondents (95%) were in agreement with the statement that victims of unbecoming behavior are given a biased hearing during disciplinary action proceedings. 4% of the respondents agreed and further 91% strongly agreed. Few of the respondents (2%) had no information on the issue whereas 2% disagreed with the statement. The response mean of the statement was 4.84 and the standard deviation was low with a value of 0.63.

The findings were similar to research by Arrowsmith (2015) who noted that there are blended conclusions with respect to the impact of requirement on compliance level, contends that authorization may make violators more modern in how to avert, and hide identification by the authority and therefore unbecoming behaviours of staff is not taken action against. The implication of the findings is that the disciplinary steps taken on staff with unbecoming behaviours is compromised. This is likely to be caused by poor staff disciplinary team. This state is likely to lead to an effect on the compliance of procurement to the regulatory.

iii. Procurement code of ethics compliance

There is an expressed acquisition governing set of principles that need to consent to. This study inspected the consistence of staff to the acquirement moral norms. The outlines are as displayed in Table 4.34. The assessment on the explanation that staffs neglect to adhere to acquirement set of principles was settled on by numerous respondents than them who differ on the proclamation. 96% of the respondents concurred to the statement. A low percentage of respondents (2%) had not made up

their mind whereas 2% of them totally disagreed with the statement. The mean of the responses collected in the survey was 4.76 and the standard deviation was 0.76.

The results concurred with a study done by Rossi (2017) and revealed that the moral code is not just the hindrance of erroneous conduct yet in addition an empowering agent for all individuals from the association to protect the moral heritage of the firm. Further, A work team that is not satisfactorily taught in procurement matters will prompt hindering results including rupture of the set of principles and code of ethics set for them to guard their working directives (victor, 2015).

The findings revealed that there is compromise in following governing set of principles in acquisition by the staff. This might have come about because of a significant number of them being uninformed about any current acquirement set of rules to be trailed by the staff. The staff in obtainment further may have been contributed by them not having spent significant time in their learning acquisition code.

iv. Availability of Code of practice

The study assessed the availability of a code of practice to be followed by the staff in procurement. The illustrations of the findings is as shown in Table 4.34. An opinion was taken on the statement that code of practice for department is unavailable to all the staffs which was agreed on by the majority. 6% of the respondents agreed and 80% strongly agreed. Few numbers of respondents (10%) recorded a disagreement whereas a few others (4%) were unaware of an existing code of practice to be followed by the department. The mean of the responses was 4.51 and the standard deviation was 1.11.

According to Mathenge (2017) the current Kenya procurement management is deficient of ethical inclination and should employ ethical considerations to re-invent itself. Further, the ethical inclination was revealed to serve as a work guideline to the staff. Similar results were shown in a study by Lagat *et al.* (2016) who notes that the most persistent barrier to combating corruption is the culture of secrecy in public procurement and associated government functions is securing and implementing a

code of practice for the staff. The findings imply that in most public universities, the code of practice if it exists is not availed effectively to the staff in the procurement department. This may have an effect on the compliance level of the staff to the procurement regulatory. This should be an essential and vital concept that should be given to all staff in this department.

v. Staffs' value of personal interests

The study had an aim of investigating the preference of the staff in terms of their personal interest in gaining financial benefits to their personal performance. The findings were illustrated in Table 4.34. The statement that procurement staffs value personal interest in form of financial gain more than their performance had a different response across the survey participants. Majority (96%) agreed to the statement where among them who agreed 85% strongly agreed. 2% of them had not made up their mind on their opinion concerning the issue. The rest (2%) totally disagreed with the statement. The responses mean of this statement was 4.78 and the standard deviation was low at a value of 0.61.

Findings in a study by Nderui and Were (2016) were similar and showed that unethical public procurement behaviour, which involves conflicts of interest and corruption, is a problem since relationships in the procurement department, ties with other departments in the business and with suppliers could be damaged. The findings imply that the personal interest of the staff in acquisition is far much surpassing the worry for the exhibition of obtainment administrations. Consequently there need be use of better recording and follow-up of acquirement activities from the providers.

vi. Sensitivity to bidders' complaints

The study sought to determine whether there is sensitivity and reaction to the bidders' complaints. This is to check the compliance of the staff to the code of ethics and regulatory. The findings were revealed as in Table 4.34. An opinion was taken on the statement that procurement department is very insensitive to bidders' complaints. Most of the respondents (95%) agreed to the statement with 84% recording a strong agreement. 3% of the respondents had a neutral opinion regarding the issue. Few other

respondents (2%) disagreed with the statement. The mean on the responses of the statement was 4.74 and the standard deviation was 0.67.

The findings imply that there is a low response to the received complaints from the bidders. The study further shows that the complaints are not welcomed to be addressed by the procurement department. This have contributed to the procurement compliance level to the regulatory.

vii. Acting on of Bidders' complaints

The study assessed whether the procurement department is responding and acting on the filed complaints from the respective bidders. Larger part of the respondents (95%) consented to the explanation that grievances got from planned bidders are not followed up on with the majority of them (82%) firmly consenting to the assertion. 1% of the respondents had not settled on their stand on the issues. 3% of the respondents totally disagreed to the statement. The mean of the responses was found to be 4.71 while the standard deviation was 0.75.

Similar findings were revealed in a report by Public Procurement and Oversight Authority (2007) indicated that the Public Procurement Directorate to screen general society acquiring process in Kenya and the Public Procurement Complaints, Review and Appeals Board to deal with emphasizing the need to address the customers' needs by attending to their complaints.

The study revealed that the received complaints are ignored and not acted upon in most cases similarly. The un-responded complaints leads to poor relation of public universities to the prospective suppliers of their products. Further, the poor response causes deterioration of customerrelations.

viii. Suppliers gifts to staff for compromise

This study focused on examining whether the staff in the procurement receive gifts from the suppliers in intention of compromising their bidding decisions. The illustrations of the findings areas shown in Table 4.34. Larger part of the respondents consented to the explanation that a few providers offer gifts to obtainment sets up

determined to think twice about to impact buying choices. 8% of the respondents concurred and further 85% strongly agreed to the statement. Few respondents (2%) had a neutral opinion whereas 5% of totally disagreed with the opinion. The mean of the responses was 4.7 and the standard deviation was 0.83.

The findings imply that there is a compromising practice of receiving gifts by the staff in order to be biased in their purchasing decisions and tendering. The compromise practice is a violation of the regulations by the staff. These actions can keep on rising if necessary disciplinary actions are not taken on the staff with the unbecoming behaviour.

ix. Personal relationship between suppliers and procurement managers

The research tried to examine the presence of connections of supervisors in the procurement office and specific providers. The delineations of the discoveries as displayed in Table 4.34 uncovered that larger part of the respondents (94%) agreed with the statement that there is presence of close personal relationship between suppliers and procurement managers. 2% had not made up their mind on the issue whereas 4% of them disagreed with the statement. The mean of the responses received was 4.74 and the standard deviation was 0.77.

Similar results were found in a study by Lagat *et al.* (2016) who notes that the most persistent barrier to combating corruption is the culture of secrecy and hidden relationships of staff, clients and suppliers in public procurement and associated government functions. Further, a study by Nderui and Were (2016) reveals that conflict of interest and corruption, is an issue since they may damage relations within the procurement department, the relationship with other departments in the company, and with suppliers.

The findings imply that there are personal relations existing between the suppliers and managers in the procurement department. The relations are likely to influence the decisions made in the procurement departments which violates the regulations set of standards in procurement.

Table 4.34: Procurement ethical standards

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean	Std Dev
Disciplinary actions are poorly conducted on procurement staffs	1.29%	1.94%	1.62%	3.56%	91.59%	4.82	0.67
Victims of unbecoming behavior are given a biased hearing during disciplinary action proceedings	1.62%	0.65%	1.62%	4.21%	91.91%	4.84	0.63
Staffs fail to stick to procurement code of ethics	1.29%	2.91%	1.94%	6.47%	87.38%	4.76	0.74
Code of practice for department is unavailable to all the staffs	5.18%	4.85%	3.56%	6.47%	79.94%	4.51	1.11
Procurement staffs value personal interest in form of financial gain more than their performance	0.65%	1.29%	2.27%	11.00%	84.79%	4.78	0.61
Procurement department is very insensitive to bidders complaints	0.97%	1.29%	3.24%	11.33%	83.17%	4.74	0.67
Complaints received from prospective bidders is not acted upon	1.94%	1.94%	0.65%	13.92%	81.55%	4.71	0.75
Some suppliers offer gifts to procurement staffs with the intention of compromising them to influence purchasing decisions	2.27%	2.59%	2.27%	8.41%	84.47%	4.7	0.83
Presence of close personal relationship between suppliers and procurement managers	1.94%	2.27%	1.29%	8.41%	86.08%	4.74	0.77
Aggregate						4.73	0.75

4.6.4 Influence of top management support on procurement regulatory compliance level

This study focused on examining the impact of top management support on procurement regulatory compliance level. Specifically, the elements focused on were

total quality management, motivation and rewards to staff, working environment, authority of individual roles and work. The results of the findings are well illustrated in Table 4.35.

i. Implementation of Total Quality Management (TQM)

The study sought to determine the management weight of concern over the importance of implementation of TQM. As per the illustrations in Table 4.35, majority of the respondents agreed with the statement that top management ignores the importance of implementation of TQM. 5% agreed with the statement and further 94% strongly agreed with the statement. Very few respondents (1%) disagreed with the statement. The mean of the responses was high and the standard deviation was low with values 4.92 and 0.39 respectively.

In a similar linked study Obanda (2016) addressed that resilient institutional support by top levels management is required by procurement employees to stimulate honesty, integrity, monitor the public procurement process and apply procurement regulations correctly. Further, Odhiambo and Kamau (2016) concluded relatively that to ensure that effective compliance with procurement regulatory principles are practiced and procurement non-compliance are avoided, regular supervision and administration must be safeguarded, by implementing quality management from the high management in procurement department.

The findings imply that the importance of implementing quality management is not well known to the top management in the procurement department and therefore, ignorance to comply with the regulatory is evident.

ii. Hindrance of adoption of TQM

The study focused on examining the existence of hindrances on adoption of TQM among the procurement staff. The illustrations in Table 4.35 show that majority of the survey participants were in agreement with the statement that top management hinders procurement staffs to adopt TQM. 6% were in agreed and further 93% strongly agreed to the statement. A total of less than 1% of the respondents were

undecided whereas others were disagreeing with the statement. The mean of the responses was high at 4.91. The standard deviation was low at 0.41.

As referred to by Geo (2017) compliance culture involves association which must begin in the meeting room and ought to be reflected, vested and confirm in executives possess practices and mentalities as directed and monitored by the top management. The results further revealed that management affects the compliance of the procurement with the regulatory. The study results implied that there exists a hindrance from the top management for the staffs to engage and enhance adoption and application of total quality management in procurement. This hindrance is likely to block the application of regulatory procedures and maintenance of ethics within the department.

iii. Performance motivation and rewards to staff

Staff and employees are in many circumstances motivated through rewards in their performance from the top management. This study sought to examine the application of this strategy of motivation amongst the employees. The illustrations shown in Table 4.35 show the opinion of different respondents on the statement that top management fails to motivate and reward staffs for their effective performance in quality provision. The results revealed that 89% of the respondents agreed with the statement. 3% of the respondents had a neutral opinion over the issue. Few respondents (8%) totally disagreed with the statement. The mean of the responses and the standard deviation was 4.59 and 1.01 respectively.

The findings imply that the top management have not been motivating the staff individually for exemplar performance. The deficient motivation strategies is likely to impact the regulatory compliance since the staff will follow more their personal value in the working rather than the performance of the procurement department.

iv. Working environment

This study sought to determine the condition of relation between the top management and staff. The illustrations are as shown in Table 4.35. Most of the

respondents agreed with the statement that there is a poor working environment between the procurement staffs and the top management where 98% strongly agreed to the statement. Other few respondents were undecided in their opinion (1%) and few disagreed with the statement (1%). The mean of the responses was high at 4.89. The standard deviation was low at 0.49.

The findings imply that there is a poor working environment between the procurement staffs and the top management. The poor relationship is likely to lead to underperformance in procurement. The unity among the staff across the levels of the management is paramount in an organization.

v. Authority of employees to conduct their duties freely.

The work and duties discharged to a worker should be done with freedom. This study sought to determine the authorization of the staff to perform their duties. The illustrations are as shown in Table 4.35. Majority of the respondents (99%) were in agreement with the statement that top management denies employees the required authority to do their work. The rest of the respondents (1%) disagreed with the statement. The mean of the responses and the standard deviation was with the values 4.92 and 0.39 respectively. This indicated that the mean was high and a low standard deviation.

Similar findings were noted by Collier (2013) that authorization to perform the assigned duties has a more noteworthy administrative effect past the violators and reminds staffs and others associated with procurement duties of the dangers appended to an inability to satisfy those obligations.

The findings implied that the employees are denied freedom to discharge their duties as assigned to them by the top management. This shows there is violation of some processes in the procurement department in order to hinder some transparency in the activities. These actions are a violation to procurement regulatory.

vi. Resources providence in work

The availability of resources for the employees to perform their duties should be a vital consideration. The study sought to determine whether the needed resources in the procurement department. The results in Table 4.35 shows that most of the respondents were in agreement with the statement that top management provides employees with the required resources to do their assigned duties. 99% of the respondents recorded an agreement, 1% recorded a disagreement with the statement. The mean of the responses was 4.92 and the standard deviation was 0.39. The mean was high and the standard deviation of the responses was low.

Concurring results were revealed in research by Antoncic and Hisrich (2016) who notes that managers can represent different styles which involve a fast adaption and acceptance of employee's valuable opinions, championing ideas, peoples acknowledgement to do and complete forward ideas, providing necessary resources, or introducing entrepreneurship in different aspects like manners, procedures and processes in the firm.

The findings revealed that the resources needed by staff to do their work are readily available. The resources are crucial for the continuous run of this department and therefore the staff are in a position to discharge their duties without interruptions of resources deficiency.

Table 4.35: Top management support

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean	Std Dev
Top management ignores the importance of implementation of TQM	0.32%	0.65%	0.00%	5.18%	93.85%	4.92	0.39
Top management hinders procurement staffs to adopt TQM	0.65%	0.00%	0.32%	5.50%	93.53%	4.91	0.41
Top management fails to motivate and reward staffs for their effective performance in quality provision	3.88%	4.21%	3.24%	6.80%	81.88%	4.59	1.01
There is a poor working environment between the procurement staffs and the top management	0.65%	0.32%	0.32%	11.33%	87.38%	4.84	0.49
Top management denies employees the required authority to do their work	0.32%	0.32%	0.00%	8.74%	90.61%	4.89	0.4
Top management provides employees with the required resources to do their assigned duties	0.32%	0.65%	0.00%	4.53%	94.50%	4.92	0.39
Aggregate						4.85	0.52

4.6.5 Influence of organizational culture on procurement regulatory compliance level

The study sought to determine the impact that organizational culture have on procurement regulatory compliance level. The study focused specifically on the elements which included supervision of overall functioning, supervision of contracts awarding, adherence to procurement act and regulations, compliance of procurement procedures, compliance audits and procurement reviews and assessments.

i. Internal reorganization of processes

This study focused on assessing whether there is internal re-organization of processes in the universities. The illustrations of the findings are as shown in Table 4.36. The majority of the respondents were in agreement with the statement that internal reorganization of processes is pursued to enhance the organisations innovativeness. 89% of the respondents agreed to the statement with among them 85% strongly agreeing. 2% of them had a neutral opinion over the issue. 9% of the respondents disagreed with the statement. The mean of the responses and the standard deviation was 4.61 and 1.03.

Similar findings were revealed by Ndumbi and Okello (2015) who established a positive significant relationship between staff training and the level of compliance to PPADR. The study concluded that staff training influences compliance to PPADR.

ii. Organization communication

This study focused on assessing whether there are well-established organization communication channels and processes in the universities. The results are as presented in Table 4.36. There was an agreement by the majority that the organization has communicated and institutionalized sanctions to be applied in cases of poor performance. Most of the survey participants (92%) were in agreement with statement, 2% of them were undecided and had no idea over the issue whereas 6% of them disagreed with the statement. The mean of the responses was 4.61. The standard deviation was 1.03.

iii. Interventions to minimize resistance to change

This study focused on assessing whether there are interventions to minimize resistance to change in the universities. The results were presented in Table 4.36. There was an agreement with the majority of the respondents with the statement that the organization has put in place interventions to ensure there is no resistance to change during strategic management implementation. 85% agreed that they adhere to the regulations, 3% had undecided decision concerning this issue whereas 12%

totally disagreed with the statement. The mean of the responses was 4.47 and the standard deviation was 1.16.

iv. Employee training and empowerment

This study focused on assessing whether employee training and empowerment are upheld in the universities. The illustrations of the findings are as shown in Table 4.36. An opinion on the statement that more emphasis on employees' training and empowerment is considered in our organisation was taken. Majority of the survey participants (90%) were in agreement with the statement. Few respondents (3%) had a neutral opinion over the statement. 7% of the respondents totally disagreed with the statement. The mean of the responses was 4.62 whereas the standard deviation was 0.96.

v. Employee knowledge of general decisions

This study focused on assessing whether employee knowledge of general decisions are upheld in the universities. The illustrations are as shown in Table 4.36. On the statement that employees' better knowledge of general decisions of the organization is of utmost benefit to the organisation, there was a mass agreement (93%) from the respondents with the statement. 1% had a neutral opinion over the issue. A total of 6% of the respondents disagreed with the statement. The mean of the responses was 4.69 and the standard deviation was 0.94.

In a study by Mwangi (2017), similar results were revealed and concluded that employees are more likely to engage in compliance behaviors, which collectively will contribute to organizational compliance. The study 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.

vi. Employee motivation

This study focused on assessing whether employee motivation is upheld in the universities. The illustrations are as shown in Table 4.36. The larger share of the respondents (91%) was in agreement with the statement that the employees are motivated to work more to attain the planned milestones by the company. Other respondents (1%) had a neutral opinion on the statement on compliance auditing whereas 8% of them totally disagreed with the statement. The mean of the responses was 4.69 and the standard deviation was 0.94.

Similar results were found in line with Chogo et al. (2016) who concluded that organization Culture, significantly affects procurement law compliance in the public secondary schools in Kwale County. Basing on the competing values model (hierarchical culture), which involves the enforcement of rules, conformity and attention to technical matters, individual conformity and compliance are achieved through enforcement of formerly stated rules and procedures. Thus, a specific type of culture, characterized by specific values such as openness, trust and honesty lead to employees being more likely to engage in compliance behaviours, which collectively will contribute to organizational compliance.

Table 4.36: Organizational Culture

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean	Std Dev
Internal reorganization of processes is pursued to enhance the organisations innovativeness	3.88%	5.18%	1.94%	3.88%	85.11%	4.61	1.03
Organization has communicated and institutionalized sanctions to be applied in cases of poor performance.	2.91%	2.59%	2.59%	5.18%	86.73%	4.7	0.88
The organization has put in place interventions to ensure there is no resistance to change during strategic management implementation	5.50%	5.83%	3.56%	6.80%	78.32%	4.47	1.16
More emphasis on employees' training and empowerment is considered in our organisation	3.24%	4.21%	2.59%	7.12%	82.85%	4.62	0.96
Employees' better knowledge of general decisions of the organization is of utmost benefit to the organisation	3.56%	1.94%	1.29%	9.06%	84.14%	4.68	0.89
Employees are motivated to work more to attain the planned milestones by the company	3.24%	4.21%	1.29%	3.24%	88.03%	4.69	0.94
Aggregate						4.63	0.98

4.6.6 Procurement regulatory compliance level

This study sought to examine the level of compliance by procurement department in the public universities to the regulatory. Among the specific elements measured were keeping of procuring records, preparation of annual procurement plans, adherence to policies and rules approved and inclusion of procuring methods in the procurement plans.

i. Records maintenance

This study assessed the monitoring and quality of record keeping in the procurement activities undertaken within a period of time. The illustrations in Table 4.37 indicate that the mean of the responses to the statement that all procurement records are poorly maintained in the department files was high at a value of 4.98 and the standard deviation was low at 0.24. Majority of the respondents (99%) indicated that the practice of poor record keeping is high in the procurement department of the public universities.

These findings imply that the poor recording of activities in the department is a cause to compromise to the regulatory and the procurement Act. This act further may lead to poor supplies, unfair contract issuance and loss of contact of prospect suppliers.

ii. Annual procurement plans preparation

The plan relays the direction that the staff will follow and the objectives to achieve in the year. This study sought to identify the availability of the annular plans in the procurement department of public universities. The results were presented in Table 4.37. Majority of the survey participants(99%) indicated a strong agreement with the statement that procurement department fails to prepares annual procurement plans. There were a few respondents (1%) who were in partial agreement there are annular plans. The mean of the responses was high at 4.98 and the standard deviation was low at 0.22.

The findings imply that there is total lack of objectives and annual plans to be achieved and to serve as motivation to the employees. Missing goals in this department makes the staff to be reluctant and therefore they aren't in motivation to hit the set goals.

iii. Adherence to policies and rules

In every organization, there exists rules and regulations governing an area. There are policies to be followed in the procurement field and therefore this study sought to

investigate the compliance to the procurement rules and policies. The results were presented in Table 4.37. The response on the statement that procurement department fails to adhere to the PPOA/PPARB/PPOAB approved policies and rules was strongly agreed on by the majority of the survey participants (89%). 3% were in agreement with the statement partially whereas 8% of the responses indicated that the compliance to rules and regulations was very low. The mean and the standard deviation of the responses was 4.6 and 1.0 respectively.

The findings imply that the violation of ruling and policing in the procurement is a rampant practice. The practice indicates that the procuring activities done are not done in the required standards which is a weakness in the procurement departments.

iv. Inclusion of procurement methods and plan

The study aimed at assessing the existence of plan breakdown and methods to get the plan and goal complete. The illustrations were given in Table 4.37. It was revealed that majority of the respondents strongly agreed (99%) with the statement that procurement plan does not include the procurement methods to be used hence no transparency. However, few respondents (1%) indicated a low agreement to the statement. The mean of the responses was high at 4.97. The standard deviation was low at 0.3.

The findings imply that drawback in the procurement department is the lack of plan and methods to conduct the activities. Lack of plan may lead to compromise of some procedures and therefore lack of transparency in the department. This is in line with Akech (2015) who asserts that lack of plan and methods to conduct procurement activities influence compliance level through collusions.

Table 4.37: A Procurement regulatory compliance level

Statement	0%	20%	40%	60%	80%	Mean	Std Dev
	19% compliance level	39% compliance level	59% compliance level	79% compliance level	100% Compliance level		
All procurement records are poorly maintained in the department files	0.00%	0.65%	0.00%	0.00%	99.35%	4.98	0.24
Procurement department fails to prepares annual procurement plans	0.00%	0.32%	0.32%	0.65%	98.71%	4.98	0.22
Procurement department fails to adhere to the PPOA/PPARB/PPOAB approved policies and rules.	3.56%	4.53%	2.91%	6.80%	82.20%	4.6	1
Procurement plan does not include the procurement methods to be used hence no transparency	0.32%	0.32%	0.00%	0.97%	98.38%	4.97	0.3
Aggregate						4.88	0.44

The respondents were required to provide the following information on transparency in regards to procurement regulatory compliance level in the universities. The information was provided in Table 4.37b.

Table 4.37b: Transparency in regards to procurement regulatory compliance level in this university

YEAR	Number of contracts Awarded in the whole year.	Number of contracts advertised through the print media	Number of contracts completed on time specified	Number of contracts that stalled.
2015	52	13	7	9
2016	36	22	7	2
2017	71	15	8	6

Table 4.37b indicates that on average, the universities were awarded an average of 52 contracts in 2015, 36 contracts in 2016 and 71 contracts in 2017. Likewise, regarding the contracts advertised through the print media, the universities were awarded an average of 13 contracts in 2015, 22 contracts in 2016 and 15 contracts in 2017. Likewise, regarding the contracts completed on time specified, the universities were awarded an average of 7 contracts in 2015, 7 contracts in 2016 and 8 contracts in 2017. The results also indicate that on average, the contracts that stalled in 2015 were 9, in 2016 were 2 and in 2017 the contracts that stalled were 6.

4.7 Diagnostic tests

Before the data was analyzed, exploratory tests were conducted to check whether the data met the requirements of inferential test criteria. Kothari (2014) points out that breaches of hypothesis lead to serious distortions and irrelevant results. The indicators were selected for more assessment and averaged to obtain one score per factor. The factors generated were then tested for their adequacy in inferential testing. Some tests to ensure that the data comply with the fundamental assumptions of inferential testing are based on the following discussions.

4.7.1 Normality Test

Normality is important when it comes to knowing the distribution form and helps to predict the reliable variables (Gel, Miao & Gastwirth, 2009). Normality in parametric experiments is a critical feature. The normality assumption avers that the residuals are normally distributed and have a mean of zero. Histograms and normal probability curves are used to confirm whether the residuals follow a normal probability distribution. If the plotted points of residual in the normal probability curve are fairly close to a straight line drawn from the lower left to the upper right of the graph, then normal distribution of the residuals will have been confirmed (Lind, Marchal & Wathen, 2012).

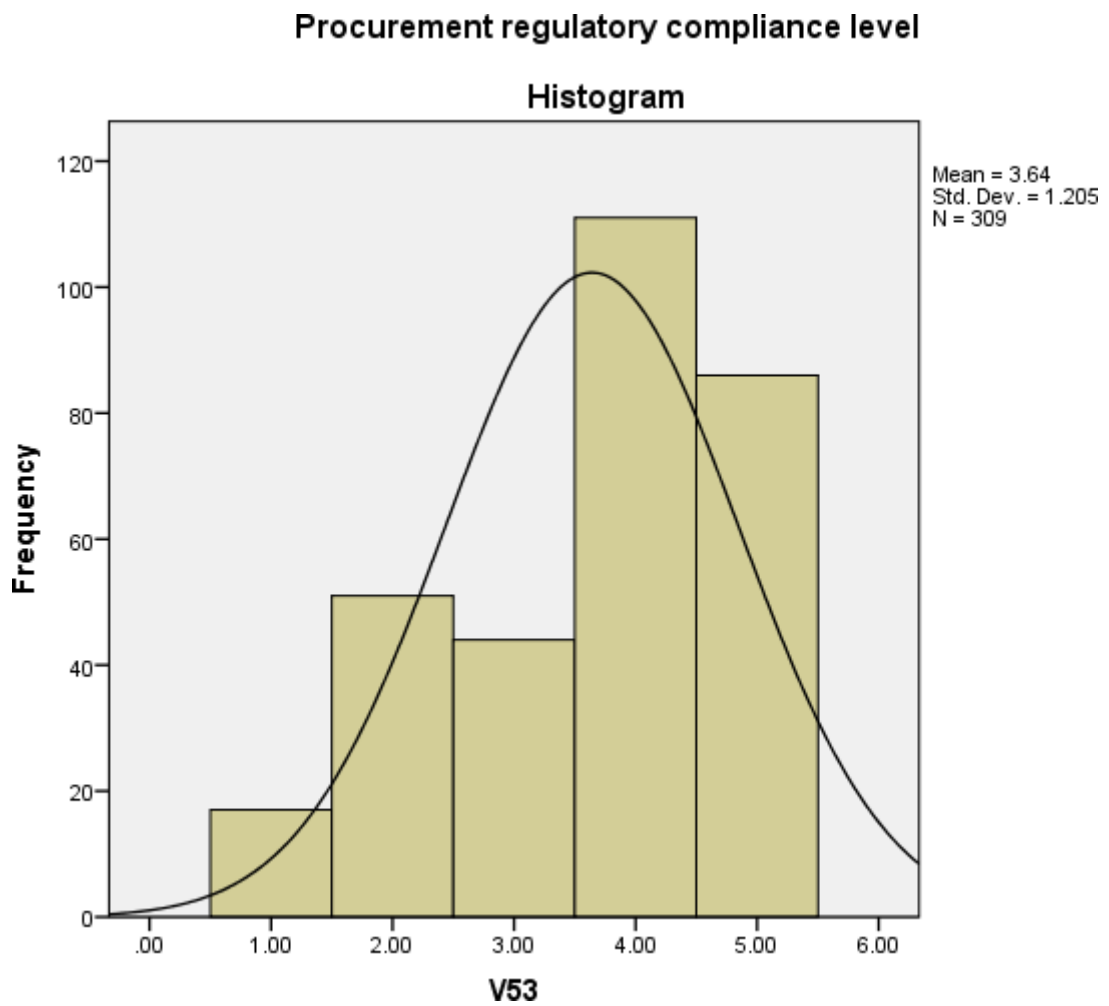


Figure 4.1: Histogram

The results in Figure 4.1 showed that the mean for the distribution was 3.64 and the standard deviation was 1.205. This curve is evenly skewed which show that the data collected is normally distributed.

4.7.2 Linearity

The linearity assumption was tested using a scatter plot. The scatter plot will test the linearity of the data, if the data distribution has a linear trend line, then the data is linear. Figure 4.3 shows the results.

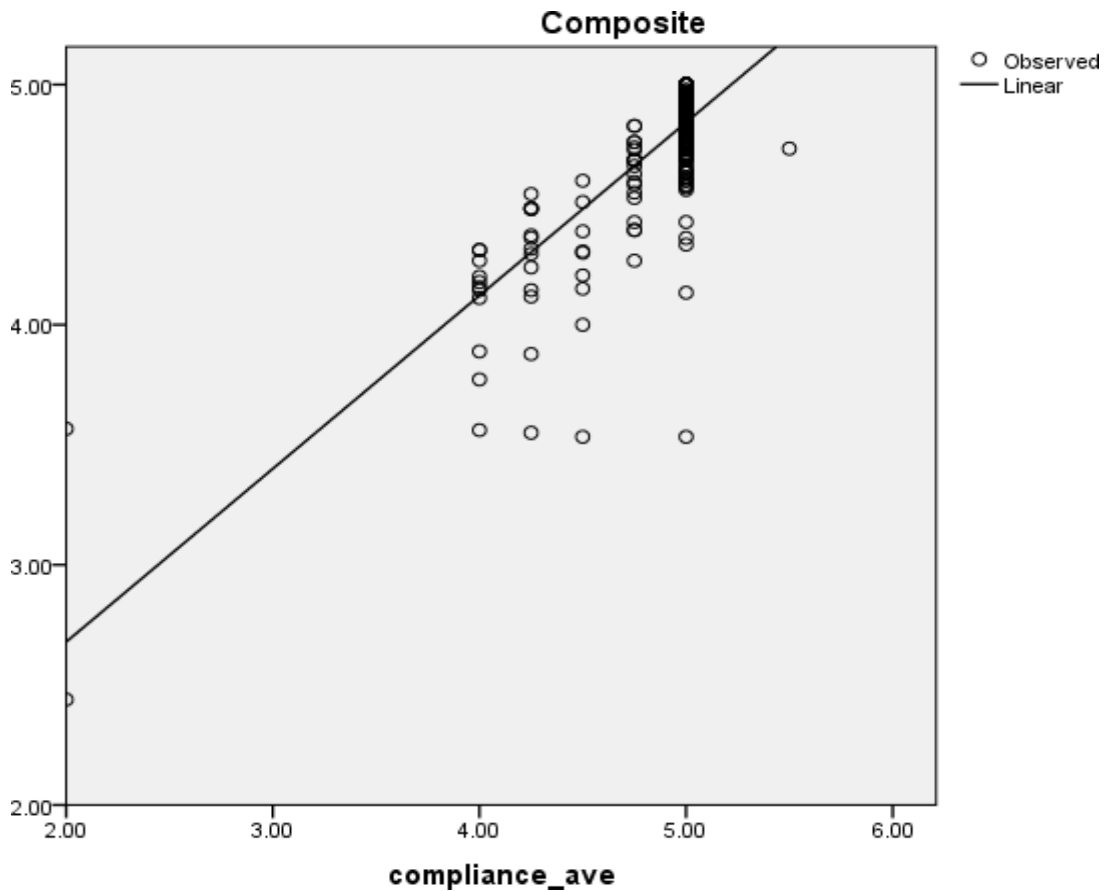


Figure 4.2: Scatter plot

The findings of the scatter plot reveal that the data have a linear relationship, and therefore the assumption of linearity have been met.

4.7.3 Multicollinearity

According to William, Burke, Beckman, Morgan, Daly and Litz (2013) multicollinearity refers to the presence of correlations between the predictor variables. In severe cases of perfect correlations between predictor variables, multicollinearity can imply that a unique least squares solution to a regression analysis cannot be computed (Field, 2015). Multicollinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors (Belsley, Kuh & Welsch, 2014).

Table 4.38: Multicollinearity test

Variables	Tolerance	VIF
Procurement expertise	0.655	1.528
Information and communication technology	0.681	1.469
procurement ethical standards	0.564	1.774
Top management support	0.427	2.342
Organizational culture	0.611	1.638
Average	0.588	1.750

Results in the Table 4.38, shows that the data has no serious multicollinearity. All the variables and average tolerance is above 0.10 while the variance inflated factors for all the variables is less than 10. This shows absence of multicollinearity and is in concurrence with Lind, Marchal and Wathen (2012) assertion that VIF less than 10 is considered devoid of multicollinearity. Tolerance below 0.2 signifies a potential problem. Little multicollinearity is implied when tolerance is close to 1.

4.7.4 Heteroscedasticity

Heteroscedasticity is usually present when the size of the error term differs across values of an independent variable (Fletcher *et al.*, 2012). Heteroscedasticity is indicated when the residuals are not evenly scattered around the line. When the plot of residuals appears to deviate substantially from normal, more formal tests for heteroscedasticity should be performed (Behm, Edmonds, Harmon & Ives, 2013). The error process may be Homoscedastic within cross-sectional units, but its variance may differ across units: a condition known as group wise Heteroscedasticity (Stevenson, 2014). For the purpose of testing heteroscedasticity in this study, Breusch Pagan Test was performed in order to calculate group wise Heteroscedasticity in the residuals. Heteroscedasticity test was run in order to test whether the error terms are correlated across observation in the panel data (Long & Ervin, 2000). As a rule of thumb, if the p value is less than 0.05, the data has the problem of heteroscedasticity.

Table 4.39: Heteroscedasticity test

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity	
chi2(1)	0.923
Prob > chi2	0.1252

Hence, there was no heteroscedasticity since the error term were small and correlated and the p value was greater than 0.05 across observation in the panel data.

4.8 Correlation Analysis

A correlation is used to estimate the strength of the linear relationship between two variables representing how closely two variables co-vary ranging from -1 termed as perfect negative correlation through 0 or no correlation to +1 termed as perfect positive correlation (Jan *et al.* (2015).

Correlation is measured by correlation coefficient that represents the strength of the putative linear association between the variables in question (Joseph & Alan, 2012). A correlation coefficient of zero is an indicator nonexistent of linear relationship between two continuous variables while a correlation coefficient of -1 or +1 indicates a perfect linear relationship. The stronger the correlation between variables, the closer the correlation coefficient comes to ± 1 (Behm, Edmonds, Harmon & Ives, 2013). If the coefficient is a positive, then the variables are directly related meaning that if the value of one variable goes up, the value of the other variable also tends goes up. On the other hand, if the coefficient is a negative then the variables are inversely related meaning that if the value of one variable goes up, then value of the other variable goes down (Joseph & Alan, 2012).

According to Artusi *et al.* (2012), Pearson correlation coefficient is good in measuring the association between couples of continuous data that is collected on the same experimental unit following a bivariate normal distribution. Correlation coefficients of 0.10 are small, 0.30 are medium and of 0.50 are large in terms of magnitude of their effect sizes (Cohen, 2014). The study used Pearson Correlation

Coefficients because it was deemed to be the best as supported by Jan *et al.* (2011). It the standard method of calculation and showed it to be the best one possible.

4.8.1 Correlation between procurement expertise and procurement regulatory compliance level

The study focused to obtain the relationship that exists between procurement expertise and procurement regulatory compliance level.

Table 4.40: Correlation test of procurement expertise

		procurement expertise	procurement regulatory compliance level
procurement expertise	Pearson Correlation	1	
	Sig. (2-tailed)		
procurement regulatory compliance level	Pearson Correlation	.667**	1
	Sig. (2-tailed)	0.000	

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

The outcomes in Table 4.40 uncovered that there was a positive and huge relationship between procurement expertise and procurement regulatory compliance level ($r = 0.667$, $p = 0.000$). This infers that procurement expertise factors have added to the come about to the degree of consistence to the acquisition administrative. This relationship coefficient determination was among 0.6 and 0.7 showing a solid positive relationship as an element of procurement regulatory compliance level. A 2-tailed test at 95% degree of freedom had a likelihood worth of under 0.05 which inferred that there was a critical relationship between procurement expertise and procurement regulatory compliance level in state funded universities.

4.8.2 Correlation between information and communication technology on procurement regulatory compliance level

Table 4.41: Correlation test of ICT

		information and communication technology	procurement regulatory compliance level
information and communication technology	Pearson Correlation Sig. (2-tailed)	1	
procurement regulatory compliance level	Pearson Correlation Sig. (2-tailed)	.527** 0.000	1

The outcomes in Table 4.41 uncovered that there was a positive and huge relationship among, information and communication technology and procurement regulatory compliance level ($r = 0.527$, $p = 0.000$). This suggested that information and communication technology factors have added to the come about to the degree of consistence to the acquirement administrative. This connection coefficient determination was somewhere in the range of 0.5 and 0.6 demonstrating a moderate positive relationship as an element of procurement regulatory consistence level. A 2-tailed test at 95% degree of freedom had a likelihood worth of under 0.05, which inferred that there was a huge connection among information and communication technology and acquisition administrative consistence level in state funded universities.

4.8.3 Correlation between procurement ethical standards and procurement regulatory compliance level

Table 4.42: Correlation test of procurement ethical standards

		procurement ethical standards	procurement regulatory compliance level
procurement standards	ethical Pearson Correlation	1	
		Sig. (2-tailed)	
procurement compliance level	regulatory Pearson Correlation	.509**	1
		Sig. (2-tailed)	0.000

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

The outcomes in Table 4.42 uncovered that there was a positive and huge relationship between procurement ethical standard and procurement regulatory compliance level ($r = 0.509$, $p = 0.000$). This infers that procurement ethical standard factors have added to the come about to the degree of consistence to the procurement regulatory level. This relationship coefficient determination was somewhere in the range of 0.5 and 0.6 showing a moderate positive connection as an element of procurement regulatory consistence level. A 2-tailed test at 95% degree of freedom had a likelihood worth of not exactly 0.05 which suggested that there was a critical relationship between procurement ethical standards and procurement regulatory compliance level. Correlation between top management support and procurement regulatory compliance level

Table 4.43: Correlation test of top management support

		top management support	procurement regulatory compliance level
top management support	Pearson Correlation	1	
		Sig. (2-tailed)	
procurement compliance level	regulatory Pearson Correlation	.698**	1
		Sig. (2-tailed)	0.000

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

The outcomes in Table 4.43 uncovered that there was a positive and critical relationship between top management support and procurement regulatory compliance level ($r = 0.698$, $p = 0.000$). This suggested that top management support factors have added to the come about to the degree of compliance to the procurement regulations. This connection coefficient determination was among 0.6 and 0.7 demonstrating a solid positive connection as an element of procurement regulatory compliance level. A 2-tailed test at 95% degree of freedom had a likelihood worth of under 0.05 which suggested that there was a huge connection between top management support and procurement regulatory compliance level in state funded universities.

4.8.4 Correlation between organizational culture and procurement regulatory compliance level

Table 4.44: Correlation test of organizational culture

	Organizational culture		procurement regulatory compliance level
organizational culture	Pearson Correlation	1	
		Sig. (2-tailed)	
procurement regulatory compliance level	Pearson Correlation	0.620**	1
		Sig. (2-tailed)	0.000

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

The outcomes in Table 4.44 uncovered that there was a positive and huge relationship between organizational culture and procurement regulatory compliance level ($r = 0.620$, $p = 0.000$). This suggests that organizational culture factors have added to the come about to the degree of procurement regulatory compliance. This relationship coefficient determination was among 0.6 and 0.7 demonstrating a solid positive relationship as a component of procurement regulatory compliance level. A 2-tailed test at 95% degree of freedom had a likelihood worth of under 0.05 which inferred that there was a huge connection between organizational culture and procurement regulatory compliance level in state funded universities.

4.8.5 Overall Correlation analysis

Correlation analysis was done to determine the antecedents of procurement regulatory compliance level in public universities in Kenya.

Table 4.45: Overall Correlation analysis

		procurement expertise	information and communication technology	procurement ethical standards	top management support	organizational culture	procurement regulatory compliance level
procurement expertise	Pearson Correlation	1					
	Sig. (2-tailed)						
information and communication technology	Pearson Correlation	.618**	1				
	Sig. (2-tailed)	0.000					
procurement ethical standards	Pearson Correlation	.471**	.438**	1			
	Sig. (2-tailed)	0.000	0.000				
top management support	Pearson Correlation	.612**	.577**	.730**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
organizational culture	Pearson Correlation	.388**	.398**	.474**	.588**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
procurement regulatory compliance level	Pearson Correlation	.667**	.527**	.509**	.698**	.620**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	

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

4.9 Regression Analysis

To comprehend the connection between the independent and dependent variables regression analysis was performed. Further the review tried the moderating impact

of organizational culture on connection between acquirement elements and obtainment administrative consistence level in the state funded universities in Kenya. Eventually, the degree of the connection among free and ward variable was measured. The T-test measurement and the R2 Test measurement were figured to decide the strength of the connection between the different independent variables (Procurement expertise, Information and communication technology, Procurement ethical standards, Top management support and Organization culture) and the dependent variable (Procurement regulatory compliance level).

4.9.1 Influence of procurement expertise on procurement regulatory compliance level

Regression analysis was done to determine the influence of procurement expertise on procurement regulatory compliance level. Results were presented in Table 4.46.

Table 4.46: Model fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667a	0.445	0.443	0.25622

a Predictors: (Constant), *procurement expertise*

b Dependent Variable: *procurement regulatory compliance level*

The outcomes in Table 4.46 introduced the fitness of model of regression model utilized in clarifying the review peculiarities. Procurement expertise was viewed as good in commitment as an element to procurement regulatory compliance level. This was upheld by coefficient of determination for example the R square of 44.5%. This shows that procurement expertise clarify 44.5% of procurement regulatory compliance level. The outcomes implied that the model applied to interface the relationship. This additionally suggests that 55.5% of the variety in the dependent variable is ascribed to different factors not covered in this model.

Table 4.47: ANOVA for Procurement expertise

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.156	1	16.156	246.098	.000b
	Residual	20.154	307	0.066		
Total		36.31	308			

a Dependent Variable: *procurement regulatory compliance level*

b Predictors: (Constant), *procurement expertise*

Table 4.47 gave the outcomes on the examination of the fluctuation (ANOVA). The outcomes showed that the model was genuinely critical. This was upheld by a F measurement of 246.098 and the revealed p value (0.000) which was not exactly the traditional likelihood of 0.05 significance level. The outcomes inferred that obtainment aptitude is a decent indicator of acquirement administrative consistence level. The discoveries additionally concurred with that of Raymond (2018) in USA Health area states that absence of obtainment ability and morals without really trying to hide procurement prompts contamination, which in the end hinders consistence level.

Table 4.48: Regression of coefficients for procurement expertise

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.15	0.175		12.304	0.000
	Procurement expertise	0.57	0.036	0.667	15.688	0.000

a Dependent Variable: *procurement regulatory compliance level*

Relapse of coefficients brings about Table 4.48 uncovered that procurement expertise and procurement regulatory compliance level are emphatically and essentially related ($\beta = 0.667$, $p = 0.000$). This infers that a unit expansion in acquirement skill would prompt expansion in acquisition administrative consistence level by 0.667. The discoveries likewise were in concurrence with that of Rossi (2017) that the ability quality isn't simply the obstacle of incorrect lead yet what's more an engaging specialist for all people from the relationship to secure and maintain the quality administrations and moral legacy of the firm. Acquirement skill is a fundamental essential in obtainment as it impacts settling on the right and vital buying choice with certainty and inside a brief time frame (Lysons & Farrington, 2016).

Hypothesis testing for procurement expertise and procurement regulatory compliance level

The speculation was tried by utilizing various straight relapse (Table 4.48, above). The acknowledgment/dismissal measures was that, assuming the p value is more noteworthy than 0.05, the invalid theory is acknowledged yet in the event that it's under 0.05, the invalid speculation is dismissed. The invalid speculation was that procurement expertise doesn't altogether impact procurement regulatory consistence level in state funded colleges in Kenya. Results show that the p-value was $0.000 < 0.05$. The determined t-esteem was $t_{cal} (15.688) > t_{critical} (1.96)$. This demonstrated that the elective speculation was acknowledged that there is a huge connection between procurement expertise and procurement regulatory consistence level in state funded colleges in Kenya. Accordingly, the review inferred that procurement expertise impact acquirement administrative consistence level.

H₀₁: procurement expertise significantly influences procurement regulatory compliance level in public universities in Kenya.

4.9.2 Influence of information and communication technology on procurement regulatory compliance level

Regression analysis was done to determine the influence of information and communication technology on procurement regulatory compliance level. Illustrations of the findings were presented in Table 4.49.

Table 4.49: Model fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.527 ^a	0.278	0.276	0.29219

a Predictors: (Constant), *information and communication technology*
 b Dependent Variable: *procurement regulatory compliance level*

The results in Table 4.49 presented the fitness of model of regression model used in explaining the survey quirks. Information and communication technology was considered satisfactory in explaining procurement regulatory compliance level. This was maintained by coefficient of confirmation for instance the R square of 27.8%. This shows that information and communication technology explain 27.8 % of procurement regulatory compliance level. The results suggested that the model applied to interface the relationship. This similarly proposes that 72.2% of the assortment in the dependent variable is credited to various elements not trapped in this model.

Table 4.50: ANOVA for information and communication technology

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.1	1	10.1	118.309	.000
	Residual	26.209	307	0.085		b
	Total	36.31	308			

a Dependent Variable: *procurement regulatory compliance level*
 b Predictors: (Constant), *information and communication technology*

Table 4.50 gave the results on the examination of the change (ANOVA). The results showed that the model was quantifiably tremendous. This was maintained by a F estimation of 118.309 and the uncovered p value (0.000) which was not actually the conventional probability of 0.05 significance level. The results proposed that information and communication technology is an acceptable mark of procurement regulatory compliance level. The disclosures were relative with Liu (2016) who uncovers that Information and Communication Technology structures provides the capacity to joint exertion and exchange of trades among affiliations related with obtaining practices as well as creation network abilities to help the securing works out.

Table 4.51: Regression of Coefficients for information and communication technology

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	2.702	0.201	13.426	0.000
	V24	0.456	0.042	10.877	0.000

a Dependent Variable: *procurement regulatory compliance level*

Regression of coefficients brings about Table 4.51 uncovered that information and communication technology and procurement regulatory compliance level are decidedly and essentially related ($\beta = 0.456$, $p=0.000$). This suggests that a unit expansion in information and communication technology would prompt expansion in procurement regulatory compliance level by 0.456. The discoveries were in accordance with Bukhalo (2017) who discovered that there was broad overreliance on more established and more work escalated innovations in ICT which killed representatives' resolve as a central point influencing procurement regulatory compliance level

Hypothesis testing for information and communication technology and procurement regulatory compliance level

The speculation was tried by utilizing different straight relapse (Table 4.51, above). The invalid speculation was that information and communication technology doesn't altogether impact procurement regulatory consistence level in state funded colleges in Kenya. Brings about Table 4.51 above show that the p-value was $0.000 < 0.05$. The outcomes further uncovered that $t_{cal} (8.855) > t_{critical} (1.96)$. This showed that the elective speculation was acknowledged that there is a critical connection among information and communication technology and procurement regulatory compliance level in state funded colleges in Kenya. Consequently, the review reasoned that information and communication technology impact obtainment administrative consistence level.

H_{a2}: Information and communication technology significantly influence procurement regulatory compliance level in public universities in Kenya.

4.9.3 Influence of procurement ethical standards on procurement regulatory compliance level

Regression analysis was done to determine the influence of procurement ethical standards on procurement regulatory compliance level. Results were as presented in Table 4.52.

Table 4.52: Model fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.509a	0.259	0.257	0.29605

a Predictors: (Constant), *procurement ethical standards*

b Dependent Variable: *procurement regulatory compliance level*

The outcomes in Table 4.52 introduced the goodness of model of regression model utilized in clarifying the review peculiarities. Procurement ethical standard was viewed as agreeable in clarifying procurement regulatory compliance level. This was upheld by coefficient of assurance for example the R square of 25.9%. This shows that acquisition moral principles clarify 25.9 % of obtainment administrative consistence level. The outcomes implied that the model applied to interface the relationship. This additionally suggests that 74.1% of the variety in the reliant variable is ascribed to different factors excluded from this model.

Table 4.53: ANOVA for procurement ethical standards

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.403	1	9.403	107.286	.000b
	Residual	26.907	307	0.088		
	Total	36.31	308			

a Dependent Variable: *procurement regulatory compliance level*

b Predictors: (Constant), *procurement ethical standards*

Table 4.53 gave the outcomes on the investigation of the change (ANOVA). The outcomes showed that the model was genuinely huge. This was upheld by a F measurement of 107.286 and the announced p value (0.000) which was not exactly the regular likelihood of 0.05 significance level. The outcomes inferred that procurement ethical standard is a decent indicator of procurement regulatory compliance level. The discoveries likewise concurred with that of Gelderman *et al.* (2016) who agrees that moral principles plays an immense occupation in ensuring consistence inside open acquisition system.

Table 4.54: Regression of Coefficients for procurement ethical standards

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.966	0.186		15.959	0.000
procurement ethical standards	0.405	0.039	0.509	10.358	0.000

a Dependent Variable: *procurement regulatory compliance level*

Regression of coefficients brings about Table 4.54 uncovered that procurement ethical standard and acquirement procurement regulatory compliance level are emphatically and fundamentally related ($\beta = 0.405$, $p = 0.000$). This infers that a unit change in procurement ethical standard would prompt a huge change in procurement regulatory compliance level by 0.405. The discoveries additionally concurred the contention likewise held by Basheka and Mugabira (2017) who affirms that low consistence levels in open obtainment frameworks is because of deficient calling morals among acquirement authorities.

Hypothesis testing for procurement ethical standards and procurement regulatory compliance level

The speculation was tried by utilizing different direct relapse (Table 4.54, above). The acknowledgment/dismissal standards were that, assuming the p value is more prominent than 0.05, the invalid theory is acknowledged yet assuming that it's under 0.05, the invalid speculation is dismissed. The invalid speculation was that procurement ethical standards doesn't essentially impact procurement regulatory compliance level in state funded colleges in Kenya. The p-value was $0.000 < 0.05$. The t-determined worth $t_{cal} (15.959) > t_{critical} (1.96)$. This showed that the elective speculation was acknowledged that there is a huge connection between procurement ethical standards and procurement compliance level in state funded colleges in Kenya. Subsequently, the review reasoned that acquisition moral principles impact acquirement administrative consistence level.

H_{a3}: Procurement ethical standards significantly influence procurement regulatory compliance level in public universities in Kenya.

4.9.4 Influence of top management support on procurement regulatory compliance level

Regression analysis was done to determine the influence of top management support on procurement regulatory compliance level. Results were presented in Table 4.55.

Table 4.55: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698a	0.487	0.486	0.24621

a Predictors: (Constant), *top management support*

b Dependent Variable: *procurement regulatory compliance level*

The outcomes in table 4.55 introduced the wellness of model of relapse model utilized in clarifying the review peculiarities. Top management support was viewed as agreeable in clarifying procurement regulatory compliance level. This was upheld by coefficient of assurance i.e., the R square of 48.7%. This shows that top management support clarifies 48.7 % of procurement regulatory compliance level. The outcomes implied that the model applied to connect the relationship. This further suggested that 51.3% of the variety in the reliant variable is credited to different factors not caught in the model.

Table 4.56: ANOVA for top management support

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.7	1	17.7	291.979	.000b
	Residual	18.61	307	0.061		
	Total	36.31	308			

a Dependent Variable: *procurement regulatory compliance level*

b Predictors: (Constant), *top management support*

Table 4.56 gave the outcomes on the examination of the fluctuation (ANOVA). The outcomes showed that the model was genuinely critical. This was upheld by a F measurement of 291.979 and the revealed p value (0.000) which was not exactly the ordinary likelihood of 0.05 significance level. The outcomes suggested that top management support is a decent indicator of procurement regulatory compliance level. The discoveries concur with that of an exploration by Etse, and Asenso-Boakye (2017) completed on the parts influencing consistence level with individuals overall obtainment regulation in Ghana set up that weak best organization reinforce in securing structure has a quantifiably basic impact on consistence level.

Table 4.57: Regression of Coefficients for top management support

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.494	0.199		7.513	0.000
	top management support	0.699	0.041	0.698	17.087	0.000

a Dependent Variable: *top management support*

Regression of coefficients brings about Table 4.57 uncovered that top management support and procurement regulatory compliance level are emphatically and essentially related ($\beta = 0.699$, $p = 0.000$). This suggest that a unit expansion in the variable of top management support would prompt expansion in procurement regulatory compliance level by 0.699. Comparative discoveries are a concentrate by Were (2017) who contends that the chief job in making and coordinating pioneering conduct is significant. Fundamentally, chiefs can give offices and prepare authoritative asset to accomplish undeniable degree of hierarchical execution.

Hypothesis testing for top management support and procurement regulatory compliance level

The hypothesis was tried by utilizing various straight relapse (table 4.48, above). The acknowledgment/dismissal measures were that, assuming the p value is more noteworthy than 0.05, the invalid theory is acknowledged however assuming that it's

under 0.05, the invalid speculation is dismissed. The invalid speculation was that top administration support doesn't altogether impact procurement regulatory compliance level level in state funded colleges in Kenya. The p-value was $0.000 < 0.05$. The outcomes further uncovered that $t_{cal} (17.087) > t_{critical} (1.96)$. This showed that the elective speculation was acknowledged that there is a critical connection between top management support and procurement regulatory compliance level in state funded colleges in Kenya. Subsequently, the review reasoned that top administration support impact acquisition administrative consistence level.

H_{a4}: Top management support significantly influence procurement regulatory compliance level in public universities in Kenya.

4.9.5 Moderation regression analysis

The fifth objective of the study was to find out the moderating effect of organizational culture on the antecedents of procurement regulatory compliance level in public universities in Kenya.

Table 4.58: Model Fitness for organizational culture

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.620a	0.384	0.382	0.26991

a Predictors: (Constant), *organizational culture*
 b Dependent Variable: *procurement regulatory compliance level*

The outcomes in Table 4.58 introduced the goodness of model of regression model utilized in clarifying the review peculiarities. organizational culture was viewed as good in clarifying procurement regulatory compliance level. This was upheld by coefficient of assurance i.e., the R square of 38.4%. This shows that organizational culture clarifies 38.4 % of procurement regulatory compliance level. The outcomes implied that the model applied to interface the relationship. This likewise suggests that 61.6% of the variety in the reliant variable is credited to different factors not caught in the model.

Table 4.59: ANOVA for organizational culture

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13.945	1	13.945	191.428	.000b
	Residual	22.365	307	0.073		
Total		36.31	308			

a Dependent Variable: *procurement regulatory compliance level*

b Predictors: (Constant), organizational culture

Table 4.59 gave the outcomes on the examination of the change (ANOVA). The outcomes demonstrated that the model was measurably critical. This was upheld by a F measurement of 191.428 and the revealed p value (0.000) which was not exactly the ordinary likelihood of 0.05 significance level. The outcomes inferred that organizational culture is a decent indicator of procurement regulatory compliance level. The discoveries concur with Were, (2017) who fights that organizational culture is the motor behind securing moral standards in each foundation.

Table 4.60: Regression of Coefficients for organizational culture

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.857	0.147		19.406	0.000
	organizational culture	0.438	0.032	0.62	13.836	0.000

a Dependent Variable: *procurement regulatory compliance level*

Regression of coefficients brings about Table 4.60 uncovered that organization culture and procurement regulatory compliance level are emphatically and fundamentally related ($\beta = 0.438$, $p = 0.000$). This infers that a unit expansion in organizational culture would prompt expansion in procurement regulatory compliance level by 0.438. The discoveries concur with that of Were, (2017) who attests that high consistence levels in association might be a result of its way of life.

Hypothesis testing for organizational culture and procurement regulatory compliance level

The hypothesis was tried by utilizing numerous direct relapse (Table 4.60, above). The acknowledgment/dismissal standards were that, assuming the p value is more prominent than 0.05, the invalid speculation is acknowledged yet on the off chance that it's under 0.05, the invalid theory is dismissed. The invalid speculation was that organizational culture doesn't altogether impact procurement regulatory compliance level in state funded colleges in Kenya. Results uncovered that the p-value was $0.000 < 0.05$. The outcomes further uncovered that $t_{cal} (13.836) > t_{critical} (1.96)$ and consequently the invalid speculation was dismissed. This demonstrated that the elective speculation was acknowledged thus there is a huge directing connection between organizational culture and procurement regulatory compliance level in state funded colleges in Kenya. In this way, the review reasoned that organizational culture impact procurement regulatory compliance level.

H_{a5}: There is a significant moderating relationship between organizational culture and procurement regulatory compliance level in public universities in Kenya.

4.9.6 Overall regression analysis before moderation Model Summary

The linear regression analysis models show the examination of the factors of antecedents of procurement regulatory compliance level in public universities in Kenya. A Coefficient of determination explains the extent to which changes in the dependent variable (procurement regulatory compliance level) is explained by changes in independent variables (procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture). ANOVA test and Adjusted R square were computed as the preliminary test for multiple linear regression were used in the study to show the significance of the regression model adopted in the study. Table 4.63 show the Model summary.

Table 4.61: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805a	0.647	0.643	0.20519

a Predictors: (Constant), *procurement expertise, information and communication technology, procurement ethical standards, top management support,*

b Dependent Variable: *procurement regulatory compliance level*

Model summary in Table 4.61 shows the output for model fitness and value of adjusted R squared to be 0.643. This shows that the variables (procurement expertise, information and communication technology, procurement ethical standards, top management support) tested had a variation of 64.3% on the procurement regulatory compliance level in Kenya at 95% confidence interval. The four independent variables that were studied, explain only 64.3% of the factors of antecedents of procurement regulatory compliance level in public universities in Kenya as represented by the adjusted R². This implies that other factors not studied in this research contribute (35.7%) of the factors of antecedents of procurement regulatory compliance level. Further research should therefore be conducted to investigate the other factors (42.5%) that affect procurement regulatory compliance level. The correlation coefficient R of 0.825 shows that there was a strong positive relationship between independent and dependent variables in the study.

ANOVA Test

Table 4.62: ANOVA test results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.51	4	5.878	139.593	.000b
	Residual	12.800	304	0.042		
	Total	36.31	308			

a Dependent Variable: *procurement regulatory compliance level*

b Predictors: (Constant), *procurement expertise, information and communication technology, procurement ethical standards, top management support,*

Moreover, the ANOVA test displayed in Table 4.62 was utilized to test the meaning of the model and the presence of varieties among factors inside the model. The aftereffects of the ANOVA test how a p-value of 0.000 which is not exactly the set degree of meaning of 0.05 for an ordinary dispersion information. The outcomes further uncovered that the model had a F-proportion of 139.593 which is huge at 5% degree of freedom. This outcome shows that the general regression model is genuinely huge and can be utilized for expectation purposes at 5% significant level. This further shows that the autonomous factors utilized (procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture) are measurably huge as forerunners of procurement regulatory compliance level. Since the review has a moderating variable, directed different relapse (MMR) investigation is utilized to test the moderating impact of organizational culture on the assessment of predecessors of procurement regulatory compliance level in state funded colleges in Kenya. The relapse models of the review are as per the following:

OLS Equation $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e \dots\dots\dots (4.1)$

MMR Equation $Y = \beta_0 + [\beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5] Z + e \dots\dots\dots (4.2)$

Where **Y** represents the procurement regulatory compliance level in public universities, while **β₁, β₂, β₃, β₄, and β₅** represents beta coefficients of independent variables: the procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture respectively, while **β₀** is Y-intercept or constant term. **X₁, X₂, X₃, X₄ and X₅** represent the independent variables: procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture respectively, **e** is the error term which accounts for all other factors outside the regression equation which may affect the dependent variable. **Z** represents the moderator (organizational culture). The variables of the study are procurement regulatory compliance level, procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture. Table 4.63 shows the regression analysis coefficients with moderating variable.

Table 4.63: Coefficients of Regression Summary Results with Moderation

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.527	0.181		2.919	0.004
Procurement expertise	0.305	0.034	0.357	8.898	0.000
Information and communication technology	0.091	0.034	0.105	2.672	0.008
Procurement ethical standards	0.036	0.034	0.045	1.044	0.297
Top management support	0.315	0.05	0.315	6.332	0.000
Organizational culture	0.164	0.029	0.233	5.599	0.000

a Dependent Variable: *procurement regulatory compliance level*

The regression results presented in Table 4.63 indicates procurement regulatory compliance level, procurement expertise, information and communication technology, procurement ethical standards, top management support and organizational culture had positive coefficients. The coefficient addresses the regression model which relates the predictors (independent) and dependent variables as generated by the SPSS.

Ordinary Least Square Equation $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + e$
 becomes; Procurement Regulatory Compliance Level = 0.527 + 0.305 X_1 + 0.091 X_2
 + 0.036 X_3 + 0.315
 X_4 + 0.164 X_5**Equation (4.3)**

The optimal regression model of the study based on the significance is:

Procurement Regulatory Compliance Level = 0.527 + 0.305 X_1 + 0.091 X_2 + 0.315
 X_3 + 0.164 X_4**Equation (4.4)**

Only the coefficients of procurement expertise, information and communication technology, top management support and organizational culture were less than the 0.05 at a testing at 95% level of significance. Hence their coefficients explain significant influence of independent variables to the procurement regulatory compliance level of public universities. The coefficient values of procurement ethical standards was insignificant because p value (Sig value) was greater than 0.05 testing at 95% level of significance. This coefficient express insignificant influence of procurementethical standards to the procurement regulatory compliance level in this model.

4.9.7 Overall Regression Analysis after moderation

Table 4.64: Model of Fitness after Moderation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.824a	0.68	0.676	0.19529

a Predictors: (Constant), Interaction term, Composite, organizational culture

The results revealed that R square increased from 64.7% to 68% after moderation with the organizational culture. This implies that organizational culture moderates the antecedents of procurement regulatory compliance level in public universities in Kenya.

Table 4.65: ANOVA after Moderation

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.678	3	8.226	215.685	.000b
	Residual	11.632	305	0.038		
	Total	36.31	308			

a Dependent Variable: V53

b Predictors: (Constant), Interaction term, Composite, organizational culture

The results in the table above implies that the overall effect of moderation with legal environmentis significant since the F statistic increases from 139.593 to 215.685.

Table 4.66: Regression of Coefficients after moderation

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-3.06	0.66		-4.639	0.046
Organizational culture	0.12	0.167	1.586	6.696	0.010
Composite	0.551	0.149	1.356	10.38	0.037
Interaction term	-0.21	0.036	-1.88	-5.781	0.003

a Dependent Variable: *organizational culture*

$$Y = \beta_0 + \beta_1 M + \beta_2 X_4 + \beta_3 X_4 .M$$

$$Y = -3.06 + 0.12M + 0.551 X_4 - 0.21X_4 .M$$

Where;

Y= the dependent variable (procurement regulatory compliance level) M = Moderating variable (organizational culture)

X₄= variable composite $\{(X_1+X_2+X_3+X_4)/4\}$

X₄ .M = Interaction term

$\beta_1, \beta_2, \beta_3,$ = Change in Y with respect to a unit change in M.

The table of regression of statistics above, shows that the moderator (organizational culture) and procurement regulatory compliance level are positively and significantly related (B=0.12, p=0.010). Additionally, the composite variable is positively and significantly related (B=0.551, p=0.037). However, upon interacting the organizational culture in the model, it was found to be negatively and significantly related as shown by (B=-0.21, p=0.003) which is less than the significance level of 0.05. This implies that an interaction of the organizational culture in the linear model results in a decrease in the overall procurement regulatory compliance level by 0.21 units.

4.10 Summary of Hypotheses

Table 4.67: Summary of Hypotheses

Null Hypothesis	t- Calculated	t- critical	P value	Conclusion
H ₀₁ : There is no significant relationship between Procurement Expertise and procurement regulatory compliance level in public universities in Kenya	8.898	1.96	0.000	The null hypothesis was rejected and alternative hypothesis was accepted indicating there is a significant relationship between Procurement Expertise and procurement regulatory compliance level. This was because the calculated t value was greater than the critical t value and the corresponding p value was less than 0.05
H ₀₂ : There is no significant relationship between Information and Communication Technology and procurement regulatory compliance level in public universities in Kenya	2.672	1.96	0.008	The null hypothesis was rejected and alternative hypothesis was accepted indicating there is a significant relationship between Information and Communication Technology and procurement regulatory compliance level. This was because the calculated t value was greater than the critical t value and the corresponding p value was less than 0.05.
H ₀₃ : There is no significant relationship between procurement ethical standards and procurement regulatory compliance level in public universities in Kenya	1.044	1.96	0.297	The null hypothesis was accepted and alternative hypothesis rejected indicating there is no significant relationship between procurement ethical standards and procurement regulatory compliance level. This was because the calculated t value was less than the critical t value and the corresponding p value greater than 0.05
H ₀₄ : There is no significant relationship between Top Management Support and procurement regulatory compliance level in public universities in Kenya	6.332	1.96	0.000	The null hypothesis was rejected and alternative hypothesis accepted indicating there is a significant relationship between Top Management Support and procurement regulatory compliance level. This was because the calculated t value was greater than the critical t value and the corresponding p value was less than 0.05
H ₀₅ : There is no significant moderating relationship between organizational culture and procurement regulatory compliance level in public universities in Kenya	5.599	1.96	0.000	The null hypothesis was rejected and alternative hypothesis accepted indicating there is a significant relationship between organizational culture and procurement regulatory compliance level. This was because the calculated t value was greater than the critical t value and the corresponding p value was less than 0.05

4.11 Revised Conceptual Framework

From the overall regression model, it was clear that the factors that had effect on procurement regulatory compliance level were three and top management support had more effect on procurement regulatory compliance level followed by procurement expertise and information and communication technology. This is because change in top management support by one unit would shift procurement regulatory compliance level by 0.315 units while change in procurement expertise and information and communication technology by one unit would change procurement regulatory compliance level by 0.305 and 0.091 units respectively. The moderation results also showed that organizational culture moderates the factors of antecedents of procurement regulatory compliance level and a unit change in organizational culture would shift procurement regulatory compliance level by 0.164. Figure 4.2 illustrates the revised conceptual framework.

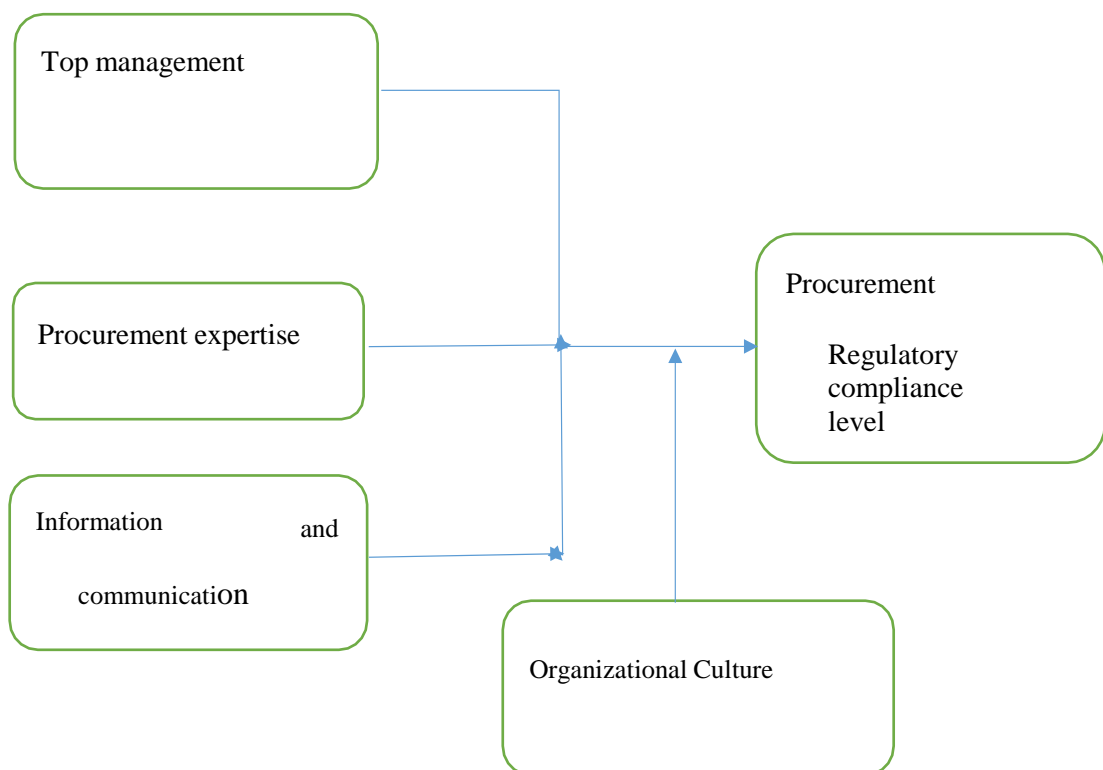


Figure 4.3: Revised Conceptual Framework

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the findings from the analysis, the conclusions and the recommendations. It discusses the findings of independent variables based on study objectives and in relation to the dependent variable. The summary, conclusions and recommendations given are in line with the objectives and the various hypotheses of the study. In addition, there are suggestions for further studies.

5.2 Summary of Major Findings

The summary of findings section presents the summary of the findings as per each of the study objectives. The results are based on the evidence of data analysis based on model fitness R^2 , Anova model F-statistic and significance levels to help reject or accept Null hypothesis, regression coefficients to for each and every statement of independent variable as well as overall moderated regression model.

5.2.1 Procurement expertise and procurement regulatory compliance level

The main target of the review pointed toward deciding the impact of procurement expertise on procurement regulatory compliance level in state funded universities in Kenya. The relationship examination uncovered that there was a positive and huge relationship between procurement expertise and procurement regulatory compliance level. This infers that acquisition mastery factors have added to the came about to the degree of consistence to the acquisition administrative. This connection coefficient determination was somewhere in the range of 0.6 and 0.7 showing a solid positive relationship as an element of procurement regulatory compliance level. A 2-followed test at 95% degree of freedom had a likelihood worth of under 0.05 which inferred that there was a critical relationship between procurement expertise and procurement regulatory compliance level in state funded colleges. Relapse of coefficients results uncovered that obtainment ability and acquisition administrative consistence level are emphatically and altogether related. This infers that a unit expansion in

acquisition aptitude would prompt expansion in obtainment administrative consistence level. The discoveries further showed that there have been a low number of instructional meetings directed on acquisition. In many examples, it was uncovered that state funded colleges they never do the stages of preparation. This infers that there is low degree of amazing skill in the acquisition rehearses that are fundamental. The inadequate experts in the office might have added to the low consistence level to the guideline of obtainment and execution of acquisition in the state funded colleges. Nonetheless, schooling level of the staff was viewed as moderately good in the acquisition region in the colleges. Further, there are frequently events of missed cutoff times in the acquisition division. Larger part of the acquisition staffs have not many years in the activities of obtainment. The discoveries uncovered that the greater part of the staff are not confirmed to be obtainment aptitude through confirmation and enrollment with higher expert bodies who manage the abilities of the individuals and along these lines guarantee the individuals are exceptional with acquisition information.

5.2.2 Information and communication technology and procurement regulatory compliance level

The second objective of the study was to establish the influence of information and communication technology on procurement regulatory compliance level in public universities in Kenya. The correlation analysis results revealed that there was a positive and significant association between information and communication technology and procurement regulatory compliance level. This implied that information and communication technology factors have contributed to the resulted to the level of compliance to the procurement regulatory. This correlation coefficient value was between 0.5 and 0.6 indicating a moderate positive correlation as a factor of procurement regulatory compliance level. A 2-tailed test at 95% level of confidence had a probability value of less than 0.05 which implied that there was a significant correlation between information and communication technology and procurement regulatory compliance level in public universities. The regression analysis results on information and communication technology found the variable to be satisfactory in explaining procurement regulatory compliance level.

The findings revealed that the internet connection in the procurement departments in the public universities is poor despite having adequate number of personal computers allocated to the staff in procurement. E-procurement is partially used in the tendering process. This was likely to have contributed to tender rules violation and missing follow-up on the ongoing tenders which is a violation on the regulatory of procurement ethical standards. Moreover, findings revealed there is low customization of transactions with the help of e-procurement.

The low usage and application of e-procurement was found to block transparency and efficiency in tendering and transactions, the records were as well affected. Further, there was deficient fiber connections in the procurement offices which makes the process of information relay with other relative departments slow and tedious. Deficient number of ICT specialists in procurement filed in the public universities was a common challenge. Inadequate ICT tools and software useful in procurement was experienced vastly. This implied that the overall infrastructure of ICT framework has not complied with the standards of the respective public universities since current ICT upgrade is haphazardly done.

Most of the respondents recorded that attending ICT seminars, workshops and trainings would help the embracing of culture of applying the ICT skills in procurement. Other respondents suggested that the ICT department should be merged with the procurement department. Further, the respondents suggested that the public universities should recruit members with ICT skills to input their skills in procurement department.

5.2.3 Procurement ethical standards and procurement regulatory compliance level

The third objective of the study aimed at determining the influence of procurement ethical standards on procurement regulatory compliance level in public universities in Kenya. The correlation analysis results revealed that there was a positive and significant association between procurement ethical standards and procurement regulatory compliance level. This implies that procurement ethical standards factors have contributed to the resulted to the level of compliance to the procurement

regulatory. This correlation coefficient value was between 0.5 and 0.6 indicating a moderate positive correlation as a factor of procurement regulatory compliance level. A 2-tailed test at 95% level of confidence had a probability value of less than 0.05 which implied that there was a significant correlation between procurement ethical standards and procurement regulatory compliance level. Regression of coefficients results revealed that procurement ethical standards and procurement regulatory compliance level are positively and significantly related. This implies that a unit change in procurement ethical standards would lead to a significant change in procurement regulatory compliance level.

The findings revealed that staff who violate the procurement regulations are not taken responsible of their actions and there is no follow up on the actions. Moreover, the disciplinary steps taken on staff with unbecoming behaviors was compromised. The code of ethics was found to be compromised in procurement by the staff. The code of practice if it exists is not availed effectively to the staff in the procurement department. Further, personal interest of the staff in procurement was far much exceeding the concern for the performance of procurement services.

There was low response to the received complaints from the bidders, and if the complaints are received, they are ignored and not acted upon in most cases. Compromising practice of receiving gifts by the staff in order to be biased in their purchasing decisions and tendering was found rampant. Personal relations were found to be existing between the suppliers and managers in the procurement department.

5.2.4 Top management support and procurement regulatory compliance level

The fourth objective of the study was to establish the influence of top management support on procurement regulatory compliance level in public universities in Kenya. The correlation analysis results revealed that there was a positive and significant association between top management support and procurement regulatory compliance level. This implied that procurement expertise factors have contributed to the resulted to the level of compliance to the procurement regulatory. This correlation coefficient value was between 0.6 and 0.7 indicating a strong positive

correlation as a factor of procurement regulatory compliance level. A 2-tailed test at 95% level of confidence had a probability value of less than 0.05 which implied that there was a significant correlation between top management support and procurement regulatory compliance level in public universities. Regression of coefficients results revealed that top management support and procurement regulatory compliance level are positively and significantly related. This implies that a unit increase in the factor of top management support would lead to increase in procurement regulatory compliance level.

The findings implied that the importance of implementing quality management is not well known to the top management in the procurement department. There exists a hindrance from the top management for the staffs to engage and enhance adoption and application of total quality management in procurement. Top management have not been motivating the staff individually for exemplar performance through rewards. Further, it was found that there is a poor working environment between the procurement staffs and the top management. Employees are denied freedom to discharge their duties as assigned to them by the top management. However, resources needed by staff to do their work are readily availed by the management.

5.2.5 Organizational culture and procurement regulatory compliance level

The fifth goal of the review pointed toward discovering the moderating impact of organizational culture on the predecessors of procurement regulatory compliance level in state funded universities in Kenya. The relapse examination results uncovered that organizational culture was viewed as acceptable in clarifying procurement regulatory compliance level. Regression of coefficients results uncovered that organizational culture and procurement regulatory compliance level are emphatically and fundamentally related. This infers that a unit expansion in perspectives connected with organizational culture would prompt expansion in procurement regulatory compliance level.

5.3 Conclusion

5.3.1 Procurement expertise

Procurement expertise and procurement regulatory compliance level are decidedly and fundamentally related. Procurement expertise was viewed as acceptable in commitment as an element to procurement compliance level. Further, it is a fundamental imperative in acquisition. Obtainment ability prompts consistency and impact settling on the right and vital buying choice.

5.3.2 Information and communication technology

Information and communication technology was viewed as a satisfactory indicator of procurement regulatory compliance level. ICT frameworks gives the ability to joint effort and trade of exchanges among associations engaged with acquisition exercises. Overreliance on more established and more work escalated advancements in ICT adversely affect representatives' resolve. Current innovation in ICT viewing acquisition, for example, e-obtainment ought to be executed across the acquirement divisions. Web and extranet associations are vital for data recording and stream between the applicable divisions. Fiber associations is likewise solid method for web supply.

5.3.3 Procurement ethical standards

Ethical standards play a huge job in guaranteeing consistence in procurement activities. procurement ethical standards is positively correlated procurement regulatory compliance level. Compliance levels in public procurement systems is related to profession ethics. Disciplinary actions on staff who violate the procurement regulatory is a strategy useful to uphold ethics. This mean that the codes of ethics and practice are useful to the staff in making known to them the directives of work plan. The relationships of the staff and the suppliers is a hazard to the proceedings and procurement activities such as contracting.

5.3.4 Top management support

Top management support is a good predictor of procurement regulatory compliance level. Managers can provide facilities and mobilize organizational resource to achieve high objectives. The adoption of total quality management is significantly influential to the procurement activities. Motivation and rewards to staff can be used as a strategy to combat the personal interest that arise in preference to fulfill their duties and assignments. Management acts as the framework to the functionality of the procurement department and activities thereof.

5.3.5 Organizational culture

Organizational culture is a good predictor of procurement regulatory compliance level are positively and significantly related. The study concludes that internal reorganization of processes, organization communication, interventions to minimize resistance to change, employee training and empowerment, employee knowledge of general decisions and employee motivation play a key role in establishing a good organizational culture for the success of procurement regulatory compliance level.

5.3.6 Procurement regulatory compliance level

The study therefore, concludes that the practice of poor record keeping is high in the procurement department of the public universities. This implies that there is total lack of objectives and annual plans to be achieved and to serve as motivation to the employees. Missing goals in this department makes the staff to be reluctant and therefore they aren't in motivation to hit the set goals. The violation of ruling and policing in the procurement is a rampant practice was also concluded. The practice indicates that the procuring activities done are not done in the required standards which is a weakness in the procurement departments. The study concludes that drawback in the procurement department is the lack of plan and methods to conduct the activities. Lack of plan may lead to compromise of some procedures and therefore lack of transparency in the department.

5.4 Recommendations

5.4.1 Procurement expertise

The study concluded that seminars to staff and expertise of the employees have an influence on the procurement regulatory compliance role. It's essential to raise level of professionalism in the procurement practices. The education of the employees guarantee that the procurement officers can read and understand the set guidelines in procurement in order to comply with the guidelines as set. Occurrences of missed deadlines in the procurement department should be minimized. Certification and registration with higher professional bodies who oversee the skills of the members ensure the members are well equipped with procurement knowledge. Procurement expertise was found to have a significant effect on the procurement regulatory compliance level.

5.4.2 Information and communication technology

The internet connection in the procurement departments in the public universities should be improved. E-procurement should be used in the tendering process and customization of transactions. Fiber connections in the procurement offices which makes the process of information relay fast should be installed to ease the communication. The universities should increase the number of ICT specialists in procurement field. Inadequacy of ICT tools and software in procurement should be eradicated.

5.4.3 Procurement ethical standards

Disciplinary steps should be taken on staff with unbecoming behaviors in an effort to uphold ethical practice. The management should encourage the staff to follow the code of ethics and code of practice in procurement. Personal interest of the staff in procurement should be discouraged and thus there need be application of better recording and follow-up on staff concerning procurement actions and relations to the suppliers. The management should action on the received complaints from the clients and suppliers.

5.4.4 Top management support

The existing hindrances from the top management for the staffs to engage and enhance adoption and application of total quality management in procurement should be eradicated. Top management instead should work on motivating the staff individually for exemplar performance. The management further should create an enabling working environment between the procurement staffs and the top management. There should be freedom of staff to discharge their duties as assigned to them by the top management.

5.4.5 Organizational culture

There should be an ultimate supervision on the procured items and the functioning of the procurement department. Monitoring in awarding contracts should be vital and the collection of returns from the procuring entities should be paramount. Periodic reviewing and assessment of the running and activities in the procurement department is to be done often to enable compliance with the regulatory and meeting standards. Procurement procedures should be complied with. Auditing practice should be done regularly in the procurement department to enhance transparency.

5.5 Suggestion for Further Research

The purpose of the study was to compare and analyze antecedents of procurement regulatory compliance level in public universities in Kenya where various factors have been discussed. The study has demonstrated why the public universities need to comply with the procurement act and regulations and the resultant negative effects as a result of ignorance on some important factors needful in the procurement department. The study therefore recommends further study to be done on other possible factors likely to influence the procurement compliance level.

Moreover, other public entities may not have similar influential factors as public universities and therefore research should be done on other public service institutions to examine the factors affecting the procurement regulatory compliance level. This will help confirm whether the results of this study are applicable to other institutions

as well or not. It is suggested that a more comprehensive study be done within the private universities in Kenya to compare and analyze the antecedents of procurement regulatory compliance level. Similar studies could also be extended to East African community public universities to ascertain their level of procurement compliance.

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APPENDICES

Appendix I: Questionnaire

Dear Respondent,

Introduction-questionnaire cover letter.

I am undertaking a research study on antecedents of procurement regulatory compliance level in public universities in Kenya. You have been selected in this study and your contributions will be exceedingly valued. This data will be held privately and will be utilized for scholastic purposes only. Compassionately answer the inquiries by composing a short proclamation or ticking the boxes given.

PROCUREMENT REGULATIONS COMPLIANCE LEVEL QUESTIONNAIRE SECTION 1: DEMOGRAPHIC INFORMATION

(Instruction-tick where appropriate)

1. Gender

Male Female

2. Age in years

Below 20 21-30 31-40 41-50

51-60 Above 61

3. Are you registered with any professional body?

Yes No

4. Your Position in this institution?

Procurement officer

Seniour procurement officer

Principal procurement officer

Chief procurement officer

SECTION 2: INFLUENCE OF PROCUREMENT EXPERTISE ON PROCUREMENT REGULATORY COMPLIANCE LEVEL

1. How often are the employees trained on procurement practices?

Very often
Often
Rarely
Never

2. What is your professional qualification?

CIPS KISM Bachelor Diploma Certificate

None

3. What is your highest Education level attained

Secondary College University Post

Education level level graduate

4. The statement below relate to the influence of **procurement expertise** on procurement regulatory compliance level in public universities in Kenya. Supplied also are five options corresponding to these statements. Strongly Agree (SA)=5, Agree(A)=4, Undecided(U)=3, Disagree(D)=2, and Strongly Disagree (SD)=1.

Please tick the option that best suits your opinion on the statement given.

Procurement expertise	5	4	3	2	1
a) Procurement staffs have an annual schedule of training programme.					
b) Procurement staffs lack adequate qualification in procurement matters.					
c) Procurement staffs have few years of experience					
d) Very few procurement staffs are members of professional bodies.					

5. How many years of experience do you have in this procurement field.

Less Than 5 years 6-10 11-15 16-20 21 and above

SECTION 3: INFLUENCE OF INFORMATION AND COMMUNICATION TECHNOLOGY ON PROCUREMENT REGULATORY COMPLIANCE LEVEL

1. Have this university invested heavily on artificial intelligence? Yes No

(b).Do procurement staffs possess ICT competency? [] Yes [] No

2.The statement below relate to the influence of **Information and communication technology** on procurement regulatory compliance level in public universities in Kenya. Supplied also are five options corresponding to these statements. Strongly Agree (SA)=5, Agree(A)=4, Undecided(U)=3,Disagree(D)=2, and Strongly Disagree (SD)=1.

Please tick the option that best suits your opinion on the statement given.

ICT indicators	5	4	3	2	1
a) Tendering is partially done through e-procurement.					
b) All procurement transactions are not customized in e-procurement..					
c)Fibre connections inaccessible by staffs					
d) Procurement department lackICT specialists.					
e) ICT tools and softwares available are inadequate and should be improved.					
f) ICT infrastructure is haphazardly upgraded in the university.					

SECTION 4: INFLUENCE OF PROCUREMENT ETHICAL STANDARDS ON PROCUREMENT REGULATORY COMPLIANCE LEVEL

1.The statement below relate to the influence of procurement ethical standards on procurement regulatory compliance level in public universities in Kenya. Supplied

also are five options corresponding to these statements. Strongly Agree (SA)=5, Agree(A)=4, Undecided(U)=3, Disagree(D)=2, and Strongly Disagree (SD)=1.

Please tick the option that best suits your opinion on the statement given

procurement ethical standards	5	4	3	2	1
a) Disciplinary actions are poorly conducted on procurement staffs.					
b)Victims of unbecoming behavior are given a biased hearing during disciplinary actionproceedings.					
c) Staffs fail to stick to procurement code of ethics					
d)Code of practice for department unavailable to all thestaffs					
e) Procurement staffs valuepersonal interest in form of financial gain more than their performance					
f)Procurement department is very insensitive to bidders complaints					
g)Complaints received from prospective bidders is not acted upon					
h)Some suppliers offer gifts to procurement staffs with the intention of compromising them to influence purchasing decisions					
i)Presence of close personal relationship between suppliersand procurement managers.					

SECTION 5: INFLUENECE OF TOP MANAGEMENT SUPPORT ON PROCUREMENTREGULATORY COMPLIANCE LEVEL

1.The statement below relate to the influence of **Top management support** on procurement regulatory compliance level in public universities in Kenya. Supplied also are five options corresponding to these statements. Strongly Agree (SA)=5, Agree(A)=4, Undecided(U)=3, Disagree(D)=2, and Strongly Disagree(SD)=1.

Please tick the option that best suits your opinion on the statement given

Top management support	5	4	3	2	1
a)Top management ensures outstanding staffs are motivated and rewarded					
b)Top management tries to improve the workingenvironment of staffs					
c)Top management fails to motivate and reward staffs for their effective performance in quality provision.					
d) There is a poor working environment between the procurement staffs and the top management.					
e)Top management denies employee's the required authority to do their work.					
f)Top management provides employees with the required resources to do their assigned duties.					

SECTION 6: INFLUENCE OF ORGANIZATIONAL CULTURE ON PROCUREMENT REGULATORY COMPLIANCE LEVEL

1. The statement below relate to the influence of **organizational culture** on procurement regulatory compliance level in public universities in Kenya. Supplied also are five options corresponding to these statements. strongly Agree (SA)=5, Agree (A)=4, Undecided(U)=3, Disagree(D)=2, and strongly Disagree (SD)=1. Please tick the option that best suits your opinion on the statement given.

Organizational culture	5	4	3	2	1
Internal reorganization of processes is pursued to enhance the organisations innovativeness					
Organization has Communicated and institutionalized sanctions to be applied in cases of poor performance.					
The organization has put in place interventions to ensure there is no resistanceto change during strategicmanagement implementation					
More emphasis on employees' training and empowerment is considered in our organisation					
Employees'betterknowledge of generaldecisions					
Employees are motivated to work more to attain the planned milestones by the company					

SECTION 7: PROCUREMENT REGULATORY COMPLIANCE LEVEL

1. The following are some of the standards used by PPADR in bidding procedures. Rate your institution regulatory compliance level using the scale provided for the last three years (2015-2017). The coding for the results will take the form of 0% - 19% compliance level to correspond to 1, 20% - 39% compliance level to correspond to 2, 40% - 59% compliance level to correspond to 3, 60% - 79% compliance level to correspond to 4 and 80% - 100% compliance level to correspond to 5

Compliance level Indicator	100 %	90 %	80 %	70 %	60 %	50 %	40 %	30 %	20 %	10 %
All procurement records are poorly maintained in the department files.										
Procurement department fails to prepares annual procurement plans.										
Procurement department fails to adheres to the PPOA/PPARB/PPRA approved policies and rules.										
Procurement plan does not include the procurement methods to be used hence no transparency.										

Appendix II: Public Universities in Kenya

SAMPLE FRAME

LIST OF PUBLIC UNIVERSITIES IN KENYA

S/N	NAME OF UNIVERSITY	YEAR ESTABLISHED
1	UNIVERSITY OF NIROBI (UON)	1970
2	MOI UNIVERSITY (MU)	1984
3	KENYATTA UNIVERSITY (KU)	1985
4	EGERTON UNIVERSITY	1988
5	MAENO UNIVERSITY (MU)	1991
6	JOMO KENYATTA UNIVERSITY OF AGRICULTURE & TECHNOLOGY. (JKUAT)	1994
7	MASINDE MULIRO UNIVERSITY OF SCIENCE & TECHNOLOGY (MMUST)	2009
8	DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY	2012
9	CHUKA UNIVERSITY (CU)	2012
10	TECHNICAL UNIVERSITY OF KENYA (TUK)	2013
11	TECHNICAL UNIVERSITY OF MOMBASA(TUM)	2013
12	PWANI UNIVERSITY (PU)	2013
13	KISII UNIVERSITY (KU)	2013
14	UNIVERSITY OF ELDORET	2013
15	MAASAI MARA UNIVERSITY	2013
16	JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY	2013
17	LAIKIPIA UNIVERSITY	2013
18	SOUTH EASTERN KENYA UNIVERSITY	2013
19	MERU UNIVERSITY	2013

20	MULTIMEDIA UNIVERSITY OF KENYA	2013
21	UNIVERSITY OF KABIANGA	2013
22	KARATINA UNIVERSITY	2013
23	KIRINYAGA UNIVERSITY	2011
24	MURANG'A UNIVERSITY	2011
25	TAITA TAVETA UNIVERSITY COLLEGE	2011
26	COOPERATIVE UNIVERSITY COLLEGE	2011
27	RONGO UNIVERSITY COLLEGE	2001
28	KIBABII UNIVERSITY	2011
29	GARISA UNIVERSITY	2011
30	EMBU UNIVERSITY COLLEGE	2011
31	MACHAKOS UNIVERSITY COLLEGE	2011