

**CONTRACT MANAGEMENT ON PROCUREMENT
PERFORMANCE IN PUBLIC UNIVERSITIES IN
KENYA**

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the Degree of Doctor of Philosophy in Supply Chain Management of
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DECLARATION

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

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This thesis is submitted for examination with our approval as the University Supervisors.

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DEDICATION

This thesis is dedicated to my family for the material and moral support. Also, I would like to dedicate this research study to my brothers and sisters for their encouragement and immense valuable concern. Your definitive support and resolute zeal for me to succeed always remained discernible in the course of compiling this work.

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ACRONYMS AND ABBREVIATIONS

AG	Attorney General
AIE	Authority to Incur Expenditure
ANOVA	Analysis of Variance
CBA	Cost Benefit Analysis
CIPS	Chartered Institute of Procurement and Supply
CLM	Contract Lifecycle Management
COD	Chair of Department
COMESA	Common Market For Eastern and Southern Africa
CUE	Commission for University Education
DW	Durbin Watson
EAC	East Africa Community
EDI	Electronic Data Interchange
ERA	Electronic Reverse Auction
ERP	Enterprise Resource Planning
EU	European Union
FAR	Federal Acquisition Regulation
GDP	Gross Domestic Product
ICC	International Chamber of Commerce
ICPAK	Institute of Certified Public Accountants of Kenya
INCOTERMS	International Commercial Terms
IFMIS	Integrated Financial Management Information System
IHRM	Institute of Human Resource Management
JKUAT	Jomo Kenyatta University of Agriculture and Technology
KII	Key Informant Interview
KISM	Kenya Institute of Supplies Management
KPI	Key Performance Indicators

KS	Kolmogorov-Smirnov
LS	Levene Statistics
LPO	Local Purchase Order
LSK	Law Society of Kenya
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organization for Economic Co-operation and Development
OLS	Ordinary Least Squares
PE	Procurement Entities
PESTLE	Political, Economic, Social, Technological, Legal, Environment
PPADA	Public Procurement and Asset Disposal Act
PPOA	Public Procurement Oversight Authority
PPRA	Public Procurement Regulatory Authority
RCM	Record Continuum Model
RDT	Resource Dependence Theory
RII	Relative Importance Index
ROI	Return on Investment
ROK	Republic of Kenya
SCOR	Supply Chain Operations Reference Model
SLA	Service Level Agreements
SMART	Specific, Measurable, Achievable, Relevant, Time-Bound
SPSS	Statistical Package for Social Sciences
TOC	Theory of Constraints
TS	Tolerance Statistics
UK	United Kingdom
UNDP	United Nations Development Programme
USA	United States of America
VFM	Value For Money

VIF	Variance Inflation Factor
WIP	Work in Progress

DEFINITION OF TERMS

Buyer-Supplier Collaboration	Is an obligation to both customers and suppliers, regardless of size to a long-term relationship based on clear mutually agreed objectives to strive for world class capability in line with the envisioned goals of the organizations (Larson, 2014).
Contract Management	It is defined as the process of planning, organizing, controlling and embracing terms and conditions that are embedded on the agreement reached by the parties to a business transaction (Elliot & Quinn, 2019).
Legal Compliance	This is the practice of observing and conforming to the peripheral statutory laws and regulations in a given jurisdiction (Sammons, 2017).
Procurement	Is the act of finding, soliciting, acquiring, buying goods, works or services from an external source, often through a tendering or competitive bidding process (Lysons & Farrington, 2012).
Procurement Performance	This is the quantitative or qualitative assessment score index over a given time towards the achievement of corporate or operational objectives relating to purchasing economies, efficiency or effectiveness (Perera & Colverson, 2012).
Procurement Risk	This is putting measures in place to reduce the severity of peril event in procurement process

Management

should that event occur (Christopher, 2018).

**Contract Records
Management**

Is a set of activities required for systematically controlling the creation, distribution use, maintenance and disposition of contractual documented information maintained as evidence of business activities and transactions (Freda, 2014).

**Transparency and
Accountability**

These are qualities of openness, fairness, honesty, integrity and taking responsibility in various activities in a business set up (Carter, 2014).

ABSTRACT

The upsurge of public universities in Kenya has culminated in extra budget allocation to these institutions by the national treasury over the last decade. Close to 60-70% of the budget is used in procurement related activities. This phenomenon has led the public universities to instill procurement contract management action plans to enhance procurement performance. Despite the introduction of regulatory bodies, there are numerous lawsuits of defaulted contracts, annulled contracts and incomplete contracts. These problems end in big financial losses and time overruns. It is against this backdrop that this research sought to assess the influence of contract management on procurement performance in public universities in Kenya. The study specifically focused on the influence of: buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management as well as the moderating influence of legal compliance on the relationship between contract management and procurement performance in public universities in Kenya. The study employed descriptive research design and prior to data collection, pilot test was undertaken at 4 public constituent university colleges. A census method was adopted in this study, whereby a target population of all the 31 public universities (Unit of Analysis) was involved in the study. One hundred and twenty-four (124) university officials (Unit of Observation) were randomly sampled. Primary data was collected by use of questionnaires whereby, a drop and pick method was used in the administration of the questionnaires. Key informant interviews were also conducted to deduce qualitative data. Secondary data was derived from the auditor general's and PPRA reports. Descriptive statistics measures of central tendency were used and statistical output was generated using SPSS version 22. Inferential statistics was also used to infer correlation analysis as well as multiple linear regression and this depicted the relationship between independent and dependent variables. The study data was tested for adherence to the assumptions of multiple linear regression analysis and it was found to be free from linearity, normality autocorrelation, heteroscedasticity and multicollinearity. The findings of the study revealed that, buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management influence procurement performance in public universities in Kenya. The study further established that legal compliance had significant moderating influence on the relationship between contract management and procurement performance in public universities in Kenya. Inferential statistics results exhibited strong R square while the results of ANOVA for the regression model showed an F statistic that was within the predictable range. All the predictor variables had significant joint influence thus the model fitted in the multiple regression was fit. The study concluded that buyer supplier collaboration strongly influences procurement performance while procurement risk management, contract records management and legal compliance have modest influence on procurement performance. Further, the study concluded that transparency and accountability slightly influences procurement performance. The study recommends that public universities should maintain the existing synergy based initiatives with suppliers, risk management strategies, professional probity policies automated contract records management procedures and ensure high degree of adherence of the procurement law as anchored in PPADA, 2015.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In the contemporary business environment, it is becoming increasingly significant for procurement professionals to keep abreast of legal developments relevant to the acquisition of goods, works and services within the public universities in Kenya. Best practices in contract management emphasize the need for inculcating the inherent tenets of success in procurement process (Lysons & Farrington, 2012). This includes understanding fully what constitutes a valid contract, terms and conditions of the contract, synergy driven initiatives with suppliers or contractors, records trail of contractual obligations, business trends in the ever volatile markets, continuous improvement discourse, degree of contractual probity and most importantly the applicability of key performance indicators (KPI) when defining procurement performance (Sammons, 2017). According to Rok (2012) better contract management turns out to be a springboard towards efficient government spending in this period of fiscal austerity. The ultimate result when contractual obligations are adhered to by the parties to the contract is sound public service delivery and maintenance of stake-holders confidence in government's undertakings.

From a legal perspective, contract management in public universities is inevitable if excellent procurement performance is to be achieved. It does not only ease contract negotiations, contract formation, contract implementation or perhaps dispute resolution and audit preparation and protection but it is an important part of the public universities risk management strategy towards a sustainable provision of customer service and cost reduction in the market environment (Elliot & Quinn, 2019). Schuhmann and Eichhorn (2019) alludes that there is escalation of demand by the stakeholders for the public entities to reduce costs, improve financial and operational performance and increase the level of customer service. Though this approach brings a trade-off on issues of cost effectiveness and customer satisfactions, buyers are obligated to confine themselves to the best options that reflect the policies of the institutions. New statutory requirements, bubbling issues like supply base

optimization, lean supply, mass customization, globalization, enhancement in contract volumes and complexities of activities in supply chain management have also resulted in an increase of the importance of effective contract management (Alan & Ray, 2012).

Lysons and Farrington (2012) postulates that the growing acknowledgment of the need to automate and improve contractual processes and satisfy increasing compliance and analytical requirements have equally led to an increase in the adoption of more formal and controlled contract management procedures. As more organizations are upgrading their contract management platforms to include increased levels of automation, there are several benefits that are derived. These include increased visibility of the contracts, reduction of errors and oversights within the contract, heightened security on the contract records, easier retrieval of the data and analysis of the contract progress. Automated contract management also comprise features for contract initiation, drafting and negotiation, review and approval, digital signing, lifecycle management, notifications, contract renewal, archiving, ability to organize contracts by clients, installation of dashboards to view contract status and milestones. All these underlined benefits have a far reaching implications to the contractual obligations of buying organizations. In unlikely event litigations are advanced to the learning institutions, then the concerned parties will be equipped with the necessary documentations to avert any unlawful ruling of the lawsuit (Baily et al., 2015).

Howard (2015) confirms that procurement officers are invariably engrossed by complex transactions in terms of both the type and range of goods, works or services being procured. In order to have some semblance of efficiency in the procurement process it is crucial for the buying entities to be clear about the overall objective of the procurement and identify ways and means on how to oversee the contractual obligations from onset. This allows a better understanding of the expectations of the parties participating in the contract hence this necessitates clear focus on execution of the tasks ahead. To this extent, therefore, public entities must have a detailed understanding of what they are buying, from whom and perhaps the delivery schedules of the supplier in order to analyze the value and risks that may accrue in

the business process. This business perspective should correspond with the overall goals, values and the underpinned business strategy. In a nutshell, both the procurement representatives of public universities, suppliers and contractors should fully be cognizant of their role in the procurement process and should provide better services that are efficient and effective in order to ensure value for money (VFM) to their respective entities (Elliot & Quinn, 2019).

Baily et al. (2015) asserts that the fundamental success factors for post-award contract management rely upon careful, complete and comprehensive implementation of the upstream supply chain activities. During the pre-award stages, the emphasis should be focused on the underlying need for the contract and whether the suppliers will be in a position to deliver in service based on the requirements of the buyer. On the contrary, careful considerations are only looked upon when the contract has been awarded and therefore, any aggrieved party may have very limited options in pursuance of the law. The institution's high-level requirements should be thoroughly researched so that there is a better understanding of purpose from inception in all aspects of the procurement process. This approach creates a roadmap on how contract will be formed, implemented and the monitoring and control mechanisms that will be put in place to ensure a seamless transactional process between buyers and suppliers (Schuhmann & Eichhorn, 2019).

Keith et al. (2013) designates that administration of contracts, more so partnerships, requires flexibility on both sides and a willingness to adapt the terms of the contract to be in tandem with changing circumstances. It is worthwhile to recognize that problems are bound to arise which could not be envisaged when the contract was awarded. It is important to demystify the fact that all contracts are predicated on the need to obtain management commitment and authorization at the relevant level. This entails the formulation of an ideal business case linked to the organization's corporate, business unit and operational strategies. The business case formulates the guideline, business and contract objectives and the issues that affect the decision and the investment. It should seek to establish whether the projected contract meet the need and that it is feasible and fiscally sound (Macintyre, 2015).

Lowe (2013) affirms that in order to have an effective contract management it is prudent to develop a contract strategy. The established strategical framework ought to be used as the guiding principle when discharging contract related activities from time to time. The overriding standard in contract management is that organizations are duty bound to accord a particular contract with the university's overall procurement strategy. The formulation of a contract strategy is planned to institute the form of the procurement and provide support in determining the generation and award of the contract, the style and type of management to be adopted for the subsequent service delivery, relationship management and contract administration (Gulshan & Kapoor, 2018).

Lysons and Farrington, (2012)) argues that in developing the contract strategy it is important to address issues based on the scale, nature and importance of the need to the organization, type of specification, value of the need, complexity of the need including innovation level, market capacity, attractiveness to the market, timescale and phasing, level of understanding of the need by potential suppliers and stakeholders. The use of supplier positioning matrices always assists in establishing the action plan towards a contract, the nature of any deliberation that may need to be conducted and the form of the supplier relationship following the award of contract. Possible supplier relationship types range from the fixed contracts, spot buy through call-off contracts, long term partnerships as well as strategic alliances. Issues of relationship style such as partnership, hands- on or proactive should also be considered (Hines, 2014).

Overby et al. (2017) cited that when establishing the contract strategy, a lot of emphasis should be given to the evaluation roadmap which gives the direction for the overall evaluation of suppliers and the predetermined tender process. It encompasses such considerations as business purpose, relative priorities of the requirement, critical success factors, communication guidelines, the modalities for determining quantifiable and non-quantifiable items, evaluation procedures including appraisal methodology, persons involved in the evaluation, supplier selection process including direction on interpretation and marking of the responses. Another vital consideration in determining contract strategy is utilization of Service Level

Agreements (SLA). The rationale behind SLAs is to let the customer to examine and control the performance of the service received from the supplier(s) against the set standards (Perera & Colverson, 2012).

Lysons and Farrington (2012) emphasizes that service levels should be established and benchmarked for both customers and suppliers. It is imperative to ensure that the service levels are established at a logical level; prioritized by the customer in order of significance and on an agreed level for example essential, major, urgent, minor, easily monitored, such as objective, tangible and quantifiable, unambiguous and understandable by all parties and should be open to re-negotiation at any time. This allows the parties participating in the contract to conduct a cost-benefit analysis (CBA) and deduce the possible returns once the contract has been effected (Overby et al., 2017).

Burt (2012) indicates that in contract management it is important to attest the fact that various changes are bound to take place. Basically, changes within the contract are almost mandatory during the time of a contract, particularly in the case of major, complex construction and service contracts. Ideally, changes should not necessarily be seen as causes for concern but should be managed effectively since they serve as opportunities to advance the contract outputs. It is worthwhile to understand the implication of change for both parties in business transaction. A change of any significance is always deemed to affect the scope and potentially the viability of the contract for either party. If a change results in a decrease in the value of the contract, the organization could be faced with claims for increases in charges and legal claims that there was, for example, misrepresentation in relation to the likely volumes required over the time of the contract. If the change results in a substantial increase in the value or scope, it is important that the organization continues to ensure that value for money is maintained (Perera & Colverson, 2012).

Keith et al. (2013) suggests that public sector organizations should be aware of the requirements of the state's procurement directives that need considerable changes during the contract period. Change can be determined by a number of factors; amongst the more common are adjustments to the strategies and objectives of the parties, the changing business requirements of the organization, market changes,

advancement in technology, economic trends which affect the feasibility of the contract and statutory changes. These in turn can translate to changes in the service required, the parameters needed, service infrastructure and workload. The end result of contract management is service delivery and therefore, the ad hoc inspection and acceptance committee members of the public universities are primarily concerned with ensuring that the actual service provided by the suppliers or contractors is commensurate with the agreed standards (Macintyre, 2015).

Hines (2014) states that the aptitude to measure the performance of the supplier and provision of feedback is essential to successful contract management and supplier development. Performance measures to cover every aspects of a contract should be designed to fit the requirements of a given contract and should be set out in the contract documentation to ensure suppliers are aware of the measurement methodology before any contract is awarded. It is vital that the performance measures selected provide clear and verifiable evidence of the success of the relationship and in principle, issues such as financial outlay and value obtained performance and customer satisfaction, delivery enhancement and added value, delivery ability, benefits realized, relationship strength and openness (Roy & Adrian, 2013).

Hines (2014) submits that the criteria that is employed to justify supplier's performance in business activities should be specific, measurable, achievable, relevant and time-bound (SMART). It is important to ensure that the actual parameters selected are not over-specified, that they are, as far as possible, readily derived from the direct performance of the contract and that they are linked to key procurement issues. Once selected, the requirements supporting the performance measures should be the main focus for contract management. They should form the structure on which information needs and flows and contract management teams, skills, activities and processes are developed (Macintyre, 2015).

Alan and Ray (2012) reveal that the "battle of forms" in contract management indicates that the last entity in business transactions to submit conditions that the other party accepts directly, or through implication or even through terms implied by the statutes would have conditions that bind the contract. The terms of a contract are

said to be direct (express terms) if the parties themselves advertised to them at the time of negotiations and actually agreed upon them (i.e. incorporated them into the contract, either verbally or in writing). A term which the parties did not expressly incorporate into the contract may nevertheless be regarded by the court as one of the terms of the contract by implication. This will be done only when it is necessary in the business sense to 'give efficacy to the contract'. Terms implied by the statutes entail sale of goods and hire purchase Acts. Normally, the terms will be implied unless they are expressly excluded by the parties in case of contracts for the sale of goods. It is imperative to reconcile the buyer's terms and conditions with those of the suppliers when faced with the battle of forms in business transactions (Keith et al., 2013).

Macintyre (2015) affirms that for an agreement to constitute a binding and enforceable contract it must have been entered in a form or manner prescribed by the law. The general rule of common law is that a contract can be entered orally, in writing, partly orally and partly in writing, or may be merely implied from the conduct of the parties to it. Basically a valid acceptance of a valid offer results in a valid contract. A valid contract is one that is legally effective and enforceable in court. A void (also called invalid) agreement cannot be enforced in court by either part since it has no legal force or effect. Under the circumstances, only one of the parties has the power to compel legal enforcement. If that party chooses otherwise, or decides to withdraw from the transaction, then the contract will not be enforced. Such an agreement is a voidable contract. For example, when one party persuades the other to contract by means of fraud, the sales contract is voidable, by the buyer who has been misled. But if it was personal whims to enter into a contract knowingly and the substance of the contract turns out to be fraud oriented, then the party in question is guilty (Elliot & Quinn, 2019).

Keith et al. (2013) upholds that the difference between a void agreement and avoidable contract is important in business transactions to avoid any confusion. A voidable contract can be enforced or avoided by one of the parties. A void agreement on the other hand cannot be enforced by either party. A valid contract sometimes becomes an unenforceable contract because the time limit for filing suit to enforce it

has passed. Therefore, a key consideration in contract management is contract enforcement which entails the attributes taken by the parties to a contract to make it a success. Generally, when the parties enter in a contract the focus is primarily based on its implementation. However, one party may fail to honour the contractual obligations. This gives rise to the aggrieved party to seek legal redress and perhaps enforce the contract as per the terms and conditions replicated in the contract. The ability to make and enforce contracts and resolve disputes is fundamental if markets are to function properly without interference from the parties to the contract (Gulshan & Kapoor, 2018).

According to Sammons (2017) when entering into a contract the terms and conditions should not be contradictory or repugnant to the subject matter of the contract. Where the contract contains terms that are vague or ambiguous, the terms are always interpreted by the court as *contra proferentem* meaning the clause will be interpreted against the party seeking to rely on it. Good enforcement procedures enhance predictability in commercial relationships and reduce uncertainty by assuring investors that their contractual rights will be upheld promptly by local courts. When procedures for enforcing commercial transactions are bureaucratic and cumbersome or when contractual disputes cannot be resolved in a timely and cost effective manner this attribute will destabilize the commercial transactions (Gulshan & Kapoor, 2018).

Roy and Adrian (2013) opines that the concept of contract enforcement can be embraced fully if there is a well-structured contract administration guideline. Contract administration is concerned with the mechanics of the relationship between the customer and the provider, the implementation of procedures defining the interface between them and the smooth operation of routine administrative and clerical functions. Contract administration handles the formal governance of the contract and changes to the contract documentation. Clear administrative policies and procedures ensure that all parties to the contract understand who does what, when, and how. The procedures that combine to make up contract administration include: Contract maintenance and change control, charges and cost monitoring, ordering

procedures, payment procedures, budget procedures, Resource management and planning, management reporting and asset management (Gulshan & Kapoor, 2018).

1.1.1 Global Perspective of Contract Management

Carter (2014) indicates that contract management is an integral approach to many countries across the globe on public procurement related activities. In most jurisdictions, contract law is adjudicated by judges according to the rules of judicial precedent. The UK procurement system spends a tune of EUR 316 billion annually on contractual transactions. UK public entities favour restricted tendering procedures when buying goods or services and this is necessitated by the need to limit the number of tenders per contract and in most cases the cost of evaluating bids from the suppliers is greatly reduced. However, the two-stage tendering procedure takes longer period than open tender and can be more restrictive for prospective suppliers to comply with, due to the value of tender submission required. The UK's administrative formation also affects its contract system in procurement related activities with exclusive legal regimes for England, Wales and Northern Ireland and Scotland on the other hand (CBI, 2014).

Based on the UK's contractual framework, procurement is constituted by two sets of laws. In England, Wales and Northern Ireland, EU Directive 2004/18/EC is transposed as Public Contracts Regulations 2006, and 2004/17/EC as Utilities Contracts Regulations 2006. These legal frameworks form the basis on how contract management is executed and hence all the parties confining themselves to this transaction are required to strictly adhere to the regulations. In Scotland, the same regulations are transcribed as Public Contracts (Scotland) Regulations 2006 and Utilities Contracts (Scotland) Regulations 2006. Similarly, the set regulations ought to be followed when the staff of various public organizations are executing procurement activities.

In USA, the procurement performance of public entities is entrenched on contract management guidelines. The public sector in the United States procures half a trillion dollars worth of products and services annually. This significant public expenditure is harnessed through a well-structured contract administration. Public procurement is

done at two distinct levels, the State level and the Federal level. The legal attribute binding all federal agencies is the Federal Acquisition Regulation (FAR) that provides procedural guidelines to control procurement processes. Cost savings and competitive processes are considered as key principles in all procurement decisions. State governments are not regulated by FAR policies. However, they learn from federal practice and conform to its principles when putting in place rules for state agencies (Vonortas, 2015).

The magnitude of contract administration varies across Organization for Economic Co-Operation and Development (OECD) countries. Portugal and Greece reports 20% of the government expenditure while countries like Japan, Estonia and South Korea registers 35% of the government expenditure. In terms of Gross Domestic Product (GDP), OECD countries reported an average share of 12.1% spent on contractual transactions in public procurement in year 2013. Most industrialized countries across the globe spend at least 10% of their GDP on procurement contracts. This calls for well-functioning public procurement systems to address contractual obligations of the parties concerned in order to ensure cost effectiveness and value creation in the holistic supply chain management (OECD, 2013).

Howard (2015) asserts that procurement has become global in scope and this has paved way to the need for contract management in international transactions. Rolling out a contract lifecycle management (CLM) solution globally brings forth enormous unique challenges. Contracts need to be in line with both international standards and local requirements. Organizations need to maintain visibility to key contract data required to effectively comply with international requirements and government standards while still optimizing revenues and minimizing costs. Global contract management should enable contract effectiveness, contract compliance and efficient risk management across numerous countries as well as multiple regulatory and business environments. In global transactions, customer relations exceed borders as well as business practices and controls (Christopher, 2018).

Burt (2012) confirms that in order to resolve any issue emanating from contract disputes the international chamber of commerce (ICC) came up with International Commercial terms (Incoterms) which entail set of rules for interpreting trade terms in

international transactions. The main purpose of Incoterms is to provide a set of international rules for the interpretation of the most commonly used trade terms in foreign trade. Howard (2015) indicates that Incoterms have put in place international procurement in the following ways: Defines responsibilities regarding title, risks and costs, and eliminates possibilities of misunderstandings and disputes. Incoterms deal with a number of identified duties imposed on the parties such as the seller's obligation to place the goods at the disposal of the buyer or hand them over for carriage or deliver them at destination and with the distribution of risk between the parties in these cases. Burt (2012) supports this by confirming that Incoterms deal with the mandate to clear the goods for export and import, the packing of the goods, the buyer's responsibility to take delivery as well as the duty to provide evidence that the respective requirements have been duly satisfied. All these developments are geared to provide a legal direction in a situation whereby the buyer or the seller seeks legal redress in case there is a dispute in international transactions.

1.1.2 Regional Perspective of Contract Management

According to COMESA (2018) contract management has been the key tenet of redifing the contractual obligations in the regional perspective. The proximity of most of the countries to Kenya, has necessitated multilateral trade to gain an upward trajectory. The Common Market for Eastern and Southern Africa (COMESA) is one of the classical regional economic community in Africa with twenty-one member states. COMESA countries have a combined Gross Domestic Product of US\$ 768 billion and this signifies vibrant contractual activities. In order to ensure seamless contract administration, the member countries of COMESA have endeavored to streamline the laws surrounding the establishment of the trading block. The backdrop of this phenomenon has created a sense of synergy and enrichment of business in all spheres of the economy to the member states (Lungu, 2020).

To enhance governance and regional integration in COMESA, modern public procurement systems have been inculcated and these considerations have improved the legal framework on transactional activities. Notably, published procurement systems of COMESA Member States conform to internationally acceptable standards

for good governance (Wignaraja, 2019). In order to improve public procurement systems of COMESA Member States, the laws, regulations and procedures pertaining commercial activities have been strengthened. This phenomenon has far reaching implications on transparency and accountability in public procurement undertakings. The embedded laws, regulation and procedures as per the trading block treaty, paves way to effective contract administration among the member countries. Public and private sectors are cognizant of the principles and workings of the national and regional public procurement systems as per the COMESA guidelines. The promulgation of national legislation on public procurement in at least 60% of the Member States is an indicative viewpoint of how COMESA countries are giving the requisite consideration on transformative contractual undertakings (COMESA, 2018).

The East African Community (EAC) is another intergovernmental organisation composed of seven countries in the Great Lakes region of East Africa. These countries comprise: Kenya, Uganda, Tanzania, Rwanda, Burundi, South Sudan and Democratic Republic of Congo. According to EAC Statistics (2019), the EAC countries have a combined Gross Domestic Product of US\$ 240 billion. As one of the fastest developing regional commercial blocs in the world, the EAC is broadening and deepening partnership among the member States in various key domains for their joint advantage. These domains include political, economic and social discourse (EAC, 2022).

The clarion call, in EAC countries has been provision of uninterrupted flow of goods and services to member countries through efficient contractual activities. The premise of this underlying philosophy, enables the EAC countries to transact without interference hence the reason for the proliferation of the trading block (Akinyi, 2019). A regional trade agreement (RTA) that is underpinned in the statutes of the member countries, contains rules and regulations that are mainly geared to reinforce cooperation and strengthen the contractual protocols to ease commercial undertakings. Since the member countries are signatories to the established rules and regulations, adherence to such guidelines are very critical in curbing disagreements (EAC, 2022).

1.1.3 State of Contract Management in Kenya

According to Ochieng (2014) contract management and in general the public procurement system in Kenyan context has transformed from a rudimentary system free from conventional standards to a lawfully regulated procurement structure in line with international principles. Since the start of the millennium, the country has endeavored to change and update its public procurement methods and this has translated to a clear understanding of contract management in public entities. The changes in public procurement in Kenya commenced through issuance of treasury circulars in the 1970s, 80s and 90s and further to a systematic legally regulated procurement system since March, 2001 under the Exchequer and Audit (Public Procurement) Regulations.

The greater strides made as part of the overall Public Finance Reform, a result of the implementation of this reform program a Public Procurement and Disposal Act (herein after referred to as PPD Act) was approved by parliament in 2005. In 2007 the PPDA Act was operationalized and established the Public Procurement Oversight Authority (PPOA) as regulatory body for advancement and oversight of the Kenyan Public Procurement System. The public procurement and disposal act, 2005 became the reference point on contractual obligations of the public entities. In order to meet the aspirations of the new constitution dispensation that was enacted in year 2010 and more importantly to enhance procurement performance in the public sector the public procurement and disposal act 2005 has been replaced by the Public Procurement and Asset Disposal Act, 2015 as per the *Kenya Gazette Supplement No.207 (Acts No.33)*.

Contract management is very conspicuous in line with the PPADA, 2015. Ideally, the accounting officers of all public entities are responsible for preparation of contracts in line with the award decision. They should also ensure that all contracts exceeding a value of Kenya shillings five billion are cleared by the Attorney-General (AG) before being signed. The country's constitution gives the AG unfettered discretion to provide a legal framework on the provision of these contracts although the AG can provide interlocutory submission if the contract turns out to be complex. On regular basis each Cabinet Secretary ought to inform the Cabinet and national treasury of all

government contracts exceeding Kenya Shillings five billion. The existence of a contract is invariably confirmed through the signature of a contract document incorporating all agreements between the parties and such contracts are signed by the accounting officer or an officer authorized in writing by the accounting officer of the procuring entity and the successful tenderer (Rok, 2015).

Procuring entities should enter into a written contract with the person submitting the successful tender based on the tender documents and any clarifications that emanate from the procurement proceedings. The written contract should be entered into within the period specified in the notification but not before fourteen days have elapsed following the provision of that notification provided that a contract shall be signed within the tender validity period. It is important to note that a procuring entity may amend the tender documents at any time before the deadline for submitting tenders by issuing an addendum without materially altering the substance of the original tender. As annexed in the tender document the latter information forms the basis of the discussions in the tendering process. No contract is formed between the person submitting the successful tender and the accounting officer of a procuring entity until the written contract is signed by the parties. It is important to note that an accounting officer of a procuring entity should not enter into a contract with any person or firm unless an award has been made and where a contract has been signed without the authority of the accounting officer, such a contract shall be declared null and void (Rok, 2015).

Ogachi (2014) concurs with PPADA Act 2015, on the provision that the tender documents form the basis of all procurement contracts and constitute at a minimum-contract agreement form; tender form; price schedule or bills of quantities submitted by the tenderer; schedule of requirements; technical specifications; general conditions of contract; special conditions of contract and notification of award. According to section 58(2) of PPADA 2015 the tender documents used by the procuring entity under subsection (1) shall contain sufficient information to allow fairness, equitability, transparency, cost effectiveness and competition among those who wish to submit their application. A person who contravenes the provisions of this section commits an offence. All suppliers participating in the tendering process

should provide a tender security which is absolute value of not more than two percent of the tender as valued by the procurement entity. The tender security shall be forfeited if the person submitting the tender withdraws the tender after the deadline for submitting tenders but before the expiry of the period during which tenders shall remain valid.

Rok (2015) asserts that if the person submitting the successful tender refuses to enter into a written contract as required under section 135 and section 61 of the Procurement Act 2015, he or she loses his or her tender security and the procurement process should proceed with the next lowest evaluated tenderer. Likewise, subject to the regulations a successful tenderer shall submit a performance security equivalent to not more than ten percent of the contract amount before signing the contract. In case the contract is not fully or well executed, the performance security shall unconditionally be fully seized by the procuring entity as compensation without prejudice to other penalties provided for by the Act. However, the tenderer shall not be liable for forfeiture of its performance security or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the contract is the result of an event of force majeure.

Rok (2015) suggests that, the accounting officer of a procuring entity should publish and publicize all contract awards on their notice boards at noticeable places and website if available within a period as prescribed. An accounting officer of a procuring entity should report all contract awards to the public procurement regulatory authority (PPRA) as prescribed. Ideally, the director general of PPRA plays an ombudsman role on contract management related activities in public entities in Kenya and this calls for the person in charge of the position to be adept at investigating procurement malpractices and show the unrelenting drive to get rid of corruption (Rok, 2015). Any interested party or supplier who feels short changed in any tendering process has the leeway to lodge his/her complaint with director general who takes up the matter for adjudication before a procurement review board. Any party to the review aggrieved by the decision of the review board may appeal to the high court and the decision of the high court shall be final. A procuring entity which

disobeys the decision of the review board or the high court shall be in breach of this act (PPADA, 2015) and any action by procuring entity contrary to the decision of the review board or the high court shall be dismissed on the grounds that the entity is in violation of the rules and the regulations.

Section 85 of PPDA, 2015 indicates that subject to prescribed thresholds all tenders shall be evaluated by the evaluation committee of the procuring entity for the purpose of making recommendations to the accounting officer through the head of procurement to inform the decision of the award of contract to the successful tenders. Section 86 (1) of the act, further indicates that the successful tender shall be the one who meets any one of the following as specified in the tender document: (a) the tender with the lowest evaluated price (b) the responsive proposal with the highest score determined by the procuring entity by combining for each proposal in accordance with the procedures and criteria set out in the request for proposals, the scores assigned to the technical and financial proposals where request for proposals method is used (c) the tender with the lowest evaluated total cost of ownership and (d) the tender with the highest technical score, where a tender is not to be evaluated based on procedures regulated by an Act of parliament which provides guidelines for arriving at applicable professional charges (Rok, 2015).

1.1.3 Procurement Performance in Public Universities in Kenya

Manyenze (2013) confirms that procurement function plays a significant role towards the envisioned goals and objectives of the public universities in Kenya. Acquaintance of the key pillars of procurement enables procurement professionals to understand the micro environmental and macro environmental constraints. The former facet comprises: Customers, Employees, Suppliers, competitors, stakeholders public and media while the latter aspect entail: political, economic, social, technological, legal and environmental (PESTLE) challenges. Procurement officers are involved in corporate strategy decisions to articulate the overall attributes that bring forth an outstanding performance on all matters concerning contract management. It is important to note that procurement provides a comprehensive analysis of legal and policy frameworks that underpin the regulation and the best

approaches in all public universities in Kenya. The importance of these aspects is paramount not only for the successful functioning of the public universities, but mostly for the conceptual direction of the holistic public sector of the country in its attempts to deliver services to the public in a more efficient and effective way (Kirande & Rotich, 2014).

The procurement process in public universities is guided by the Constitution of Kenya, 2010 and various statutory provisions including the public procurement legislative framework, the Universities Act, statutes thereon and internal administrative guidelines that are issued from time to time. Article 227 of Kenyan constitution promulgates that, when a public entity contracts for goods or services, it shall do so in accordance with a system that is fair, equitable, transparent, competitive and cost effective. An act of parliament shall prescribe a framework within which policies relating to procurement and asset disposal shall be implemented and may provide for all or any of the following: categories of preference in the allocation of contracts, the protection or advancement of persons, categories of persons or groups previously disadvantaged by unfair competition or discrimination, sanctions against contractors that have not performed according to professionally regulated procedures, contractual agreements or legislation, sanctions against persons who have defaulted on their tax obligations, or have been guilty of corrupt practices or serious violations of employment laws and practices (Rok, 2010).

A total departure from these considerations when it comes to contractual responsibilities in government organizations, warrants the regulatory authorities to take punitive measures against the offenders (Rok, 2010). Just like other public entities in Kenya, public universities ought to ensure that there is value for money in all transactions executed, transparency and accountability should be maintained, establishment of efficiency and effectiveness in business should be effected, promotion of competition through competitive procurement methods should be a reality, creation of integrity and fairness of procurement procedures ought to be prioritized.

Further, restoration of public confidence in procurement process should be compulsory, building public trust to stakeholders must be achieved, promotion of local industry and spurring of economic development should be a priority. This should be effected by ensuring that goods and service are obtained at the right price, right quality, right quantity, from right source and delivered at the right place. These public procurement objectives form the basis of contract management since any deviation can bring adverse effects like unnecessary costs, customer dissatisfaction and also fraud to public universities in Kenya (Chesang, 2013).

The procurement function of public universities in Kenya is anchored on the provisions of the statutory policies, Executive orders, National Treasury circulars, Public Procurement Regulatory Circulars, the University financial regulations, and other enabling statutes. Prior to any initiation of a contract in the public universities, procurement functions are mandated to come up with a procurement plan. All procurement should be within the approved budget and should be planned by the Universities through an annual procurement plan (Public Procurement and disposal Act, Section 44(2) (c) and Section 53 Procurement plans define what is to be procured, the estimated cost, and when to procure. Chairmen of departments in public universities are entitled to submit an annual procurement plans to the Vice Chancellors through the Directors, Supply Chain Management at least thirty (30) days before the close of each financial year covering all items of procurement (Rok, 2015).

Gathua (2015) indicates that procurement process in public universities begins with identification of needs by the user departments. Needs are those items or services that should be procured to help the University achieve its strategic plans and goals. All required items have to be budgeted for and their total value is what is referred to as the "Annual Procurement Plan." Therefore, any requirement that has not been budgeted for will not be processed for procurement. It is important to note that the user departments have the responsibility of drawing up the correct specifications of their procurement needs before forwarding them to the Supply Chain Department. If need be, users may seek the assistance of technical experts in drawing up

specifications since the goods/services should be described in sufficient details in terms of performance without displaying biases towards particular brands.

All procurement requests must be accompanied by completed Authority to Incur Expenditure (A.I.E) forms. These should be raised by the users, who are duly authorized by either the Chairmen of Departments, Principal of Colleges, or Deputy Vice-Chancellor. It is only after the Finance Department or college bursar has confirmed the availability of funds that the procurement process can commence. In all procurement processes the procurement officers have the constitutional obligation to provide professional advice to the accounting officers on matters of procurement in the public universities. Upon the receipt of the professional advice the accounting officers ought to exercise their own discretion on the way forward and not to subvert the constitutional mandate of the procurement officers by coercing or deploying them in other functions. However, in the event that procurement officers abdicate their role under their service cadre ostensibly to safeguard the interest of the university, then the accounting officers can apply the powers by instituting disciplinary actions to the offenders (Rok, 2015).

It is worthwhile to underscore the fact that procurement is law rounded. Public universities should follow strictly the Public Procurement and Asset Disposal Act, 2015 when deriving the viable concepts of contract management. According to Article 227 of the Constitution, the Act provides procedures for efficient public procurement and for assets disposal by government institutions. To be in line with the procurement act the public procurement process should comprise: Standard tender document, requirement identification process, procurement requisition processes, appointment of ad hoc evaluation, inspection and acceptance committees, determination of procurement method, procurement planning and strategy development. Also other considerations include: solicitation of tenders guidelines, documents preparation and publication, pre-bid/proposal meeting and site visit, bid/proposal submission and opening, bid/proposal submission and opening, bid/proposal evaluation, evaluation committee's recommendations, due diligence process contract negotiations if it is purely for service oriented activities and lastly contract award (Rok, 2015).

One of the key reforms in public procurement in Kenya is application of digital platforms in execution of procurement activities. The considerable modules that are recommended entail use of integrated financial management information system (IFMIS) which is an online portal where suppliers perform various procurement processes including tendering, requisition, payments and checking notifications of tender awards. Electronic reverse auction (ERA) is another element whereby suppliers upon registration compete for the tenders online and the rule of the transaction is that the identity of all suppliers is concealed and the lowest bidder at the closure of business is awarded the tender (Rok, 2015).

Further, Enterprise resource planning (ERP) is also another common method applied in public procurement process in public universities in Kenya. It is a business management system that is supported by multi-module application software that integrates all the department's functions of the universities and it allows chair of departments (COD) from all departments to have a consolidated view of what is or is not taking place throughout the universities and this platform creates a clear position of enhancing procurement performance (Lysons & Farrington, 2012).

Public universities in Kenya have increased tremendously in the last one decade. Currently there are 31 public chartered universities and 8 public constituent university colleges. Due to the expansion of the public universities in Kenya the government has also increased the budget allocation all the public universities. For example, during 2014/2015, 2015/2016 and 2016/2017 financial years the exchequer allocated 55 billion, 52.9 billion and 57.8 billion respectively to public universities. Cumulatively this translated to 3.5 % of the country's Gross Domestic Product (Rok, 2017). It is important to note that 60-70% of this budget is always channeled to issues based on procurement in order to ensure capacity building and research developments (PPRA, 2018). It is of interest, therefore, to explore the topical issue that is in line with the influence of contract management on procurement performance in public universities in Kenya. This is as result of massive amount of money directed to these public entities and therefore, this compels the need for stringent controls in utilization of resources to meet the university's needs in short term as well as in the long term endeavors (Rok, 2015).

1.2 Statement of the Problem

Contract management in public universities is a complementary approach to more broad-based reforms on public procurement, which is one of the very first areas of change in the growth trajectory of developing countries (Perera & Colverson, 2012). Procurement functions in public universities are susceptible to irregularities and the ripple effect causes social prejudice and economic recession. Despite the introduction of regulatory bodies in Kenya like public procurement oversight authority (PPOA), public procurement oversight advisory board and the public procurement administrative review board and now the new regulatory bodies that comprise National Treasury in public procurement and assets disposal and public procurement regulatory authority (PPRA) regulations could still be circumvented through acts and omissions of it being rigged by public and private sector operatives. There are also immense cases of defaulted contracts, nullified contracts as well as stalled projects that remain work-in-progress (WIP). These myriad of problems culminate to huge financial losses, time overruns and also inconveniences to the target beneficiaries in public universities (Muchungu, 2012).

The audit trail on procurement performance in public universities in Kenya attests contravention of procurement laws. The auditor general's report for the years 2013-2014 on the financial statements, showed that 24% of public universities in Kenya flouted procurement laws through unprocedural acquisition of goods and services. These anomalies included procurement of goods and services from firms that were not in the list of the prequalified suppliers contrary to the then provisions of section 25(3) of the procurement act, which stated that the procuring entity shall invite tenders from only the persons who have been prequalified under the set regulations. The implications of these non-compliance related activities under the domain of public procurement in Kenya meant that the key stakeholders that included the government, taxpayers, donor countries and world bank did not get value for their money hence a considerable drawback to the progress of the country was witnessed.

The subsequent auditor's report during 2014/2015 financial year denoted a staggering statistics on contravention of procurement law on contractual activities in

public universities in Kenya. These included buying of goods and services above the predetermined threshold using direct procurement method and also awarding the contracts to the second lowest evaluated bidders without explaining why the tenders were not awarded to the lowest bidders. In some cases, no bids were floated for procurement of the services. All these contracts did not comply with the predetermined rules and regulations depicted in the PPADA, 2015 and the procurement regulations of 2020. The magnitude and trend of these transactions in public universities merited intensive research, discussion and sound recommendations if efficiency and effectiveness is to be achieved by the procurement functions in public universities in Kenya.

Although the Kenyan government has introduced contract price variation in a tune of 25% of the original contract price for contracts exceeding one year, staggering statistics have emerged that shows increase of contract variations in public entities in Kenya (Rok, 2015). In particular, public universities in Kenya have been subjected to contract variations during contract implementations. This has been compelled by price fluctuations, complexity of contracts, lack of professional probity, delays of disbursement of funds by the exchequer, omission of the required information in the bill of quantities and unanticipated changes in the market. The net effect of these outcome has been debarment of contractors on subsequent contracts, cancellation of contracts, legal redress for the liquidated damages, withholding of payments, and stern warning of the suppliers and contractors (CIP, 2013).

A number of empirical studies have been conducted on the area of contract management and procurement performance in public universities in Kenya. Manyenze (2013) who carried out a research on procurement performance in the public universities in Kenya focused primarily on ways of establishing mechanisms to reduce the effects of procurement challenges and determinants of effective procurement performance. On the same breadth, Ngetich (2017) conducted a research on determinants of effective procurement contract administration in selected public universities in Kenya. This study concentrated on staff competences, information technology, staff professionalism and accountability. Further, Kirande and Rotich (2014) conducted a research study on the determinants affecting public

procurement performance in Kenyan universities and zeroed on organizational budget, work environment, quality management systems and organizational structure. It is imperative to note that although the researchers provided a broad perspective of procurement performance in public universities, these studies did not address the key tenets of contract management that were advanced by Vasudevan (2015) namely: buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management and legal compliance. This study therefore, sought to bridge this knowledge gap by exploring the influence of contract management on procurement performance in public universities in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

To determine the influence of contract management on procurement performance in public universities in Kenya.

1.3.2 Specific Objectives

1. To find out the influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.
2. To establish the influence of procurement risk management on procurement performance in public universities in Kenya.
3. To determine the influence of transparency and accountability on procurement performance in public universities in Kenya.
4. To establish the influence of contract records management on procurement performance in public universities in Kenya.
5. To examine the moderating influence of legal compliance on the relationship between contract management and procurement performance in public universities in Kenya.

1.4 Research Hypotheses

This study collected data on testable hypotheses and subjected them to empirical investigation. These hypotheses were stated in a null context as follows:

H₀₁: There is no significant influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.

H₀₂: There is no significant influence of procurement risk management on procurement performance in public universities in Kenya.

H₀₃: Transparency and accountability has no significant influence on procurement performance in public universities in Kenya.

H₀₄: Contract records management has no significant influence on procurement performance in public universities in Kenya.

H₀₅: Legal compliance has no significant moderating influence on the relationship between procurement contract management and procurement performance in public universities in Kenya.

1.5 Justification of the Study

The in depth analysis of this study will make a great contribution to the existing knowledge in the area of contract management and generally procurement performance in the context of public universities in Kenya. The study will primarily benefit stakeholders such as public universities, regulators and academicians.

1.5.1 Public Universities

The findings of this study will extensively benefit public universities in Kenya. The top management and the signatories of crucial contractual business transactions on procurement matters will be informed on how, when and what contracts need to be endorsed for the interest of the respective universities. This will enable the university staff in question to administer contracts in ways that will leverage long term procurement performance in order to reduce procurement irregularities in subsequent transactions.

1.5.2 Regulators

The regulators of public procurement and asset disposal act such as the National Treasury in public procurement and assets disposal, Public procurement regulatory authority and Public Procurement Administrative Review Board can use the study findings to understand the bottom line role of contract management in public entities in Kenya. The study will provide explicit insights on the possible approaches that can enhance the procurement performance and hence guide in regulation and policy formulation. This will therefore, help policy makers of the public universities to develop and review the existing policies in order to achieve synergy in line with the existing circumstances. Therefore, this thesis will enable the public procurement regulators to have a new dimension on how to safeguard public resources in public universities in Kenya. The actualization of the findings of the study by the procurement regulatory bodies will create value for money in all the transactional activities in public universities in Kenya.

1.5.3 Academicians

The students, researchers and academicians of all walks of life will use this study as a basis for discussions on implementation of contract management in the public universities. The study will be a source of material for future researchers on other related topics and therefore, this study will be a classical reference point of inferring relevant empirical information.

1.6 Scope of the Study

The study concentrated on the influence of contract management on procurement performance in public universities in Kenya. The focus of the study was post contract award phase since this step in procurement process shows the chronology of the activities undertaken by both the buying entities (Public universities) suppliers, service providers as well as the contractors. The choice of the public universities was prompted by the fact that there has been a proliferation of institutions of higher learning for the last one decade and this development has translated to a huge budget allocation to public universities by the exchequer. Therefore, the issues of contract

management on procurement activities have remained very crucial over the years since conformance or non-conformance of procurement law has huge implications to the government. The former consideration paves way to value for money while the latter consideration results to financial losses.

It is also important to underscore the fact that universities have been earmarked by the government to be the key drivers of the *vision 2030* and this necessitates the need for research in institutions of higher learning in order to address the pertinent issues that may turn out to be impediment towards this strategic plan. The study was limited to buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, legal compliance and their influence on procurement performance of 31 public universities in Kenya. The researcher derived a data of public universities from July 2013-June 2018 fiscal years.

1.7. Limitations of the Study

The major constraints that turned out to be the stumbling block of this study were restraints and confidentiality from the institutions to the questionnaire as some of the public universities considered the information the researcher sought to be confidential. In order to have a breakthrough on this impediment the researcher provided a letter of introduction from JKUAT as well as a research permit from National Commission for Science, Technology and Innovation (NACOSTI). The researcher also assured the respondents that the information provided was to be used for academic purpose and thereby the researcher was obliged to treat the information with a sense of confidentiality.

Far-flung universities posed a serious challenge to the researcher because of the logistical costs that was to be put in place and also the longevity of the distance since most of the public universities in Kenya are scattered. To overcome the intensity of these challenges the researcher added more budget for the study and sought reinforcement from the research assistants who expedited the issuance and collection of the questionnaires from the respondents. This considerable strategy turned out to be panacea of the then challenge since the researcher was in a position to receive 104

questionnaires out of 124 questionnaires issued which translated to 84% of the response rate.

The scientific limitation of the study was as a result of constrained by the extent of existing knowledge in line with contract management on procurement performance in public universities in Kenya. Some of the reviewed studies were not in tandem with the topical issue of the study. However, this phenomenon was solved by finding unparalleled theoretical basis that supported the research topic.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explores the fundamental aspects that are in line with the research topic being studied. The chapter is divided into three distinct parts. The first part covers the theoretical review on buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, legal compliance, procurement performance and generally the concept of contract management. This leads to the development of the conceptual framework that guided the study. The second part deals with the review of existing literature in accordance with the study variables. The third part deals with empirical studies carried out in the past and in accordance with the variables presented in the research model, critique, research gaps and summary.

2.2 Theoretical Review

Theoretical review is an explanation about the phenomenon based on conceptual analysis, previous studies and theories that exist in the literature (Camp, 2001). There are many theories and models advanced by different scholars to explain the influence of contract management on procurement performance in public universities in Kenya. This study was guided by five theories and two models discussed in this chapter.

2.2.1 Resource Dependence Theory

The proponent of resource dependence theory (RDT) was Pfeffer (1978). The theory started as a publication of the external control of organizations which was deemed to be a resource dependence perspective discourse. Resource dependence theory emphasize how organizational behavior is affected by external resources the organization utilizes like raw materials and services. The theory is necessary because an organization's ability to gather, alter and exploit raw materials faster than competitors can be fundamental to success (Collins & Hillman, 2009).

According to Cobb (2010) resource dependence theory is underpinned by the idea that resources are essential to organizational performance and that access and control over resources is a basis of power. Organizations normally build redundancy into resource acquisition in order to reduce their reliance on single sources. The basic argument of resource dependence theory can be summarized as follows: Organizations rely heavily on resources, resources eventually emanate from an organization's environment, the environment, to a considerable extent, contains other organizations, the resources one organization needs are in most cases in the hand of other organizations, resources are a basis of control, lawfully independent organizations can therefore depend on each other and lastly power and resource dependence are directly linked (Collins & Hillman, 2009).

In the recent times, resource dependence theory has been under investigation in several review and meta-analytic studies: Collins and Hillman (2009); and Cobb (2010); which all indicated the importance of this theory in explaining the actions of organization such as forming interlocks, alliances, joint ventures, and mergers and acquisitions, in striving to overcome dependencies and improve an organizational autonomy and legality. While resource dependence theory is one of many theories of organizational studies that characterize organizational behavior, it is not a theory that explains an organization's performance per se. But still in many ways, resource dependence theory predictions are similar to those of transaction cost economics and shares some aspects with institutional theory (Drees & Heugens, 2013).

Resource dependence theory provided a distinct insight on relationship management in business transactions albeit the empirical application of the theory being too narrow. The scholars exploring a multiplicity of ways in which firms could manage dependence relations failed to accomplish the envisioned tasks while resource dependence theory narrowed its focus thus the institutional theory became expansive. It was open to scholars who were interested in one of their main concepts, even if the intention was completely orthogonal to the original motivations of institutional theory (Oliver, 1991).

The open tent approach allowed institutional theory to develop fairly quickly from an explanation for the rationalization of the organization to a wider theory about the macro-cultural environment of organizations. The flexibility of institutional theory made it attractive to management scholars who were looking for non-economic explanations for organizational phenomena. Because institutional theory was seen as more flexible, it became a formidable competitor to resource dependence theory in management scholarship, which would gradually become the hot bed for influence building in organizational theory (Sharif & Yeoh, 2014). The major philosophy in line with Resource dependence theory emphasizes the need for synergy between buying entities and the suppliers in business circles. This approach is one of the key requirements on the concept of buyer-supplier collaboration and therefore, this theory anchors the first specific objective of the study on the influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.

2.2.2 Theory of Constraints

The theory of constraints was initiated by Goldratt (1984) through his bestselling novel entitled the goal. The theory of constraints is a methodology for identifying the most important limiting factor that is (Constraints) that stands in the way of gaining goal and then systematically improving that constraint until it is no longer the limiting factor. This is accomplished by establishing a methodological approach that devises the prone areas that create disturbance in the set organizational activities.

The theory of constraints assumes a systematic concept to improvements. It hypothesizes that every complex structure, including procurement, manufacturing processes and distribution consists of several linked activities, one of which acts as a constraint upon the entire system. Since the decisive goal of most of the organizations is to make profit both in the short term and long term this theory provides a powerful set of tools to achieve the set goals (William, 2007).

One of the appealing characteristics of the theory of constraints is that it prioritizes improvement in activities. The top priority is always the current constraint. In environments where there is an urgent need to improve, TOC offers highly focused modalities for creating rapid improvements. A successful theory of constraints

implementation has the following benefits: Fast improvements of activities, increased profits, improved capacity, reduced lead time and also reduced inventory (Vorne, 2011).

Watson (2006) indicates that the underlying premise of the theory of constraints is that organizations can be measured and controlled by variations on three measures: throughput, operational expense, and inventory. Inventory is all the money that the system has invested in purchasing things which it intends to sell. Operational expense is all the money the system spends in order to turn inventory into throughput. Throughput is the rate at which the system generates money through sales. Before the goal itself can be reached, ideal conditions must first be met. These typically include quality, safety, legal obligations, etc. For most businesses, the goal itself is to make money. However, for many organizations and non-profit businesses, making money is a compulsory condition for pursuing the goal. Whether it is the goal or a necessary condition, understanding how to make sound financial decisions based on throughput, inventory, and operating expense is a significant requirement (Alexandre, 2009).

Dettmer (2003) confirms that the limiting factors of this theory are the impediments or constraints. At any given time, an organization is faced with at least one constraint that limits business operations. Typically, as one constraint is eliminated another constraint will arise. The organization should then focus its attention on the new constraint. And this process repeats itself continuously. According to the theory of constraints, the best way for an organization to achieve its goals is to reduce inventory, reduce operating expenses and increase throughput. Some criticisms of this theory include the idea that Goldratt borrowed concepts and ideas from preceding studies but failed to recognize these contributions to this theory (Wayne, 2009).

In reference to this theory, there is conspicuous action plans analyzed, discussed and recommended based on procurement risk management e.g. risk identification, risks mitigation and most importantly rational decisions on how to avoid risks in procurement functions. This theory therefore, links the second specific objective of

the study on the influence of procurement risk management on procurement performance of public universities in Kenya.

2.2.3 Deontological Theory

The deontological theory is primarily the work of Kant (1785) in his approach of the grounding for the metaphysics of morals that emphasized on developing a clear understanding of moral principles that could prevent distractions. According to Kant actions are moral if they are put in place without concealed motive and the moral quality of an action is judged not according to the action's consequences but according to the motive that produced it. Also actions are moral if they are executed out of respect for the moral law contrary to some other motivation such as a desire or need.

Deontology is an extensively accepted principle that involves an honest, open, accountable and accessible approach to communication. In the spirit of sustainable procurement organizations of all types are reporting on economic, social, ethical and environmental impacts. The drivers for this disclosure include reputation enhancement, demonstrating an ethical position to stakeholders and meeting investor demand for performance information. Failing to be honest and open and about the organization and its practices can be detrimental to the organization and damage its image. Deontology can improve the organization's credibility, community's commitment and the public trust to the organization (Micheal, 2015).

Over the years various scholars have examined the idea of deontology theory. Han (2012) confirms that the premises of deontology enforce a totalitarian system of honesty at the expense of other social values such as secrecy, shame and trust. Anthropologist have long undertaken ethnographically the relation between revealed and concealed information and have increasingly taken up the subject in relation to transparency and accountability.

According to Birchall (2011) the rise of deontology as a political and cultural approach has left secrecy to add negative connotations. The moral conversation that condemns secrecy and rewards transparency may cause many people to

misunderstand the symbiotic link between these terms. The prime model of governmental data driven transparency paves way to neoliberal subjectivities that decrease the risk of politics as a ground of dissent between real alternatives.

This theory addresses the fundamental ethical standards that ought to be followed by public entities in the entire process of procurement e.g. impartiality, openness, confidentiality, due diligence, fidelity to professional responsibility and honesty. To this extent, therefore, the theory supports the third specific objective of the study on the influence of transparency and accountability on procurement performance in public universities in Kenya.

2.2.4 Records Continuum Model

This model was pioneered by Upward (1996) with contributions from Sue Mckemmish and Livia Lacovino as a rejoinder to the then developing debate that was about the challenges of managing digital records and archives in the discipline of Archival science. The records continuum model (RCM) was first published in Upward's 1996 paper "Structuring the Records Continuum Part One: Post custodial principles and properties". Upward describes the RCM within the broad framework of a continuum where activities and connections convert documents into records, evidence and memory that are used for several purposes over time. The RCM is an abstract conceptual model that clarifies issues based on understanding recordkeeping activities.

According to Mckemmish (1997) recordkeeping activities take place prior to the records creation and this is necessitated by identifying recordkeeping requirements in action plans, systems, procedures, rules, social requirements that affect on what is created and how it is managed over space-time. The implication of an RCM concept to records and archives is that systems and processes can be put in place before records are even generated. A continuum model therefore indicates that records are both current and archival at the point of formation. The RCM is designed as a series of concentric rings that entail dimensions of creating, capturing, organizing and pluralizing crossed axes based on transactionality, evidentiality, recordkeeping and identity.

The RCM states the enormous and diverse perspectives that contribute to records and archives including individual, group, organizational, institutional and societal. These frameworks disclose the need to take into account various stakeholders and co-contributors in relation to use, access and assessment of records and archives. Over the existence of a record numerous decisions are made by various personalities of the records that include, but are not limited to records managers and archivists. Other individuals can be identified at various dimensions of interaction, including those involved in providing as well as community. Records are therefore not just physical or digital representations of physical objects held and managed in an archive or repository, but are proof of various perspectives, narratives and contexts that contributed to their development (Upward, 1997).

Mutero (2011) alludes that the RCM is often described as being different or at odds with the lifecycle records model. While the RCM is inclusive of numerous ways of conceptualizing and performing recordkeeping, including a lifecycle concept, there are some significant differences. Firstly, of all, where the lifecycle model shows clearly demarcated phases in the management of records, a continuum model conceptualizes elements as continuous with no visible parts. Secondly, the lifecycle approach identifies clear conceptual and procedural limits between active or current records and inactive or historical records, but a continuum approach deems records processes as more incorporated across space-time. In the continuum it is recordkeeping processes that carry records forward through space-time to enable their use for various purposes. Archival records are thus not just historical, but are able to be re-created, re-interpreted, and re-contextualized according to their place and use in space-time. In this way, archival institutions are nodes in the system of recorded information and its framework, rather than the end point in a lifecycle stage for records.

Reed (2010) confirms that it is important to note that RCM is the most well-known of all the continuum models created, but does not exist in isolation. Several other complementary models have been developed by RCM creator Frank Upward, and there are others created by continuum researchers that offer enhanced or alternative ways of understanding the continuum. Basically, the new models advanced by Frank Upward were initiated in order to compliment the records continuum model and

provide a solid base of conceptualizing and comprehending this model well. The series of continuum models created by Frank Upward include: Information Systems (Data) Continuum Model (data modeling and data flow), Cultural Heritage Continuum Model (the stories the documents tell and the significance of those stories to others), Publication (Access) Continuum Model (the reach of accessibility and the way the document is issued), Information Continuum Model (Barbara Reed, Don Schauder, Frank Upward) (the technologies driving the system and classification methods). Other models include juridical contexts of the Records Continuum Model (Livia Iacovino), Mediated Recordkeeping: culture-as-evidence (Leisa Gibbons).

Records continuum model focuses more on record keeping on contractual activities in procurement function and provides a trail of evidence on transactional activities from time to time. This include ascertaining the implementation of policies, systems, rules, economic requirements that affect what is created and how it is managed in specific time frame. This model, therefore, correlates with the fourth specific objective of the study on the influence of contract records management on procurement performance in public universities in Kenya. The records continuum model is captured in the review of this model (see Figure 2.1).

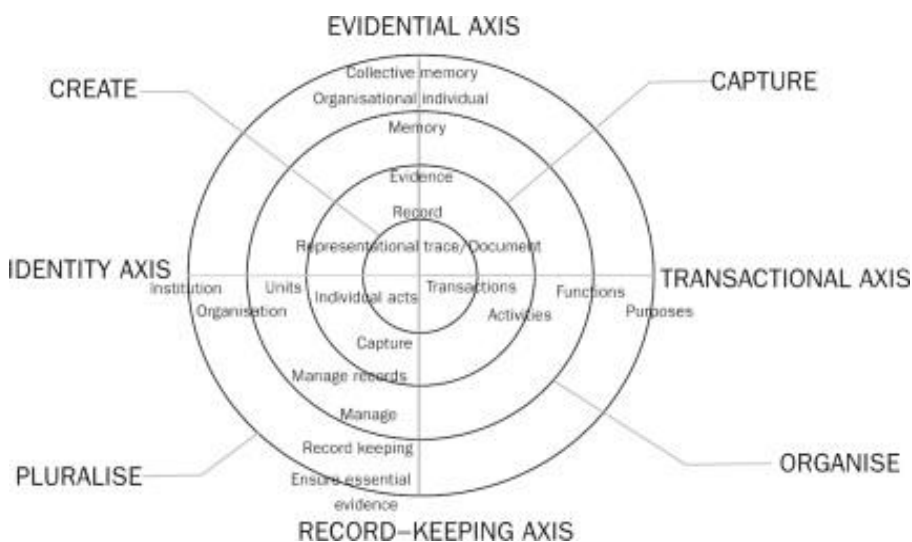


Figure 2.1: Records Continuum Model; adapted from Upward Frank (1990)

2.2.5 Legal Theory

Legal theory popularly known as jurisprudence was started in year 1832 by John Austin. This renowned scholar of law deeply explained the nature of law in its most general form and provided a deeper understanding of legal reasoning, legal systems, legal institutions and the role of law in society. Leiter (1998) indicates that legal theory is a discourse that explains variety of conventional aspects that govern law in all spheres of life. These include analytic jurisprudence, normative jurisprudence and sociological jurisprudence. In his submission about the legal theory, Austin (1832) argued that laws are rules, which are defined as the command. More precisely, laws are general commands issued by a sovereign to members of an independent political society and backed up by adverse consequences in the event of non-compliance.

Pillai (2016) asserts that contemporary philosophy of law, which deals with general jurisprudence, addresses problems internal to law and legal systems and problems of law as a social institution that relates to the larger political and social context in which it exists. This aspect basically defines the judicial process that ought to be followed by the magistrates and judges when making rulings of the cases presented to them. The foundations of law are accessible through reason and it is from these laws of nature that human laws gain whatever force they have. Analytic jurisprudence rejects natural law's fusing of what law is and what it ought to be. It espouses the use of a neutral point of view and descriptive language when referring to aspects of legal systems. It encompasses such theories of jurisprudence as "legal positivism", which holds that there is no necessary connection between law and morality and that the force of law comes from basic social facts. Legal realism is also another component of analytic jurisprudence and it indicates that the real-world practice of law determines what law is, the law having the force that it does because of what legislators, lawyers, and judges do with it (Raymond, 2009).

Hart (1994) indicated that normative jurisprudence is concerned with "evaluative" theories that provide prescriptive questions about the law. It deals with what the goal or purpose of law is, or what moral or political theories provide a foundation for the law. It not only addresses the question "What is law?", but also tries to determine

what the proper function of law should be. This gives rise to the question- what sorts of acts should be subject to legal sanctions and what kinds of punishment should be permitted if there is a non-compliance of what is ought to be done. If complying with the legislated laws turns out to be unsurmountable to the citizens, it's therefore, incumbent upon the legislative organs of the country to revise the laws with a sense of creating sound, reasonable and practical laws that are predominantly working towards the interest of the country in general.

Criminal laws, for example, remove certain behaviors from the range of behavioral options by penalizing them with disciplinary measures to deter the offenders from repeating the mistakes. Likewise, civil laws require people to take certain precautions not to injure others and to honor their contracts. But the principle of *prima facie* should always prevail in all social activities, meaning that one party to the legal proceedings has a burden of proof which requires it to present all circumstantial evidence for a case to be concluded (Himma, 1998). According to Devlin (1965) legal moralism is an important aspect in normative jurisprudence. It views that the law can legitimately be used to prohibit behaviors that conflict with society's collective moral judgments even when those behaviors do not result in physical or psychological harm to others. Aquinas (1988) suggests that legal moralism, implies that it is permissible for the state to use its coercive power to enforce society's collective morality for the interest of the state and possibly remedy the affected parties from unscrupulous undertakings.

Feinberg (1985) had a different view on the offence principle advanced in normative jurisprudence. The scholar contends that the offensive principle does not provide sufficient protection against the wrongful behaviors of others, as it is inconsistent with many criminal prohibitions we take for granted as being justified. The harm principle must be augmented by the offense principle, which he defines as follows: "It is always a good reason in support of a proposed criminal prohibition that it would probably be an effective way of preventing serious offense to persons other than the actor and that it is probably a necessary means to that end."

Bix (1995) confirms that sociological jurisprudence is a term coined by the American Jurist Roscoe Pound to describe his approach to the understanding of the law. This philosophical approach to law stresses the actual social effects of legal institutions, doctrines, and practices. In Germany, Austria and France, the work of the "free law" theorists (e.g. Ernst Fuchs, Hermann Kantorowicz, Eugen Ehrlich and Francois Geny) encouraged the use of sociological insights in the development of legal and juristic theory. In the second half of the twentieth century, sociological jurisprudence as a distinct movement declined as jurisprudence came more strongly under the influence of analytical legal philosophy; but with increasing criticism of dominant orientations of legal philosophy in English-speaking countries in the present century, it has attracted renewed interest. Increasingly, its contemporary focus is on providing theoretical resources for jurists to aid their understanding of new types of regulation (for example, the diverse kinds of developing transnational law) and the increasingly important interrelations of law and culture, especially in multicultural Western societies.

This theory connects fully with the moderating variable of the study that is legal compliance in the sense that the rallying call for the law is compliance to the stipulated guidelines. This is evidenced in the legal theory where a clear position of the law indicates that willful breach of the law, or unauthorized departure from the procedures derived from constituted guidelines prompts a disciplinary action.

2.2.6 Supply Chain Operations Reference Model

The Supply chain operations reference (SCOR) model was originally developed in 1996 by PRTM, a management consulting firm and endorsed by the Supply Chain Council (SCC) in 2004 as the cross-industry, standard diagnostic tool for supply chain management. The SCOR model describes the business activities associated with satisfying a customer's demand, which include plan, source, make, deliver, return and enable. Use of the model includes analyzing the current state of a company's processes and goals, quantifying operational performance, and comparing company performance to benchmark data. SCOR has developed a set of metrics for supply chain performance, and Supply Chain Council members have formed industry

groups to collect best practices information that companies can use to elevate their supply chain models. This reference model enables users to address, improve, and communicate supply chain management practices within and between all interested parties in the extended enterprise (Rosenbaum, 2003).

Poluha (2007) suggests that by describing supply chains using process modeling building blocks, the model can be used to describe supply chains that are very simple or very complex using a common set of definitions. As a result, disparate industries can be linked to describe the depth and breadth of virtually any supply chain. The SCOR management processes replicate the following outcome in business operations: Plan processes balance aggregate demand and supply to develop a course of action which best meets sourcing, production, and delivery requirements while considerations on source ensures processes that procure goods and services meet planned or actual demand.

Make approach creates processes that transform product to a finished state to meet planned or actual demand. As a way of providing processes that provide finished goods and services to meet planned or actual demand deliver concept is emphasized. Return ensure processes associated with returning or receiving returned products for any reason is addressed. Lastly the enable approach ensures processes being associated with the management of the supply chain e.g. business rules, performance, data, resources, facilities, contracts, supply chain network management, managing regulatory compliance and risk management are adhered to (Simchi et al., 2008).

According to White (2018) the supply chain operations reference (SCOR) model helps businesses evaluate and perfect supply chain management for reliability, consistency and efficiency. SCM is complex, but the SCOR model is intended to help standardize the process and create a measurable way to track results. It's meant to work across industries using common definitions that can apply to any supply chain process. Using the SCOR model, businesses can judge how advanced or mature a supply chain process is and how well it aligns with business goals. There are three levels used to measure supply chain performance. These levels help standardize supply chain performance metrics so that companies can be evaluated against other businesses, even if they're operating differently. The SCOR metrics

that form the basis of supply chain performance comprise attributes based on: reliability, responsiveness, agility, costs and asset management efficiency. Businesses use these attributes to establish the requirements for the supply chain by figuring out which performance indicator to prioritize and which areas the business can perform at an average pace (Rosenbaum, 2012).

According to Dewicki (2015) though SCOR model have transformed transactional and operational activities in the supply chain set up, there a scores of areas that undermine full perfection of supply chain performance. One common criticism of SCOR is that it is too “generic” to describe the peculiarities of a given industry or company. But it is in that lack of specificity that its true genius is revealed. At the task level, one or two levels of decomposition below SCOR’s processes, most companies describe their activities using jargon, IT system entries, and other terms unique to their products, services and customers. By masking those unique steps within higher level “black boxes,” supply chain leaders working with counterparts in other companies and organizations can more easily identify the actors, events and data needed - that is, the hand-offs - to orchestrate multi-enterprise processes (Salazar, 2012).

Stadtler (2005) confirms that a thinly veiled criticism on SCOR is also evident in the vast array of metrics at each of the model’s three process levels. While it is true that the hundreds of individual measures can seem daunting to say the least, it’s important to understand what SCOR curators considers to be the fundamental attributes of any supply chain: Reliability, Responsiveness, Flexibility, Costs and Assets. Each process step or activity within SCOR contributes to them in some way, so the metrics are intended to assess the outcome of each step with respect to those attributes. This level of granularity enables practitioners to quickly identify bottlenecks requiring the application of lean and other methods to improve process efficiency and effectiveness. These actions lower costs and increase throughput, quality and first-pass yield. To this extent therefore the SCOR model has limitations that lead to gaps in the need for performance evaluation in organizations (Lemghari et al., 2018).

This model relates to the dependent variable of the study that is procurement performance which serves as a sub-set of supply chain performance. Broad analysis on supply chain operations reference model are clearly indicated (see Figure 2.2).

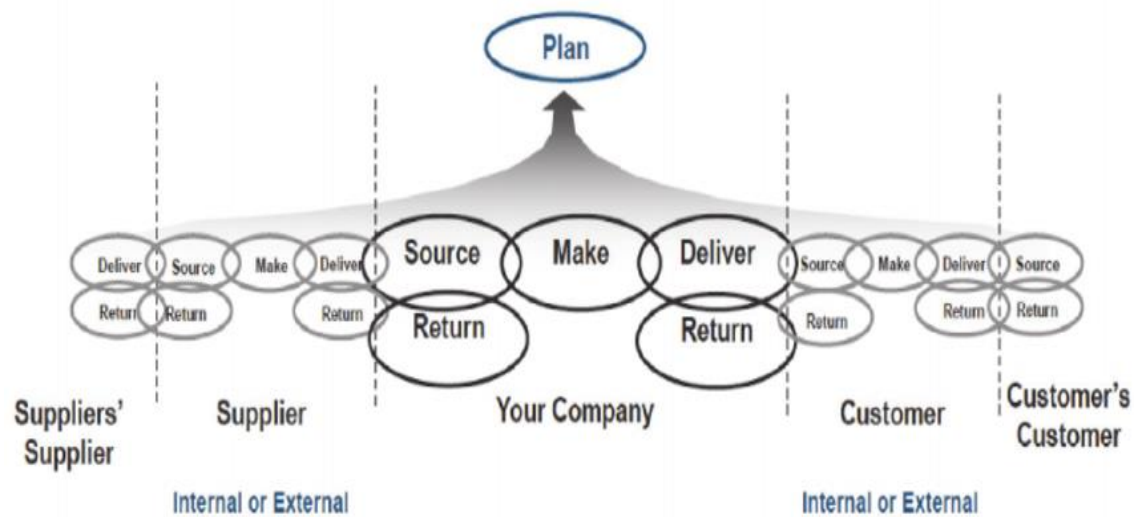


Figure 2.2: Supply Chain Operations Reference Model; adapted from Supply chain council 2010

2.2.7 Relational Contract Theory

This theory was developed in the United States by a renowned legal scholar by the name Ian Roderick Macneil in 1969. Relational contract theory is based on the view that contracts are relations-oriented rather than discrete business dealings. This theory is based upon a relationship of trust between the parties involved in the contract management. The explicit terms of the contract are just an outline as there are implicit terms and understandings which establish the behavior of the parties. Relational contract theory covers economic exchange in general, not just contracts that would be acknowledged as lawfully enforceable agreements by courts in any given jurisdiction, that relations are mostly held collectively by their own internal values and the broad environmental, social as well as economic factors, and, at least in relational theory in the Macneil mould, that exchange relations are governed by a series of norms (Austen, 2009).

What is particularly distinctive about this concept is the postulation of a number of "norms in a positivist sense," of which ten common contract norms relate to all contracts: role integrity; reciprocity, implementation of planning; effectuation of consent; flexibility; contractual solidarity; the linking norms; the power; propriety of means; and harmonization with the economic, social and environmental matrix. This last aspect is not to indicate that relational contract theory is normative in nature, it sets out what ought to be the case properly and this creates a dimension that is genuinely observable and normal factors are always at play (Campbell, 2001).

According to Baker (2009) previous writing may be taken in places to imply that the substantive rules of contract law need to be reframed to recognize the relational, non-discrete nature of contracts and this has not been subsequently pursued and current scholars like (Eisenberg, 2000) have suggested that it is neither possible nor necessary to reform the law of contract itself to work successfully with relationally-constituted contracts. Baker who is well known scholar on matters of contract management from England has more recently proposed a different version of relational contract theory, called "comprehensive contract theory," which posits "comprehensive contract norms." Although this scholar does not refute the validity of Macneil's norms as a complex tool of analysis of contract management its work has immense glaring loopholes that make it hard for a proper direction to be followed in dealing with procurement performance.

In the context of this theory, there are explicit attributes that address contract management for e.g. enforcement of agreements in business transactions and the need for procurement professionals to have clear knowledge on jurisprudence. This theory therefore, instigated the general objective of the study and the intrinsic views in contract management assisted in exploring how contract management influences procurement performance in public universities in Kenya.

2.3 Conceptual Framework

Conceptual framework is a detailed description of the phenomenon under study accompanied by a graphical or visual depiction of the major variables of the study (Mugenda, 2008). The conceptual framework below shows the relationship between

the dependent and independent variables. The dependent variable in this study is procurement performance, which is represented by cost effectiveness, customer satisfaction and procurement agility which are proxy indicators of university's performance. The independent variables are the influence of: buyer-supplier collaboration, procurement risk management, transparency and accountability and contract records management on procurement performance in public universities in Kenya. The relationship between contract management and procurement performance was moderated by legal compliance which was measured by Above Average Compliant, Average Compliant and Non-Compliant in line with PPADA, 2015 (PPRA, 2018). The conceptual framework was developed from the review of literature and assumed a linear relationship between the variables (see Figure 2.3).

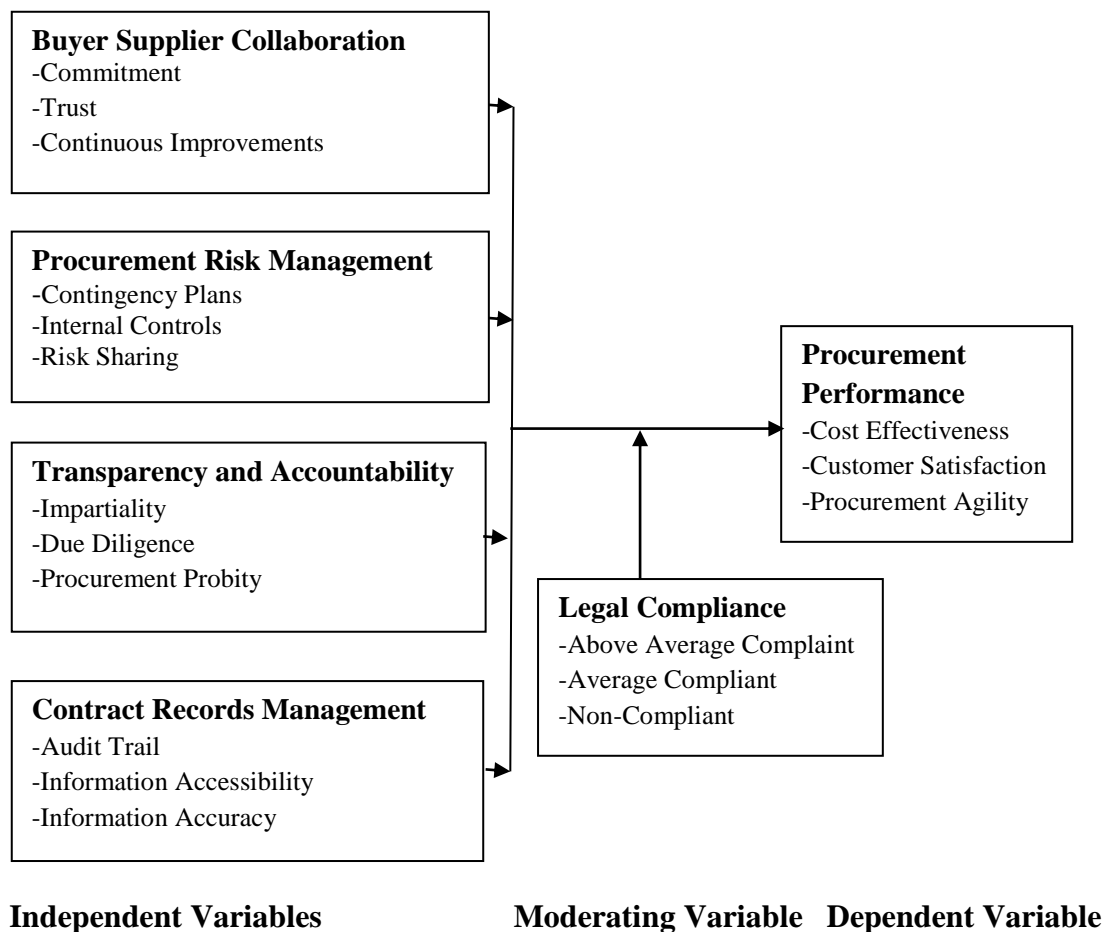


Figure 2.3: Conceptual Framework

2.3.1 Buyer-Supplier Collaboration

According to Gebert (2013) a dysfunctional relationship between the buying organizations and suppliers or contractors is the main cause of mediocre performance in the holistic supply chain function. Contract administration ought to be executed by parties that have harnessed well their expectations in a way that is for the mutual benefits of the business. It is therefore, important for buyers and service providers to have a workable relation in order to address these negative predicaments that may create uncertainty on the progress of the various activities that are being implemented. Establishing long-term collaborations with capable suppliers and working closely with them over time to achieve high levels of quality and productivity involves communicating intentions and expectations clearly, defining measures of success, obtaining regular feedback, and implementing corrective action plans to improve performance (Shahzad, 2015).

Lysons and Farrington (2012) indicates that world class organizations are replacing the conventional buyer-supplier relationship with strategic collaborations that turns out to be an explicit part of the procurement functions. This is as a result of a backdrop of the need for organizations to be competitive in the market. Managing buyer-supplier collaborations is a major concern to the buyers as source consolidation continues to be effected. The objective is to increase business with those key suppliers that are the most capable partners. Achieving this objective requires that these partnerships be developed, structured, administered and evaluated to determine whether they are successful in meeting the buyer's needs. It is upon the buying entities and suppliers to have shared common objectives and compatible benefits that consists: agreed problem-solving methods and shared risks according to who can best manage them, an active search for continuous measurement improvements and ways of managing relationships proactively in order to avoid breakdowns in future (Waithaka, 2015).

The result of a buyer-supplier collaboration in competitive platform has been to improve performance in business operations. In order to have a good working relationship with suppliers it is important to undertake regular supplier assessment since some suppliers turns out to be complacent in a period of time. This enables the

buyer to determine whether the supplying organizations subscribe to its vision, that the same management teams share the same policies, that the supplying organization has the capacity for operational expansion in line with the business requirement and most importantly cross checking whether the supplier forms part of strategic analysis and identify the gap between current performance and future performance that is required (Larson, 2014).

Shahzad (2015) examined the effect of Buyer-supplier partnership and information integration on supply chain performance. Based on the research findings buyer supplier relationship significantly affects trust which subsequently influences quality information as well as real-time information. According to the researcher maintaining buyer-supplier partnerships, a high level of trust would be the first belief of participants to be keen to take risk in establishing partnership relationship. Without putting in place the initial conviction for their partners, the other issues in social and economic exchange would not be possible. The finding of the study also indicated that establishing strong relationship between supply chains parties need to increase mutual trust aiming for achieving common benefits from their relationships. Such common benefits have been instrumental in determining the effects of information integration.

From the above studies it is prudent for organizations to have a common ground that emphasizes the need for buyer supplier collaboration if a sustainable progression of the set goals and objectives is to be achieved in the long run. This attribute is dictated by the need for the buyers and suppliers to have a competitive advantage and be in a position to tackle the turbulent challenges in the market. The bottom-line is the continuous benefits that can be shared across the board through proper collaboration when agitating for the true the interest of the organizations. Gebert (2013) denoted that the consistency and focus of organizations in nurturing a business relationship yields unending benefits between the parties involved hence a win-win situation for the business operators because of the exponential returns from time to time.

2.3.2 Procurement Risk Management

Arjan and Van (2014) specified that procurement is a function that entail immense risk factors that arise from internal and external environment, as well as strategic and operational considerations. Basically, strategic risks are considered in relation to medium and long-term goals and objectives of the organization. They include: Political risks, economic risk, social risk, technological risk, regulatory risk and also competitive risk. Operational risk entail: professional risk, financial risk, legal risk and also environmental risk. Procurement's role is to ensure that an organization has a predictable supply of the external input/s it requires, offering demonstrable value for money and delivered in a cost-effective manner to support the attainment of the organization's objectives. While its conventional role is in dealing with upstream suppliers in a supply chain context, it may also deal with downstream transactions, e.g. for logistic support in distribution of finished product (Liang, 2017).

Arjan and Van (2014) confirms that by its nature, procurement exposes an organization to risk. Procurement practices have, for this reason been established with inbuilt controls designed to deal with that risk, for example purchasing through public or selective tendering, in the right circumstances, will encourage competition and reduce the scope for fraud and collusion in acquisition processes. Procurement should identify risk factors associated with each procurement, analyze the probability of the risk occurring and consider the impending impacts. Risk management plans should then be developed, based on the decision to avoid, assume, or transfer the established risks.

Christopher (2018) noted that the precondition to overall risk management is the risk assessment. Risk assessments entail analyzing the chance and the effect of every known risk on the attainment of established objectives, as well as the corrective action to take should that risk occur. The risk assessment is therefore a requirement for establishing how the risks should be controlled, managed and eliminated. Mitigation seeks to put measures in place to lessen the severity of a risk event, should that event occur.

Liang (2017) asserts that the procedure of the overall risk management plan is a continuum based on the size or nature of the procurement. Planning can extend from simple consideration or incorporation of risk registers as a part of the procurement planning program, to inclusion of risks in more prescribed acquisition plans, to comprehensive risk management plans on enterprise-wide projects where their complexity and scope warrants it. To realize the maximum benefit of risk management, the management and communication of risks needs to be fundamental part of existing procurement and organizational functions.

A major factor leading to a greater focus on risk management in the procurement framework is the blurring of organizational boundaries, through: increasing use of a “contingent” workforce, that is contractors rather than employees; outsourcing of operational and transactional functions, including business processes and logistic services to achieve strategic, competitive, and commercial advantages; and the establishment of collaborative relationships with suppliers and customers as important members in the overall supply chain (Arjan & Van, 2014).

When changing to commercial environment, it is necessary to complement a process view, where risks are identified and treated as isolated events, with a holistic view of risk where organizational objectives and procurement are considered together and their interrelationships and associated risks are addressed. This higher level approach will identify opportunities to increase value through systems; including shortening lead times, reducing inventory holdings, and supporting the development of new market opportunities for the business (Christopher, 2018). The integration of best practice in risk management will better position the procurement professional to manage stakeholder expectations, and facilitate outcomes that are within the risk tolerance of the organization. Risk Management, applied effectively, will assist the procurement professional to identify changes to the procurement environment, implement treatment plans and reengineer cost effective procurement process to mitigate risk (CIPS, 2013).

Liang (2017) adds that all procurement professional should be an active participant in risk management seeking to ensure integration between procurement risk management and other relevant risk management activities. Desirable key activities

include: maintaining a procurement risk management framework which is integrated with the procurement process and wider organizational risk framework, monitoring sources of procurement risk for material change that may impact on the organization's ability to achieve its objectives, identifying tools and techniques that will assist with the identification and assessment of risk, ensuring that the organization's procurement processes and methods are effective in treating identified risks, clearly articulating the risks, in terms of uncertainty and severity when making procurement decisions, actively participating in risk management discussion at strategic and operational levels (Arjan & Van, 2014).

2.3.3 Transparency and Accountability

Carter (2014) indicates that transparency and accountability constitutes a central pillar of any procurement system. Without transparent and accountable systems enabling governments and citizens to engage in a mutually responsive way, the vast resources channeled through public procurement systems run the danger of increased corruption and misuse of funds. Even in a system with low levels of corruption, public and civic oversight can help identify inefficiencies, thereby increasing procurement efficiency and effectiveness for the benefit of improved service delivery and ultimately citizens. According to Gaventa (2013) Public procurement is vulnerable to fraud but the enhancement of transparency and accountability in contract awarding mechanisms as well as fair and adequate regulations may contribute to the efficiency of tendering practices.

Accountability exists when rights holders and duty bearers both deliver on their duties. This conceptually connects accountability to a rights-based understanding of development following three principles: "inclusive rights for all people, the right to participation, and the 'obligations to protect and promote the attainment' of rights by states and other duty bearers" (Acosta, 2013). In order to enhance transparency in public organizations, the managers should instill greater disclosure, accuracy and clarity into communications with stakeholders. Also a lot of sensitization on issues of transparency and accountability should be a priority in organization's strategical plans since the outcome of this initiative can dispel the notion that procurement is the

epicenter of fraud in business transactions. The intricate nature of this argument brings negative connotation to procurement profession. As such, the active engagement of a government on one side and its citizens on the other is necessary to achieve any measure of accountability (Zyl, 2014).

McGee and Gaventa (2013) asserts that lack of transparency and accountability has affected procurement performance of many public entities. Conventional wisdom indicates that all stakeholders on matters of public procurement need to do a thorough oversight on the process applied to acquire products or services. Although many countries have a series of regulatory bodies to oversee procurement performance, to a great extent the media in the recent history has become the ‘watchdog’ because of its independence. Many procurement scandals have been revealed by the members of the fourth estate and a free press is an authoritative tool to promote transparency and accountability in public procurement on contractual activities.

Calland and Bentley, 2013 affirms that in public procurement the role of the media is three-fold. Firstly, it is a channel for communication regarding public procurement and the transfer of prescribed procurement information such as tender notices, award notices, etc. Nowadays, public entities are required by law to publicize procurement information. The purpose of this information is to fulfill obligations related to disclosure and transparency. Secondly, the role of the media in public procurement is to uncover procurement irregularities, and thus strengthen the claim for transparent and accountable government. Carlitz (2013) alludes that the intrigues of modern public procurement can make this difficult, but many procurement authorities invite media representatives to public procurement trainings and workshops which enable journalists to understand and critically investigate the subject matter. Although the media has the responsibility to examine public procurement, some consider the media coverage to be overly focused on scandals and to have too little positive procurement news. Thirdly, the media can serve as a means for education regarding public procurement, sensitizing the general public on procurement rules, systems and regulations and principles (Carter, 2014).

Calland and Bentley (2013) alludes that there is slight doubt that under the right circumstances improved transparency in public procurement can lead to better accountability, improved service delivery and, ultimately, less misuse of public resources. In the interim, a lot of factors should be considered when attempting to strengthen transparency through improved access to information. Among the critical areas is monitoring and controlling of the procurement process and the information it produces e.g. tender documents, bids, minutes from technical committees, bid evaluation records etc. Further, when investigating contravention of the procurement law, it is prudent, practical and perhaps proactive to find out the beginning of the malpractice and not to have a blanket condemnation to procurement function. The giveaway signs in procurement department may be just *a tip of the iceberg* since in procurement process there is segregation of responsibilities from the requisitioners, evaluators, contract negotiators, contract validators and authorizers of the payment to the suppliers or contractors. Each of these university representatives in the procurement process are capable of instigating fraud.

Zyl (2014) indicates that under a system where observers are physically in attendance during bid evaluation meetings, a key concern must be to maintain the integrity and independence of these observers. This could be done through training activities, rotation schemes or other actions to be considered. Transparency in public procurement is about information. The access to key procurement information by the media and other stakeholders, and the ways in which these actors can use the information, directly affects accountability. More importantly, transparency is deemed a highly cost-effective way of achieving greater accountability (Carter, 2014).

2.3.4 Contract Records Management

The prime function of contract records management is to facilitate a reference point on contractual transactions in an organization by ensuring that information is available when and where it is needed. Records hold vital information in line with organization's activities captured in all business transactions in a given time. Procurement records present and authenticate the resolution taken, the proceedings

carried out and the outcome of such dealings, support action plans and decision making in management, it protects the welfare of the organization, the right of the company, customers, suppliers and help the organization to perform its business and deliver its services in unwavering and impartial trend (Freda, 2014).

Contract records management is crucial to all organizations private or public, small or big. In circumstances devoid of effective records management, it is not possible to execute business in transparent and accountable manner since there is no guiding document to account for what has transpired in the past or to make decisions about the future. Procurement records are a fundamental corporate asset and are needed to provide evidence of action and decisions. The significance of records management is gradually being acknowledged in organizations. Procurement records forms main sources of information and are the most dependable and lawfully verifiable source of data that can serve as evidence of actions, decisions and transactional obligations of organizations (Musembe, 2016).

According to Mordecai (2022) the function of contract records management is to make sure that staffs involved in different activities have the information they need, when required. Records are used as an information resource in strategic planning. The service provided by contract records management is of vital significance to both employees and organizational success. Contract records management platform, therefore, acts as a control structure that reinforces systems such as internal and external auditing. The records management creates opportunities to discover corruption in an organization. Records can provide a trail for investigators to track the source of fraud. Nevertheless, for records to be meaningful in this capacity, its accessibility is mandatory.

Freda (2014) argues that organizations are currently involved in knowledge management. Contract records management should be seen as an enabling function towards knowledge management. The case should be that without records, an organization would lose an affluence of knowledge provided by its employees during day to day operations. The business realm requires that records must be created and maintained to support the important activities of an organization in serving as the basis through which decisions are taken to ensure reliability, consistency in

providing evidence of the organization's operations and ensuring progressive performance. Despite the fact that businesses are increasingly being conducted through automotive means, both within and between organization, records should still be reserved to support and fully document all business, fiscal, legal, social and past needs.

Musembe (2016) indicates that good contract records management system is necessary for supporting accountability and transparency in financial management. As a dependable tool of evidence, records make sure that the organization has fulfilled its distinct financial, social, legal, ethical obligations. In all accountability sessions, records are deemed as the true reflection of activities by managers, auditors, investigators or by anyone inquiring into a decision, a process or the performance of individual or an organization. Organizations should therefore maintain reliability and accuracy in their record management systems. Poor contract records management has been a contributory reason to fraud in most organizations. Members of the public also rely heavily on records to question, criticize, and hold staff of the organizations accountable. Authentic records present an ideal connection between an approval assigned to a particular person and the date of the activity. This provides evidence that identify misuse, abuse, and non-compliance with financial obligations and regulations that have legal implications. As a result, records management provides mitigating approaches, reliable restraint against fraud and corruption.

According to the Mordecai (2022) procurement function is engrossed by many activities and therefore contractual work has increased in importance. It has become a decisive element of commercial planning where the need for more effective government underpins much of a department's activities. Records produced in the course of the work may be vital in providing evidence of departmental effectiveness and in managing any lawsuit that might arise from it. Departments should ensure that they maintain records of all contracts and related business transactions on registered files. The files must contain correct and complete records of all internal and external documentation so that the stages and analysis of the transactions are evident. Such precise and dependable record keeping will ensure that a complete audit trail is provided.

2.3.5 Legal Compliance

The meaning of legal compliance especially in corporate legal department's perspective has recently been expanded to include understanding and adhering to ethical codes within entire profession, as well. There are two requirements for an organization to be compliant with the law, first its policies need to be in line with the law and secondly, its policies need to be complete with respect to the law. Within the realm of public entities strong legal governance helps procurement professionals to comply with the stipulated guidelines an attribute that paves way to consistent performance. The legal compliance on procurement performance is underlined under the threshold of Above Average Complaint (81-99%), Average Complaint (51-80%) and Non-Complaint (Below 50%) in regard to PPADA, 2015 (PPRA, 2018). Above average complaint is the state of complying with great percentage of the stipulated guidelines in line with procurement law. Average Complaint is modest compliance of the procurement action plans while Non-compliance consist incomplete fulfillment or marginal repudiation of the guidelines stipulated under the procurement act (Orobo, 2015).

According to Baily et al. (2015) it is essential for procurement departments to act responsibly and in compliance with the law. This approach is fundamental to corporate culture and is the reason why suppliers, taxpayers, shareholders and the general public place their trust to public entities. It is therefore, prudent for all stakeholders participating in procurement proceedings to be obliged to act responsibly and in compliance with the law. Although there is increasing complexity of businesses that pose risk of laws being violated it is necessary for public institutions to have a legal compliance code that should provide a direction on what is supposed to be done. To prevent fraud, waste, corruption or local protectionism, the law of most of the countries regulates government procurement more or less closely. It usually requires the procuring authority to issue public tenders if the value of the procurement exceeds a certain threshold (OECD, 2013).

It is important to note that open tender is the mainstream procurement process although the government recognizes special exemptions for instance sole source justification because of the monopoly of the supplier, sole source because of

emergency requirements and that the urgency is neither foreseeable by the procuring entity nor the result of dilatory conduct on its part. More importantly also is the emphasis of sole source justification because of issues of compatibility that concentrates on standardization. Public procurement and asset disposal act, 2015 acts as the reference point on public procurement in Kenya. The legal compliance framework assists procurement staff to confidently manage obligations imposed by the government in acquisition of goods and services. It formalizes existing responsibilities and processes to help manage compliance internally and demonstrate compliance externally. Monitoring compliance requires awareness by procurement staff of the legal context in which they conduct their work. The act has been designed to provide all staff with the necessary knowledge that creates a guideline hence compliance of the law (Rok, 2015).

Kirande and Rotich (2014) confirms that procurement staffs of all public entities should be able to instill the key objectives of public procurement that include: ensuring public organizations get value for money, enhancing transparency and accountability, ensuring efficiency and effectiveness, promoting competition and ensuring that competitors are treated fairly by use of competitive procurement methods, promoting integrity and fairness of procurement procedures, restoring public confidence in procurement process, building public trust to stakeholders, facilitating promotion of local industry and economic development and ensuring that goods and service are obtained at the right price, right quality, right quantity, from right source and delivered at the right place.

Procurement staff should be mindful of the fact that legal compliance is mandatory requirement based on the Latin maxim that *ignorantia juris non excusat* (ignorance of the law does not excuse) an argument that states that a company (which, in law, is a legal person) and its servants, such as procurement specialists, are presumed to know the law. This law in Kenya is encapsulated in section 7 of the penal code which strictly denote that ignorance of the law does not afford any excuse for any act or omission. It is also worthwhile to note that all procurement staff should have an awareness of the possible legal consequences of their actions (Mbae, 2014).

2.3.6 Procurement Performance

According to Kakwezi and Nyeko (2019) contract management act as a catalyst for procurement performance through maximizing operational efficiency and reducing financial risks. It also involves building a good working relationship between procurement function and the suppliers. It continues through various stages and it involves managing proactively anticipated future needs as well as reacting to situations that arise. The central aim of contract management is to obtain the services as agreed in the agreements and achieve value for money. This means optimizing the efficiency, effectiveness and economy of the service or relationship described by the contract balancing costs against risks and actively managing the customer–provider relationship in business operations.

Vasudevan (2015) indicate that contract management affects organizations profitability in a very large way due to the emphasis on revenue and expenses. When a contract is phrased poorly, one organization can lose colossal amount of money over a simple technicality they lacked the resource to identify. Effective contract management can ultimately create a powerful business relationship and act as a roadmap to greater returns on investment (ROI) over a long term. This sensational outcome is possible in an environment where parties to the business transactions are up to the tasks that govern the business activities (Sammons, 2017).

Schuhmann and Eichhorn (2019) indicates that contract enforcement forms the basis of successful contracts management and it is one of the pillars of the rule of law. The ability to make and enforce contracts and resolve disputes is fundamental if markets are to function properly. Good enforcement procedures enhance predictability in commercial relationships and reduce uncertainty by assuring investors that their contractual rights will be upheld promptly by local courts. When procedures for enforcing commercial transactions are bureaucratic and cumbersome or when contractual disputes cannot be resolved in a timely and cost effective manner this attribute will undermine the commercial transactions. Salim (2013) suggests that the key attributes of contract management in ascertaining procurement performance include: management of service delivery. Service delivery management ensures that the service is being delivered as agreed, to the required level of performance and

quality. It is important therefore, to ensure that the services are assessed regularly to determine procurement performance.

Basically, quality metrics ought to be created that allow the quality of service to be assessed, even in areas where it is hard to quantify. At the most basic level, the service must fulfill the terms of the contract. Relationship management keeps the connection between the two parties open and constructive, aiming to resolve or ease tensions and identify problems early. Another important attribute is contract administration which is concerned with the mechanics of the relationship between the customer and the provider. Also, it provides information on the implementation of procedures defining the interface between them and the smooth operation of routine administrative and clerical functions. Contract administration handles the formal governance of the contract and changes to the contract documentation. Clear administrative procedures ensure that all parties to the contract understand who does what, when, where and how to execute the responsibilities at hand (Oluka & Basheka, 2012).

Salim (2013) suggests that it is necessary to seek performance improvements in contract management. The aspect of creating a mechanism for continuous improvement to a great extent impacts positively to the parties to a contract since exceptional services will be put in place. However, the issue will be based on whether the parties to the contract will be ready to be governed by the new issues to the contract. Ideally, the requirement for improvement should be embodied in the terms of the contract. This can be at a number of levels, from simple price or turnaround time innovation in the way services are delivered. The provider should be involved in these considerations, and a good working relationship will be a huge help in making improvement a reality. As always, it should be remembered that the provider must benefit too.

Ramadhan (2012) posits that seeking improvements is not about extracting more from the provider against their will, but about working together to improve quality, performance, and value for money, or other aspects in such a way that benefits both parties. Nguyen (2013) alludes that it is necessary to manage rapid changes in the

market. New changes in the market makes some decisions agreed upon by the parties to the contract to be impracticable. The parties to the contract should form a basis of being bound by the new changes. The drivers for change during the term of a contract can come from a range of sources. These sources can be internal or external based. Internal drivers for change include: Evolving business requirements, the organizational restructuring of either party, significant revisions to the corporate strategy objectives of either party.

According to Shiwa (2014) external drivers could include: developments in technology (things which were not possible become possible, and therefore desired, or necessary to maintain the 'market' efficiency of service provision), economic trends that affect the profitability/value for money of the organizations, relationship – from the perspective of the customer or the provider, the need to provide electronic forms of service delivery to meet customer expectation, changes in legislation or legal interpretation.

2.4 Empirical Review

Empirical studies have shown that effective contract management is enhanced significantly when parties to the transaction have a mutual relationship since this action plan culminates to a long term relationship under the premise of a win-win approach. Shahzad (2015) indicates that the best collaboration programs focus on segmenting the supplier base. Ideally, there is a reason why companies are selective in choosing suppliers for collaboration programs. Not every supplier justifies the investment. With more strategic suppliers that represent a significant part of a buyer's spending in some area or that provide special value from the customer's perspective-collaboration is the ideal approach.

2.4.1 Buyer Supplier Collaboration

In order to create successful collaboration programs, most organizations have to develop new capabilities. One of the most important of these is cost engineering, a way of analyzing, supplier's products and processes to gain insights into the economics of the extended enterprise and identify opportunities for improvement. To

make the relationship more vibrant and productive the buyers and suppliers should set a policy that advocates mutual interest and working as a team. It is worthwhile to build credibility for the program at the senior level and within the organization. There is also a need towards a dynamic of greater trust, more information sharing and enhanced transparency (Larson, 2014).

Gebert (2013) affirms that successful companies apprise suppliers of its long term plans, a concept that makes it easier for suppliers to improve their designs, enhance the quality and the systems they develop. However, relative few buyers approach their collaborative initiative in a systematic manner. They might work with their suppliers to reduce the cost of operations, but they don't integrate suppliers into their organizations or work with them to reduce complexity and this fact makes the procurement departments to miss an opportunity to leverage supplier's capabilities in need to focus on business changes. This is because some of the appealing goods and services may turn out to be obsolete and be overtaken by events.

Stella et al. (2013) studied a topic based on Information Sharing, Adaptation, Trust Commitment in Buyer-Supplier Relationships in the Ugandan SMEs. The researcher applied cross sectional survey design and adopted a quantitative approach that focused on describing inferences from the findings on the relationship between buyer-supplier collaboration, trust, adaptability, relationship continuity and commitment. The findings of the study indicated that there was a significant positive correlation between information sharing and commitment in buyer-supplier relationship. Information sharing was also a significant predictor of commitment in buyer-supplier relationship. This indicates that when buyers and suppliers agree to share pertinent information in the process of undertaking business with each other this approach invariably promotes commitment in their business dealings. The study recommended that great attention should be emphasized on aspects of commitment and trust in order to ensure unwavering relationship continuity between buyers and suppliers in procurement related transactions.

Waithaka (2015) carried out a study on the role of buyer supplier relationship on supply chain performance in Kenya's state corporations. The researcher adopted descriptive research design and census sampling technique. From the findings of the

study 90% of the respondents agreed that quality affects buyer supplier relationship, 80% of the respondents confirmed that lead time also affects buyer supplier relationship, 57% said that cost affects buyer supplier relationship and 53% of the respondents noted that employee morale affect buyer supplier relationship on supply chain performance. The researcher recommended the need for buyers to have good relationship with suppliers in order to enhance efficiency and also obtain superior quality products at competitive prices.

2.4.2 Procurement Risk Management

Kisaka (2014) studied ways of managing supply chain risks within the state departments in Kenya. The research design incorporated empirical, descriptive and survey research to evaluate supply chain risks and empirically analyze the information. The Relative Importance Index (RII) ranked the top ten risk drivers in order of importance. The ranking of the broader risk categories using the RII identified procurement risk as critical and needing Government attention to address exchange rate risks, single sourcing (non-competiveness), and unrealistic contract duration risk. The study recommended that management and classification of supply chain risks is important attribute to effective governance in public sector and the mandate of risk mitigation is upon all the staff at all levels in a procurement entity.

Okonjo (2014) assessed procurement risks management practices and supply chain performance in Kenya. The research design was a descriptive study. The researcher found out that there was a very significant relationship between procurement risk management practices and supply chain performance represented by adjusted R^2 value of 0.646 which translated to 64.6% variance explained by the ten independent practices of procurement risk management. The study recommended that all the parties to transactions should endeavor to fully comprehend the procurement risk management attributes in order to oblige them to undoubted performance of their supply chains. Procurement risk management attributes are very dynamic and keeps on varying hence need to replicate the study in line with changes that may affect supply chain performance.

Chemoiwo (2016) sought to find the influence of supplier appraisal on supply chain risk management in Egerton University. The study employed a descriptive survey research design and a Census survey design was employed whereby all members of the target population participated in the study. The study found out that supplier appraisal was the most influential influencing supply chain risk management in Egerton University with correlation of ($r = 0.763$, $p < 0.05$). In order to improve supply chain risk management in public universities in Kenya, the researcher recommended all procurement departments to adopt supplier appraisal consistently since this approach could identify the ideal suppliers to deal with in business transactions.

2.4.3 Transparency and Accountability

Oberoi (2013) conducted a study on Institutionalization of Transparency and Accountability in Indian governance. The findings revealed that Transparency is vital in service delivery and enables information in the hands of the citizens in a way that they may be able to claim their entitlements. However, mere knowledge of what entitlements are, and who is responsible for fulfilling them, is not adequate in ensuring that public services are sufficiently and effectively delivered to the intended beneficiaries. There is a risk also that the opening up government becomes only a superficial process. Access to information laws can become merely paper laws if they are not then appropriately implemented or are undermined by other laws. The right mechanisms to ensure implementation are just as imperative as the laws themselves. The researcher recommended that if transparency actions brings forth the platform for the exercise of voice, the conversion of voice into accountability needs extra scrutiny on the ways in which transparency and accountability measures are planned, the social, economic and institutional factors which affect such relations and how citizens are empowered with the ability to apply their voice and insist accountability from the public entities.

Despite these linkages, scholars such as Carlitz (2013) and Carter (2014) argue that while transparency is an important constituent for securing accountability, the link between the two is neither unassailable nor automatic. Further the exercise of voice

which is seen as a critical element for reaffirming this relationship is conditioned by various factors. Transparency of information while providing the opportunities and the material basis for the exercise of voice is not sufficient in impelling citizens to pressurize officials in demanding the effective delivery of services.

Mukoruru (2014) carried out a research on the effects of public procurement disposal act (2005) on transparency and accountability on management of public finance. This study adopted descriptive survey research design and the sample was selected using simple random sampling to ensure representativeness. The study indicated that 67.9% of the procurement activities and procedures were not transparent in that decisions on procurement related activities did not follow the rules and regulations of the Act and this information was not accessible to the general public. The study found out that there were immense appeal cases that were pending on issues of procurement. This meant that procurement procedures were not transparent. To add on that procurement entities had no oversight mechanisms and the activities were not audited regularly to ascertain arbitrary expenditures and ways of achieving accountability.

2.4.4 Contract Records Management

Ngulube (2012) indicates that in addition to providing the means whereby a transaction can be audited, full and accurate record keeping of contractual matters provides: Value for money, by ensuring that work can be done swiftly and accurately, evidence of what has occurred in the event of discussion of the matter covered by the contract, evidence in the event of allegations of fraud or impropriety and precedent for future action, including any re-tendering process. The amount of documentation generated by different types of contracts will differ according to the size of the transaction. It will generally consist of some or all of the following: conditions of contract, tender invitation, suppliers' proposals, tender receipt record, evaluation criteria and report, specifications, schedule of work, bills of quantity and signed contracts. Many contractual records need to be retained for six years after the end of the contract. Similar considerations are appropriate to other financial records.

Some special contracts are executed under seal and the limitation period in these cases is twelve years.

Dzifa and Reindolf (2015) studied the topic the analysis of records management and organizational Performance. The authors used simple random sampling to select a sample size of 30 respondents. Based on the survey results, it was discovered that tertiary institutions often practice sound records management. It was also observed that the institution's records management is changing from manual to electronic system of managing records by using automated systems. This allows the users to complete and submit the information on stipulated time. The electronic filing system prevents the users from making serious errors that could affect the operations and reputation of the institution. Training, supervision and control on records management skills are recommended for all relevant employees of the institution for efficient records management to promote better institutional performance.

2.4.5 Legal Compliance

Dewah and Mutula (2015) conducted a study on the nexus between legal records and human rights in the justice delivery system. The research defined the concepts of court records management and justice delivery and explored the link between records management and the discharge of justice. A survey research design was used on a purposively selected sample of 30 participants employed in various sections of the court. The findings of the study indicated that courts invariably use a range of records to administer a justice. In most of the cases the aggrieved parties are denied justice because of missing or incomplete records.

Awino (2014) conducted a research study on public procurement legal framework implementation challenges and organizational performance. In line with the study public procurement permeates the entire spectrum of supply chain management and therefore there is need for the government to adjust legal framework to provide an efficient system of procurement in order to address the weaknesses in the entire supply chain. Abere (2015) also carried a study on factors affecting compliance with the public procurement and disposal regulations in Kenya. The researcher adopted descriptive survey research design. The study revealed that training on public

procurement and disposal regulations, ethical practices during tendering process and enforcement mechanisms influences the compliance of procurement and Disposal Regulations in public entities in Kenya. The study recommended compulsory training for all procurement officers on the procurement procedures, methods of procurement, professionalism and excellence in order to provide consistency in tender decision making and minimize costs that may relate to non-compliance such as poor quality costs and legal charges arising from litigations filed by aggrieved suppliers for discrimination in awarding of contracts.

Marendi (2015) conducted a research study on the implementation of the public procurement and disposal Act, (2005). The researcher adopted explanatory survey design. The findings of the study revealed that compliance levels of procurement activities were below the minimum compliance of 60% set out by the then public procurement oversight authority (PPOA). The study recommended that public entities ought to do a due diligence before award of contracts to facilitate sound decision making and conduct internal audits continuously to measure the efficiency of the procurement process. It is against these empirical studies that the study attempted to examine whether legal compliance has moderating influence on relationship between contract management and procurement performance in public universities in Kenya or not.

2.4.6 Procurement Performance

Kiage (2013) carried out a research on factors affecting procurement performance. The study was conducted through a descriptive design using a cross sectional survey. Findings of the study revealed that procurement planning has a significant impact on procurement performance. Also the study depicted diverse variations of various variables in terms of procurement performance. Contract management accounted 23.3%, staff competency 20.1%, resource allocation 17.2% and planning 26% in procurement performance.

Mutua (2014) carried out a research on the influence of contract management on performance of outsourced projects in medium manufacturing enterprises in Nairobi County, Kenya. Contract management had a positive correlation with project

performance. Contract management and other factors accounted for 66% variation in project performance. Contract management was found to have the strongest influence on performance of outsourced projects. The fixed-price contract was beneficial in ensuring project costs were within budget. Notably, 95% of all firms surveyed considered a clear statement of project objectives in contracts important for successful project delivery, while project acceptance criteria and dispute resolution mechanism were rated as important contractual devices.

Mbae (2014) sought to find out public procurement law and procurement performance of county governments in Kenya. The study found out that when two parties strike a bargain, there must be some mechanism to ensure that each party will stick to the terms. However, it's important to understand the effect of any decision taken by the parties to the contract. From an economy-wide perspective, the issue is not whether a contract can be enforced but rather the cost of the various enforcement mechanisms and their effectiveness in improving confidence between contracting parties. To be efficient, the costs of enforcement must not outweigh the gains achieved from increased contractual commitment. The study recommended that the public entities are required to appoint procurement oversight committee that can oversee the implementation of the procurement law and policies on procurement.

2.5 Critique of Existing Literature Relevant to the Study

Contract management plays a major role in determining procurement performance in public universities in Kenya. Most of the reviewed empirical studies are clearly expressed and succinct in the sense that they bring on board compelling findings and this contributes immensely to knowledge. Despite these positive propositions, considerable number of studies show dissimilarities on various aspects of contract management on procurement performance. For instance, there is no clear consensus among various authors regarding the influence of contract management on procurement performance. Of interest however, is how conflicting the results and findings are. Stella et al. (2013); Waithaka (2015) differed on how buyer supplier relationship affects procurement performance.

The latter researcher indicated that quality, lead time, cost and employee morale are the prime attributes that affects buyer supplier relationship. This is contrary to what the former researcher found out since customer satisfaction, future expectations and relationship loyalty formed the basis for an ideal buyer supplier relationship. However, the two authors unanimously agreed that mutual trust should be the key pillar towards buyer-supplier relationship on procurement performance of public entities. This created concise, well-structured and thoughtful analysis that enhances the understanding of buyer supplier collaboration on procurement performance in public universities in Kenya.

Chemoiwo (2016) differed slightly with Kisaka (2014) and Okonjo (2014) on how to mitigate risks in procurement functions. The authors noted that supplier appraisal should be the starting point when addressing risk management in procurement since this approach justifies the credibility of the suppliers that will be engaged from time to time. On the area of transparency and accountability, Oberoi (2013) noted that, this is a vital approach towards procurement performance. This suggestion was echoed by Mukoruru (2014) who indicated that the performance of procurement functions depend more on these attributes. Both studies employed statistical methods that were meticulously chosen and applied though the granularity of the analysis could have been improved to make the respective research studies conclusive for easier extraction of inferences.

Dzifa and Reindolf (2015) highlighted the need for records management in promoting organizational performance. Dewah and Mutula (2015) partly supported this argument by emphasizing the fact that records enable courts adjudicate and administer justice at the stipulated time. On the issues of legal compliance on procurement performance, the authors review had a huge difference on this matter. Awino (2014) advocated the need to adjust legal framework to provide efficient system of procurement while Abere (2015) noted that legal compliance can only be adhered to if proper training was to be considered by the procurement entities. On the other hand, Marendi (2015) emphasized the need for due diligence before the award of the contracts to cross check credibility of suppliers and contractors. Though there is little research done in the area of legal compliance since the information in most of

the empirical studies appears anecdotal, these researchers added insights to the understanding of legal compliance and this approach provided inspirational motivation for further research.

Kiage (2013) noted that procurement planning is key towards procurement performance and it is the responsibility of the public entities to come up with proper policies on how to execute various tasks. Mutua (2014) had different views on what influences procurement performance in public organizations. The researcher indicated that the clear way of embracing a good contract management is primarily through adherence of the terms and conditions reflected in the contracts. Many respondents were cognizant of the fact that effective contract management leads to the compliance of contract's requirements.

Mbae (2014) conducted a research study in line with public procurement law and procurement performance. The author zeroed on how public procurement process affects procurement law and how procurement regulations affect the procurement performance. The respondents strongly agreed that internal procurement procedures affect the performance of public entities. It is worthwhile to note that based on the authors report to a great extent procurement regulations affect the performance of public entities. In regard to these studies, it is apparent that there is a sense of disparity on the findings in line with the influence of contract management on procurement performance. Further, some of the reviewed theories in relation to the underpinned variables that comprise: Buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, legal compliance and procurement performance are scanty. Conversely, the reviewed theories provided a base of understanding the intrinsic aspects that are in line with contract management in relation to procurement performance.

2.6 Research Gaps

Several studies have been done in the area of contract management on procurement performance in public universities in Kenya. For example; Manyenze (2013) who carried out a research on procurement performance in the public universities in Kenya focused primarily on ways of establishing mechanisms to reduce the effects of

procurement challenges and determinants of effective procurement performance. To add on that, Ngetich (2017) conducted a research on determinants of effective procurement contract administration in selected public universities in Kenya. This study concentrated on staff competences, information technology, staff professionalism and accountability. Further, Kirande and Rotich (2014) conducted a research study on the determinants affecting public procurement performance in Kenyan universities and zeroed on organizational budget, work environment, quality management systems and organizational structure.

Based on the reviewed empirical studies the implementation of legal compliance should not be an oversight role for procurement regulatory bodies alone but it should be emphasized by other regulatory agencies of the government. In view of this argument, it is evident that there is a gap between theory and evidence in application of contract management to help improve procurement performance in public universities in Kenya. In addition, it is evident that research in the area of contract management has been done but not in a comprehensive approach. All the literature reviewed indicates that previous researchers only concentrated on a few variables of contract management on procurement performance. These variables address more on the outcome of contract management in relation to procurement performance. Therefore, a gap exist on the issues of contract management since the empirical reviews does not tackle extensively on the key elements of contact management that influence procurement performance.

This study therefore, covers additional important variables that were omitted by previous studies like buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, as well as legal compliance on procurement performance. These are crucial building blocks of contract management and the extent to which they are implemented within the circles of public universities in Kenya. Generally, these pillars affect directly or indirectly the overall performance of the business operations of the universities. It is important to note that these policies can only work if there is an already established framework that gives a direction on what is supposed to be done by the parties involved. In overall, empirical evidence showing the influence of contract management on

procurement performance in public universities in Kenya is not explicitly researched and notably, studies that are related on contractual activities on procurement performance in Kenya are not well documented. Therefore, a gap exists which can be filled through more research on this area.

2.7 Summary

The chapter has discussed in details various theories and models that are commensurate with the research variables of the study. These include resource dependence theory, theory of constraints, deontology theory, records continuum model, legal theory, supply chain operations reference model and relational contract theory. The research variables included: buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, legal compliance and procurement performance. The study also looked into the conceptual framework of the study and covered a review of the empirical studies that are in line with contract management on procurement performance in public universities in Kenya. Reviewed theories revealed that, contract management helps public universities in evading deviation of the procurement procedures. This is because procurement regulation impacts the behavior and performance of stakeholders in the public universities. Lastly, the critique of the existing literature relevant to the study was also ascertained as well as the research gaps of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives a description of the methods and approaches that were adopted in conducting this study. It includes the research design, research philosophy, target population, sampling frame, census, research instruments, data collection procedure, pilot study, data processing and analysis. The measurements of variables and data analysis techniques are also discussed.

3.2 Research Design

Kothari (2004) affirms that a research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It is the conceptual structure within which research is conducted and it constitutes the blueprint for the collection, measurement and analysis of data. As such the design includes an outline of what the researcher is supposed to do when writing the hypothesis and its operational implications to the final analysis of data (Orodho, 2003).

In regard to this study, the researcher adopted descriptive research design. This is a research design that shows the state of affairs as it exists at the present (Mugenda & Mugenda, 2003). The premise of descriptive research design is to gather information based on what, when, where and how and it is appropriate for identifying characteristics, frequencies, trends, correlations and categories. Therefore, by the use of the research design, the researcher was in a position to ascertain and describe the inherent characteristics of various variables of interest in different scenarios. This created a possibility to observe the research phenomenon in completely natural in unchanged environment. As a way of harnessing the study in a logical manner, the study integrated the qualitative and quantitative methods of data collection (Sekaran, 2006).

The multifaceted attributes in line with the adopted research design, created in-depth analytical approach to the study. By the virtue of using the already established facts and information that was revealed by the respondents the researcher was in a position to make critical evaluation of the materials. All these undertakings prompted the researcher to explore extensively the various aspects that are in line with contract management and procurement performance in public universities in Kenyan context. This study design has been used by Kinoti (2013) on the Determinants of Supply Chain Management Ethical Practices Implementation in Government Ministries in Kenya and also Memia (2018) on the Influence of Contemporary Supply Chain Practices on Performance of Large Manufacturing Firms in Kenya. Therefore, this research design was deemed appropriate as research methodology of this study was extensively related to these studies.

3.2.1 Research Philosophy

Research philosophy is a paradigm or model that involves a broad framework that comprises perception, beliefs and understanding of several theories and practices that are used to conduct a research (Saunders et al., 2009). Research philosophy comprise deep inherent attributes that elicit a sense of autonomy in line with ideologies that the researcher deems to be relevant and accommodative to a well-defined area of study in a specific discipline. This viewpoint creates a well calculated move to the researcher if it constitutes acceptable knowledge in that field. Research philosophy therefore, is important in the development of the research background, research knowledge and its nature. In the process of establishing knowledge on the study, the researcher was guided by one of the four business oriented philosophical viewpoints noted by (Cooper & Schindler 2008). These comprised: positivism, pragmatism, realism and interpretivism (interpretivist) research philosophies.

Positivism is a philosophical theory stating that certain knowledge is based on natural phenomena and their properties and relations. Pragmatism on the other hand considers words and thought as tools and instruments for prediction, problem solving and action and rejects the idea that the function of thought is to describe, represent or mirror reality. In line with realism it is a view about the nature of reality in general

where it claims that the world exists independent of the mind, as opposed to non-realist views. Philosophers who support realism often claim that truth consists in a correspondence between cognitive representations and reality. Lastly, interpretivism involves researchers in interpreting the elements of the study and it integrates human interest into a study and hence it advocates key approaches that govern features of the study (Bajpai, 2011).

The researcher adopted the positivist philosophy which is part of epistemological viewpoint that is concerned with the nature and scope of knowledge. In essence, positivist philosophy advocates for an objective interpretation of reality using hard data from surveys that are structured, formal and have a specific and detailed plan (Saunders et al., 2012). These attributes were commensurate with the researcher's framework that focused more on highly structured measurement of the variables that was derived through qualitative and quantitative analysis. Predictions were made on the basis of the previously observed and explained realities and their inter-relationships. This approach enabled the researcher to see the relationship between the influence of contract management (buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management) on procurement performance in public universities in Kenya by establishing a causal relationship.

3.3 Target Population

Ngechu (2006) confirms that a population is an entire group of individuals, events or objects having common characteristics that conform to a given specification. A target population is a well-defined set of individuals, collection of things, households, organizations, services, components or occasions subject to investigation. Basically, this signifies that the target population should connect to a set of requirements which the researcher is undertaking and it is supposed to be homogenous to ensure reliable, replicable and adequate results (Mugenda & Mugenda, 2003).

The target population (Unit of Analysis) of this study comprised all the public universities in Kenya that have been in existence from June 2013 to July 2018. Specifically, the study zeroed on the procurement officers, finance officers, legal

officers and registrars-administration and planning staff of the 31 public chartered universities in Kenya. The main reason for choosing these employees is because they were considered to be responsible in transactional and operational activities in the precincts of the universities. The selected participants are also deemed to have a broad understanding on influence of contract management on procurement performance in public universities in Kenya.

In contractual obligations procurement officers act as the secretariat of the ad hoc evaluation committee, Finance officers advise the universities on financial status of the universities as well budget allocation for projects. Further, the legal officers advise the universities on jurisprudence of various contracts being advanced by the universities. Registrars-administration and planning on the other hand coordinate and prepare annual departmental budgets and procurement plans for the user departments of the universities. These responsibilities necessitate the registrars to coordinate and implement development projects and prepare capital projects for budgeting. These activities are crucial during contract initiation and contract implementation in public universities.

Table 3.1: Target Population

University Management Staff	Target Population
Procurement Officers	31
Finance Officers	31
Legal Officers	31
Registrars-Administration and Planning	31
Total	124

3.4 Sampling Frame

Sampling frame is a list of all the items where a representative sample is drawn for the purpose of a study. In an ideal sampling frame in a research study, every element of the population of interest ought to be present in the frame (Nachmias & Nachmias, 2008). Therefore, the sampling frame for this study was derived from the list of all

chartered public universities in Kenya that have been in operation between 1st of July 2013 to 1st June 2018. This constituted the unit of analysis for the study while the unit of observation comprised: Procurement officers, Finance officers, Legal officers and Registrars-Administration and planning. The period of the study consisted a chronology of five fiscal years in the respective universities (see Appendix VII).

3.5 Census

This study adopted a census method. Basically, a census is a study of every unit, everyone or everything, in a population (Sekaran, 2010). Since the population was too small, census was considered to be the most preferred method for the study. Mugenda and Mugenda (2003) affirms that census method brings forth a robust sample in design and reliable representation of the whole population. Further, adoption of a census in a study ensures complete enumeration of all the items in the population and high level of accuracy in the inquiry (Kothari, 2004).

All the 31 chartered public universities in Kenya were selected for the study in order to get proper precision of the information in line with the study as affirmed by (Orodho, 2003). The cognizant of the fact that, it is a requirement for public universities to undertake a segregation of responsibilities of the staff who participates in contractual obligations through the procurement process as per the PPADA, 2015, prompted the researcher to stratify the respondents in terms of their respective service cadre. The university staff who were selected comprised four executives in each of the public universities in Kenya (procurement officers, finance officers, legal officers and registrars-administration and planning).

The selected participants, resulted into an aggregate of a sample size of 124 respondents, whom the researcher regarded to be having insightful knowledge and expertise in the area of the study. This is because these respondents represented all the essential extremes on contract management on procurement performance in public universities in Kenyan. This corresponds with Saunders et al. (2009) who indicated that the selected respondents in a research study are supposed to be endowed with knowledge on the topical issue of the study.

3.6 Research Instruments

The research collected both primary and secondary data. In particular, primary data comprised use of questionnaires which were administered to the respective respondents in all public universities in Kenya. The researcher drafted both quantitative and qualitative questions and this is in relation to Bajpai (2011) who indicated that this approach prompts dependable and accurate data. The qualitative questions were open ended with the essence of deriving the authentic details about the subject matter. The preceding Likert scale for quantitative questions was adopted whereby the resultant measures meant: 5= Strongly Agree, 4 = Agree, 3 =Neutral 2 = Disagree 1 = Strongly Disagree. In the drafted questionnaire, the questions were divided into eight distinct sections.

The first section comprised demographics and general information of the university staff, section two covered contract management, section three encompassed questions on buyer-supplier collaboration, section four entailed questions on procurement risk management, section five was based on questions in line with transparency and accountability, section six covered questions on contract records management while section seven and eight comprised legal compliance and procurement performance questions respectively.

The researcher also carried out key informant interviews (KII) in line with the influence of contract management on procurement performance in public universities in Kenya. Sekaran (2006) confirms that KII is a qualitative in-depth analysis based on a topical issue. The study carried interview on opinion of selected respondents on influence of contract management on procurement performance. In particular, the study conducted KII from internal auditors, procurement assistants (in charge of stores) and estate managers of public universities in Kenya. However, only four public universities (Chuka University, Jomo Kenyatta University of Agriculture and Technology, Maseno University and Meru University of Science and Technology) granted permission for key informant interview to be conducted to the selected respondents.

This method was necessitated by use of interview guide that entailed the subject matter of the study and the selected respondents were engaged to respond to the questions raised by the researcher. This enabled the researcher to receive clarifications pertaining issues that were addressed by the respondents hence this initiative translated to derivation of the right information concerning the study. The data derived from key informant interview was analyzed by use of content analysis whereby the researcher classified the data to various themes to draw inferences to the study.

Secondary data on the other hand was also part of the consideration in the research study. According to Cooper and Schindler (2008) secondary data is a useful qualitative technique for evaluating historical or contemporary confidential public records, reports, government documents and opinions and this prompts the researcher to collect this kind of data. The researcher used secondary data collection form to derive the relevant data in line with this data collection method. The secondary data was collected from auditor general's report as well as public procurement administrative review reports in the financial years starting from July 2013 to June 2018. The results of the secondary data were used to draw inferences to the study.

3.7 Data Collection Procedure

Prior to the data collection process, the researcher applied for letter of introduction from the office of the chairperson, Procurement and Logistics Department-JKUAT and later research authorization letter as well as research permit from National Commission for Science, Technology and Innovation (NACOSTI). These letters and the research permit were crucial for data collection process in the public universities in Kenya. Upon the receipt of the letters and the research permit the researcher appointed two research assistants who were engaged in fast tracking the administration of the questionnaires to the respective respondents. Notably, before the administration of the questionnaires to the respondents, the researcher convened a training session in order to impart the necessary skills needed in data collection process to the research assistants. Drop and pick method was used in the

administration of the questionnaires since the targeted respondents were presumed to be busy and probably couldn't have time for a face to face interview.

3.8 Pilot Test

Pilot test is a study that is conducted before the actual data collection to ascertain the aptness of the research instruments. The rationale of pilot study is to administer the instruments to small respondents who have similar characteristics with a larger group of respondents to be involved in the main study. Pilot test enables the researcher to refine the questionnaires and subsequently ensure the research instrument is credible and objective (Hazzi & Maldaon, 2015). The pilot study exercise enabled the researcher to assess the clarity and reliability of the research instruments. This impelled simplification of the data collection process and this was evidenced in the main data collection process since most of the respondents were in a position to comprehend well the questions raised hence most of the questions were answered objectively.

Before the actual data collection, pilot test was undertaken in 4 public constituent university colleges. This amounted to 10% of the total number of population and according to (Mugenda and Mugenda, 2003) this percentage is considered adequate for pilot study. These public constituent university colleges included: Alupe University College, Bomet University College, Kaimosi Friends University College and Tom Mboya University College. In regard to this method every university was equated to 4 purposive selected respondents perceived to be knowledgeable in contract management and procurement performance related matters. These respondents comprised selected staff in: procurement, finance, registrar-administration and planning and lastly legal officer's representatives of the public constituent university colleges in Kenya.

3.8.1 Validity of the Research Instruments

Kothari (2004) asserts that validity is a level of precision of a concept in a study and it specifies the degree to which an instrument measures what it is supposed to measure. In research study the common types of validity comprise: content validity,

construct validity and criterion validity. Content or logical validity measures the extent to which a measure represents all facets of a given variable. This allows the researcher to determine whether a given variable contain all aspects that should be measured. Construct validity on the other hand is the degree to which a test measures what it claims or purports to be measuring. This allows the researcher to understand whether the test scores from the data obtained through the instruments can be applied to induce inferences in line with the questions raised in the study. Lastly, Criterion validity relates to researcher's ability to forecast some future outcome or approximate the existence of some current condition.

This study adopted content validity and under the framework of this method, the researcher used competent and reliable experts in line with the supply chain management to evaluate whether test items were in tandem with the subject matter of the research study. The experts were in a position to compliment and critique some of the items replicated in the questionnaire. Because of the attributes of content validity that are simple and intuitive in nature, coupled with quality assessment of the items of the research instruments, the verification of the questionnaire in regard to its suitability to the study, turned out to be a distinct guideline to the researcher. This enabled the researcher to maintain the questions that were well captured in the questionnaire while the questions that raised eyebrows were adjusted and refined accordingly to fit the comments of the experts.

3.8.2 Reliability of the Research Instruments

Reliability is the degree to which an instrument yields consistent results irrespective of the number of times that method is repeated. Mugenda and Mugenda (2003) confirms that a reliable measurement is the one that if repeated a second time gives the same results as it did the first time. The shrinkage of the variability observed creates a scenario of deeming the measure to be reliable and this forms the basis of authenticating the instruments of the study. (Kenneth & Abbott, 2011).

The distinct indicators of a scale's reliability are test-retest reliability and internal consistency. The test-retest reliability of a scale is evaluated by administering it to the same people on separate times and analyzing the relationship between the scores

derived. High degree of test-retest denotes a more reliable scale. Internal consistency is the scale to which the items that forms the basis of the measure have the same causal attribute. Sekaran (2010) indicates that a Cronbach's alpha is the most accepted guideline in testing reliability of the questions and the 93 rule of the thumb for Cronbach Alpha is that the closer the alpha is to 1 the higher the reliability and a value of at least 0.7 is recommended (see Table 3.2).

Table 3.2: Cronbach's Alpha Internal Consistency Levels

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Internal consistency was measured using the statistic Cronbach's alpha and this provided an indication of the average correlation among all the items of the research study. The reliability results were used to improve on the data collection instruments before the main data collection process.

3.9 Data Processing and Analysis

Data processing encompasses, editing, coding, classification and tabulation of data collected before analysis. Analysis involves the computation of definite measures and probing the patterns of correlation that are replicated in the data category arrangement (Kothari, 2004). In this study the processed and analyzed data was presented by use of tables and figures. During the early stages of data collection, the researcher concentrated first on pilot study from the public constituent colleges and thereafter, analyzed the data for these institutions of higher learning to test validity and reliability of the research instruments. Later, upon finalization of data collection

from the target population (public universities) the researcher embarked on data analysis process of the study.

In the separate data processing and analysis stages, the researcher divided two sets, public constituent university colleges and public chartered universities and further analysis was done on each set to eliminate the influence of the dummy variable representing legal compliance. Descriptive statistics that is measure of central tendency especially the mean as well as measure of dispersion (standard deviation) were employed to analyze the characteristics of study variables (the buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management and procurement performance among public universities) using the statistical package for social sciences (SPSS) Version 22 tool.

Descriptive statistics was used to summarize and profile the status of the predictor variables with dependent variable among public universities in Kenya. For inferential statistics regression analysis and correlation analysis was used to analyze the relationship between independent variables and dependent variable. The correlation analysis was used to establish strength relationships between independent variables and dependent variable. In particular Pearson correlation was applied to establish the strength of the linear relationship. The study also used analysis of variance (ANOVA) to examine the existence of significant differences the influence of the predictor variables had on dependent variable of the study.

Multiple linear regression model was employed to establish the relationship among independent variables on the dependent variable. Test statistics was used to determine the relative importance of each independent variable in influencing procurement performance. In this case t-test and F-test, statistics were considered to be statistically significant when the value of the test statistic falls in the critical region. As a result of this, the null hypothesis was rejected and the alternative hypothesis was upheld. This was done to determine the relative contribution of each independent variable in influencing the performance among 31 public universities sampled for five years (July 2013- June 2018). The moderating influence of legal compliance was also evaluated by using it as a dummy variable (Above Average Compliant-81-99%, Average Compliant-51-80 and Non-Compliant-Below 50% to

PPADA, 2015). The KII and secondary data results were used in the study to form logical inferences.

3.9.1 Diagnostic Tests

Diagnostic tests are used in research to evaluate the model assumptions and examine whether there are observations with large or even trivial influence on the analysis that happens to be unnecessary in the research study. Therefore, the data is usually tested for adherence to assumptions of regression analysis in line with linearity, normality, autocorrelation, homoscedasticity and multicollinearity (Gujarati & Porter, 2009). The study that is normally free from these occurrences is fit enough to use linear regression model for inference and prediction of the subject matter being studied (Statistics Solutions, 2013). If a data fails to adhere to the assumptions of regression due to strong relationships amongst the predictor variables this necessitates the data to be transformed into their natural logarithm. Further, the regression analysis can also be done using the square of errors for the data. These considerations create inverse function of the exponential analysis leading to the definition and simplicity of the values applied in the study. This prompts the researcher to be in a position to understand whether the stipulated guidelines are being observed (Greene, 2012).

3.9.1.1 Linearity Test

Stock and Watson (2007) affirms that linearity test seeks to determine the relationship between independent variables and dependent variable. For a research to be good in the regression model, there should be a linear relationship between the predictor variables and dependent variable. Violations of linearity are serious in a research study since when a researcher fit a linear model to a data that is nonlinear the predictions of the study is prone to errors when the researcher extrapolate beyond the range of the sample.

Linearity test is normally assessed by examination of a scatter plot of all the independent variables against the dependent variable to determine if there is a straight-line relationship. Also, the linearity test can be ascertained by use of the

correlation coefficient statistics which is a statistical measure of the strength of the relationship between the relative movements of the variables. The values range between -1.0 and 1.0. The decision making process in the linearity test suggest that if the value sig. deviation from linearity >0.05 , then the relationship between the independent variables are linearly dependent. Further, if the value sig. deviation from linearity <0.05 , then the relationship between independent variables with dependent variable is not linear (Hansen, 1999).

3.9.1.2 Normality Test

Normality test refer to statistical tests on a data to determine whether a data set is well modeled by a normal distribution (Thode, 2002). Normally distributed data yields better regression results because any random variable in a data set is normally distributed. Kolmogorov-Smirnov (KS) and Shapiro-Wilk (SW) are common measures used to test the data for adherence to the normality assumptions. The Kolmogorov-Smirnov test is a nonparametric goodness of fit test and is used to determine whether two distributions differ. Shapiro-Wilk on the other hand is designed to detect all departures from normality. Thus, if the significant value of the K-S and S-W Test is more than p-value of 0.05, the data is normal hence the null hypothesis is rejected. If significance value is below 0.05, the data significantly deviate from a normal distribution and therefore, the null hypothesis is not rejected (Razali & Wah, 2011).

Dougherty (2016) confirms that a graphical method can also be used to establish the degree of normality in a study. A graphical tool for assessing normality is the normal probability plot, a quantile-quantile plot (Q-Q plot) of the standardized data against the standard normal distribution. The correlation between the sample data and normal quantiles (measure of the goodness of fit) measures how well the data are modeled by normal distribution. For normal data the points plotted in the Q-Q plot should fall approximately on a straight line, indicating high positive correlation. These plots are easy to interpret and also have the benefit that outliers are easily identified

3.9.1.3 Autocorrelation Test

Autocorrelation refers to the relationship of a time series with its own past and future values. It is also sometimes called “lagged correlation” or “serial correlation,” which refers to the relationship between members of a series of numbers arranged in time. Autocorrelation occurs when the variances of the error term are sequentially interdependent. Once this problem occurs a given disturbance term would then be related to the previous value (values) in a stochastic manner (Mukras, 1993).

According to the assumptions of Classical Linear Regression Model, the disturbance occurring at one point of observation should not be related with any other disturbance occurring at another point at the set of observation (Maddala, 2002). Autocorrelation leads to biasness and inconsistency of parameter estimates. Autocorrelation is detected by use of Durbin Watson (DW) test. A DW of zero implies that there exists positive autocorrelation, while DW equal to four implies high negative correlation level. A DW value between 2 and 2.5 implies that there is no correlation. Presence of autocorrelation should be eliminated by use of correct specification of functional form of the model.

3.9.1.4 Homoscedasticity Test

Homoscedasticity is the test of whether the data set has equal variances (deviations) throughout from the first data point to the last. This is called homogeneity of variance. The assumption of homoscedasticity (same variance) is central to linear regression models. Data with homogeneous variances is said to be homoscedastic while those with varying deviations is said to be heteroscedastic (Maddala, 2009). Heteroscedasticity complicates the analysis because many methods in regression analysis are based on an assumption of equal variance.

Homoscedastic data sets yield more accurate regression results while heteroscedastic data present standard errors that are already biased. Levene Statistic (LS) is always used to test the homogeneity of variance in the data sets. If the resulting p-value of Levene’s test is less than some significance level (0.05), the obtained differences in sample variances are unlikely to have occurred based on random sampling from a

population with equal variances. Thus, the null hypothesis of equal variances is rejected and it is concluded that there is a difference between the variances in the population (Knaub, 2014).

3.9.1.5 Multicollinearity Test

Brewer (2002) indicates that in regression analysis, multicollinearity is a test of whether the variables, other than the dependent variable have strong relationships. It is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated meaning that one can be linearly predicted from the others with a non-trivial degree of accuracy. In this situation the coefficient estimates of the multiple regression may change erratically in response to small changes in the model or data. It is therefore, a type of disturbance in the data and if present in the data the statistical inferences made about the data may not be reliable since the mere presence adversely affect the regression results (Mukras, 1993).

Multicollinearity arises from the presence of interdependence among the explanatory variables in multivariate regression model. If the explanatory variables are not intercorrelated then the variables will be orthogonal. Any departure from orthogonality constitutes some measure of multicollinearity. Further, some independent variables may have strong relationships which is not a good characteristic as this could inflate the coefficients including the nature and size of R and R-Squared. In such situations data should be transformed to trim the causation amongst the independent variables. Tolerance Statistics (TS) and Variance Inflation Factor (VIF) statistics are used to test the presence of multicollinearity. Tolerance is associated with each independent variable and ranges from 0 to 1 while variance inflation factor of more than 10 indicates high correlation and this stimulates a cause for concern in the study (Allison, 1999).

3.9.2 Regression Model

In order to analyze the relationships between the independent variables and dependent variable a multiple linear regression model was used. The study model helped in analyzing the influence of contract management on procurement

performance among public universities in Kenya. The multiple linear regression model that was adopted is similar to that used by many of the studies done in the area of contract management and procurement performance (Silas, 2015). The replication and revelation of this model showed a connection on what other researchers have applied in earlier studies based on this topical area. The general regression model used in this study was defined as follow:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

For testing the moderating effect, the following model was used:

$$Y = \beta_0 + \beta_i X_i + \varepsilon \dots \dots \dots (i=1, 2,3,4)$$

$$Y = \beta_0 + \beta_i X_i + \beta_m M + \varepsilon$$

$$Y = \beta_0 + \beta_i X_i + \beta_{mi} M X_i + \varepsilon$$

Where; Y=Procurement performance

β_0 =constant

β_i is the coefficient for X_i ($i=1, 2,3,4$)

X_1 =Buyer-supplier collaboration

X_2 =Procurement risk management

X_3 =Transparency and accountability

X_4 =Contract records management

M= Legal compliance (Moderating variable)

ε = error term

The regression model was contextualized as follows:

$$Y_{it} = \beta_0 + X'_{it} + \varepsilon \dots \dots \dots (3.1a).$$

This equation was transformed to random effects model by specifying E_{it} as shown in Equation 3.1b.

$$\varepsilon_{it} = V_i + U_{it} \dots \dots \dots (3.1b).$$

Where Y_{it} is the dependent variable denoting procurement performance of public universities in Kenya, i at time t i denotes the legal compliance of (universities), $i=1, \dots, 31$ while t is the time period $t = 2013, \dots, 2018$; X_{it} denotes a vector of independent variables β are coefficients to be estimated, a β_0 is a constant term, and

ε_{it} is a composite error term. Where V_i denotes heterogeneity effects and U_{it} denotes idiosyncratic disturbances. The multiple linear regression model was specified and tested in this study (see Equation 3.1).

$$PP_{it} = \beta_0 + \beta_1 BSC_{it} + \beta_2 PRM_{it} + \beta_3 TA_{it} + \beta_4 CRM_{it} + \varepsilon_{it} \dots \dots \dots 3.1$$

Where:

PP_{it} = Procurement performance (Dependent variable)

β_0 = Constant for each public university in Kenya (Fixed effects).

(β_i ; $i=1,2,3,4$) = Regression coefficients values.

(BSC_i ; PRM_i ; TA_i ; CRM_i ; $i=1,2,3,4$) = Values of independent variables.

ε_{it} = composite error term (the residual error of the regression).

BSC_{it} = Buyer supplier collaboration of public universities in Kenya i at time t .

PRM_{it} = Procurement risk management of public universities in Kenya i at time t .

TA_{it} = Transparency and accountability of public universities in Kenya i at time t .

CRM_{it} = Contract records management of public universities in Kenya i at time t .

t = 2013.....2018.

3.9.3 Moderating Effect Model

To determine the moderating influence of legal compliance on the relationship between contract management on procurement performance in public universities in Kenya the study was specified and tested (see Equation 3.2). The predictor variables comprised: Buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management.

$$PP_{it} = \beta_0 + LC_{it} + \beta_1 BSC_{it} * LC_{it} + \beta_2 PRM_{it} * LC_{it} + \beta_3 TA_{it} * LC_{it} + \beta_4 CRM_{it} * LC_{it} + \varepsilon_{it} \dots \dots \dots 3.2.$$

Where: LC = Moderating variable = Legal compliance (Above Average Compliant-81-99%, Average Compliant-51-80 and Non-Compliant-Below 50% to PPADA, 2015).

3.9.4 Operationalization of Variables

According to Nachmias and Nachmias (2008), operationalization is the process of strictly defining variables into measurable factors and defining unclear concepts in a way that facilitate accurate replication of the research process. This allows proper statistical analysis of the results. Therefore, constructs of each item of the variables were measured by scale as summarized in Table 3.3.

Table 3.3: Operationalization of Variables

Type of Variable	Variables	Measures	Notation
Dependent Variable	Procurement performance	Cost efficiency	CE
		Customer satisfaction	CS
		Procurement agility	PA
Independent Variables	Buyer supplier collaboration	Commitment	BSC
		Trust	
		Continuous improvement	
	Procurement risk management	Contingency plans	PRM
		Internal controls	
		Risk sharing	
	Transparency and accountability	Impartiality	TA
		Due diligence	
		Procurement probity	
Contract records management	Audit trail	CRM	
	Information accessibility		
	Information accuracy		

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1. Introduction

This chapter presents the research findings derived from the questionnaires, key informant interview guide and secondary data forms and links them to the objectives of the study. The results of this study is derived from the pilot study, response rate, background information of the respondents, descriptive analysis of the study variables, diagnostic tests result, inferential statistics results, hypothesis test results, qualitative and secondary data analysis.

4.2 Pilot Study Results

The pilot study was conducted between November 6th 2018 to 22nd January 2019 after approval of the research permit by NACOSTI in four public constituent university colleges (Alupe University College, Bomet University College, Kaimosi University College and Tom Mboya University College). This amounted to 10% of the total number of population which is considered adequate for pilot study (Mugenda, Mugenda 2003). Out of 16 questionnaires issued to the selected respondents, 12(75%) were filled and returned while unreturned questionnaires amounted to 4(25%). Subsequently, validity of the research instruments as well as reliability of the research instruments was undertaken. These two important approaches were undertaken primarily to fine tune the research instrument before carrying out the main research study. The pilot study was an eye opener to the researcher in terms of devising the strategical plans to incorporate in the main study.

4.2.1 Validity of the Research Instruments

This study adopted content validity and under the auspices of this method, the researcher used subject matter experts to evaluate whether test items assess defined content. Generally, the experts assessed whether the questionnaires could help in establishing the influence of contract management on procurement performance in

public universities in Kenya. In perfection of the research questions, the experts recommended replacement of order fulfilment variable with contract records management since the former variable seemed to be more aligned with dependent variable (procurement performance). This corresponds with Drost (2011) who opined that the erratic, vague and perplexing statements ought to be discarded in a research study.

4.2.2 Reliability of the Research Instruments

In this study, an internal consistency was done using Cronbach Alpha to measure how well the items were correlated to each other for all the questionnaires issued to the selected respondents for the pilot study. The essence of this process was to ascertain the degree on which the research instruments yielded consisted results. The general guideline for Cronbach Alpha is that the closer the alpha is to 1 the higher the reliability and a value of at least 0.7 is recommended (Sekaran, 2010). The results of Cronbach Alpha reliability coefficient are shown in Table 4.1.

Table 4.1: Summary of Cronbach Alpha Reliability Coefficient

Variables	Number of items	Cronbach Alpha
Buyer Supplier Collaboration	7	0.797
Procurement Risk Management	7	0.748
Transparency and Accountability	7	0.817
Contract Records Management	7	0.831
Legal Compliance	7	0.718
Procurement Performance	7	0.781
No of Items/Average Score	42	0.782

Buyer supplier collaboration had alpha of 0.797, procurement risk management 0.748, legal compliance 0.718 and procurement performance registered alpha of 0.781 which all falls in the acceptable limit which is above 0.7. Transparency and accountability had alpha of 0.817 while contract records management had 0.831 which is deemed as good internal consistency. This implied that respondents who

selected high scores for one item were likely to select high scores for the others. Further, those who selected low scores for one item were likely to select low scores for the others. The data collection instrument was therefore, reliable for the purpose of the study. This enhanced the ability to predict outcomes using the scores and the aggregation of the arithmetic mean.

4.3 Response Rate

The main data collection commenced in the month of February 2019 up to May 2019. The targeted respondents in the study were procurement officers, finance officers, legal officers and registrars-administration and planning of all public universities in Kenya. A total of 104 questionnaires were filled out of the expected 124, translating to 83.9% (see Table 4.2). This good response rate was attributed to well thought data collection procedure, where the researcher in conjunction with two research assistants administered questionnaires to the selected respondents who filled them accordingly. Drop and pick method proved to be panacea of high response rate since the selected respondents had adequate time to respond to the questions in the questionnaire.

Table 4.2: Response Rate

Response Rate	Sample Size	Percent
Filled and returned questionnaire	104	84
Un-returned questionnaires and non-response	20	16
Total	124	100

The response rate was good and representative and conforms to Mugenda (2008) stipulation, that a response rate of 50% is adequate for analysis; a rate of 60% is good and a response rate of 70% and over is excellent. Therefore, this response rate was excellent for making conclusions and generalization of the study results and it can be applied for policy development in public universities in Kenya.

4.4 Demographics and General Information

The researcher analyzed the demographics and general information of the respondents which included: Designation, highest academic qualifications, membership in respective professional bodies and frequency of participation in sensitization forums of PPADA, 2015. Further, the respondents background information included; the degree of knowledge on contract management in Kenyan context and the experience of respondents on contractual activities in procurement process. The information in line with this demographical aspects of the respondents created an avenue of understanding well the respondent's connection on the area of contract management and procurement performance in their respective institutions of higher learning.

4.4.1 Respondents Designation

The respondents were asked questions on their respective designations. This question helped the researcher to establish the extent to which they deal with activities that are in line with contract implementation in stirring procurement performance in public universities in Kenya. The rationale behind this question was to ensure that all the respondents engaged had the technical knowledge of the subject matter of the study.

Table 4.3: Respondents Designation

Respondents Designation	Frequency	Percent
Procurement Officers	28	26.9
Finance Officers	26	25.0
Legal Officers	25	24.0
Registrars-Administration and Planning	25	24.0
Total	104	100

The results of the study indicated that, the majority (26.9%, n=104) of the respondents drawn from public universities in Kenya, were procurement officers. Finance officers followed with 25% while 24% were both legal officers and registrars-administration and planning (see Table 4.3).

4.4.2 Highest Academic Qualification

The study sought to know the highest level of academic qualification of the respondents. This enabled the researcher to find out their acquaintance with contractual responsibilities in their respective universities. The level of education of the respondents was also a key indicator of establishing their understanding of the studied area and this enabled the researcher to draw conclusions and recommendations. The results of the study are as follows are shown in Table 4.4.

Table 4.4: Highest Academic Qualifications

Highest Academic Qualifications	Frequency	Percent
Doctorate Degree	9	9
Masters Degree	72	69
Bachelors Degree	23	22
Total	104	100

The majority (69%) of the respondents engaged in contractual obligations in procurement process had masters degree, 22% had Bachelors degree while 9% had Doctorate degree. However, none of the respondents had certificate or diploma qualifications. The findings showed that all the respondents were highly educated and this enabled the researcher to get comprehensive information on the influence of contract management on procurement performance in public universities in Kenya. These results were in support of Manyenze (2013) results that indicated the cumulative percentage of respondents with at least bachelor's degree was in a tune of 70%.

4.4.3 Respondents Membership to Professional Bodies

The study sought to know the professional body the respondents had an allegiance to. This was to ascertain the degree of values, advocacy and professional growth in their respective area of specialization. The results of the study are depicted in Table 4.5.

Table 4.5: Respondents Membership to Professional Bodies

Membership to Professional Body	Frequency	Percent
KISM	27	26.0
CIPS	3	2.9
ICPAK	29	27.9
LSK	22	21.2
IHRM	17	16.3
Any Other	4	3.8
None	2	1.9
Total	104	100

The majority of respondents 98.1% belong to specific professional bodies (see Table 4.5). A tune of 27.9% of respondents belonged to Institute of certified public accountants of Kenya (ICPAK) followed by 26% who belonged to Kenya Institute of Supplies Management (KISM), 21% belonged to Law society of Kenya (LSK), 16.3% belonged to Institute of human resource management (IHRM), 3.9% belonged to other professional bodies e.g. Kenya Institute of Management (KIM), 2.9% belonged to Chartered Institute of Procurement and Supply (CIPS) while 1.9% did not belong to any professional body. This shows that majority of respondents are accountable and it is easy to discipline the members who flouts their professional code of conduct (Munene, 2014).

4.4.4 Participation in sensitization forums of Public Procurement and Asset Disposal Act, 2015

The study sought to establish whether the respondents are sensitized on the current procurement act either internally or use of external consultants in order to familiarize on the contract management process envisaged in the law to reduce audit queries from the auditor general reports. The results are shown in Table 4.6.

Table 4.6: Participation in Sensitization Forums of PPADA, 2015

Participation Trend	Frequency	Percent
Annually	53	51
Semi annual	13	12.5
Quarterly	30	28.8
None	8	7.7
Total	104	100

Majority (51%) of respondents indicated that they are sensitized annually on PPADA, 2015, 28.8% said that they are sensitized quarterly, 12.5% of the respondents said that they are sensitized twice per year (Semi annual) while 7.7% said that they are not sensitized. It is therefore, clear that sensitization forums on PPADA, 2015 are carried out in public universities in Kenya to familiarize the staff on the procurement law and new trends in the market that ought to be incorporated in transactional activities in line with procurement. This is evidenced in PPRA (2017) annual report which indicates that pursuant to section 9(1) of the PPADA, 2015 the regulatory body, provided technical support to public entities (public universities included) on general aspects of the public procurement law.

4.4.5 Knowledge on Contract Management in Kenyan Context

The study sought to establish the respondent's ratings on their knowledge on contract management process. This was to examine whether the respondents were endowed with crucial information based on contract management on procurement performance in Kenya (see Table 4.7).

Table 4.7: Respondents knowledge on Contract Management in Kenyan Context

Knowledge on Contract Management in Kenyan Context	Frequency	Percent
Excellent	9	8.7
Very Good	34	32.7
Good	47	45.2
Adequate	12	11.5
Inadequate	2	1.9
Total	104	100

The majority (45.2%) of the respondents were of a view that they had good knowledge on contract management process in Kenyan context, followed by 32.7% of the respondents who said that have very good knowledge on contract management process in Kenyan (see Table 4.3). A marginal number of respondents (11.5%) indicated that they had adequate knowledge on contract management process in Kenyan while 8.7% of respondents affirmed that they had excellent knowledge on contract management process in Kenya. Lastly, a small number of respondents (1.9%), felt that they had inadequate knowledge on contract management process in Kenya.

These results shows that majority (98.1%) of respondents felt that they had enough knowledge on contract management process in Kenyan according to PPADA, 2015. This is an indication that most of the staff who are assigned responsibilities on contractual activities in public universities in Kenya, are conversant with public procurement regulations of 2006. Paradoxically, according to auditor general reports on fiscal year 2013/2014 to 2016/2017, non-compliance to the stipulated contract management regulations is a recurring issue in most of the public universities in Kenya. This begs the question, “what is the cause of flouting procurement laws if most of the staff working in public universities on contractual and procurement related activities are conversant with public procurement regulations.

4.4.6 Years of Experience in Contractual Activities in Procurement Process

The study sought to establish the number of years the respondents were involved in contractual activities in the procurement process. This was to ascertain to what extent their responses could be relied upon to make conclusions for the study based on their working experience. The results of the respondents in line with this subject matter is shown in Table 4.8.

Table 4.8: Years of Experience in Contractual Activities on Procurement Process

Years of experience	Frequency	Percent
Above 14 years	7	6.7
10-13 years	20	19.2
6-9 years	37	35.6
3-5 years	38	36.5
Below 3 years	2	1.9
Total	104	100

From Figure 4.4, majority (36.5%) of respondents were involved in contractual activities in the procurement process for 3-5 years, 35.6% of the respondents involved for 6-9 years, 19.2% of the respondents 10-13 years while 6.7% were involved in contractual activities in the procurement process for over 14 years. Cumulatively, 98% of the respondents had a working experience of more than 3 years and this indicates that they understood the contract management process as outlined in both procurement act of 2005 and procurement act of 2015. This is also commensurate with the best practices principles in human resource development, which postulates that the intellectual capacity of a staff in a certain discipline is as a result of the longevity (learning curve) in execution of the underlined tasks (Armstrong, 2019).

4.5 Contract Management on Procurement Performance

The study sought to establish the inherent aspects of contract management on procurement performance. The rationale behind this idea was premised on establishing a broad perspective on how contract management influence procurement performance in public universities in Kenya.

4.5.1 Influence of Contract Management on Procurement Performance

Contract management is the subject matter in the procurement since it dictates the holistic performance in the upstream and downstream supply chain activities. In order to understand the clear metrics in contract management that forms the basis of procurement performance the study established varied findings. The study findings is a reflection of the integral attributes that are deemed necessary by the public universities in Kenya and constitutes the performance indicators in a procurement process (see Table 4.9).

Table 4.9: Influence of Contract Management on Procurement Performance

Influence of Contract Management on Procurement Performance	Frequency	Percent
Improves timely delivery of goods and services	14	13.5
Increase value for money in ordering process	28	26.9
Creates customer satisfaction	13	12.5
Builds vibrant relationship with suppliers	16	15.4
Improves transparency and accountability of procurement process	4	3.8
Enhance adherence of terms and conditions of the contract	20	19.2
Minimizes occurrence of procurement risks	9	8.7
Total	104	100

Majority of respondents (26.9%) said that contract management increases value for money in the ordering process, 19.2% said that it enhances adherence to the terms and conditions of the contract, 15.4% indicated that contract management builds a vibrant relationship with suppliers. Further, 13.5% indicated that contract management improves timely delivery of goods and services, 12.5% said that contract management creates customer satisfaction, 8.7% said that it minimizes occurrence of procurement risks. Lastly, 3.8% indicated that contract management improves transparency and accountability of procurement process.

These results are similar to that of Yegon (2018) who conducted a study on determinants of procurement contract management of the selected state corporations

in Nakuru County, Kenya. The study found out that adherence to the terms and conditions of the contract, cost management and contract documentation are key pillars for sustainable contract management discourse. These findings of the study are considerably replicated in the research study thus creating a distinct connection on the two studies. These findings are commensurate with the findings of Key informant interview carried out by the researcher. The results affirmed that value for money in tendering process is the central requisite in determining viability of contract management in relation to procurement performance.

4.5.2 Key Considerations when Constituting an Award of Contract to Suppliers

Prior to the award of the contracts to various suppliers or contractors in public universities in Kenya, the ad hoc evaluation committee constituted by the accounting officers according to section 46 of PPADA, 2015 have a statutory obligation to establish the right service providers to the underpinned contracts. These committee members are guided by the inherent specifications replicated in the standard tender documents. Therefore, the study sought to establish the key considerations when constituting an award of contract to the suppliers (see Table 4.10).

Table 4.10: Key Considerations when constituting an award of Contract to Suppliers

Key Considerations when Constituting an Award of Contract to Suppliers	Frequency	Percent
Production capacity of goods and services	8	7.7
Technical requirements	8	7.7
Responsiveness of the tender	51	49.1
Competitiveness of the bids (Price discounts, Warrants, After sales services)	17	16.3
Track record of the suppliers/contractors	20	19.2
Total	104	100

Majority of the respondents (49.1%) opined that responsiveness of the tenders is the primary consideration by the ad hoc evaluation committee when constituting an

award of contract to suppliers or contractors. This was followed by the track record of the suppliers/contractors which recorded 19.2% of the ratings. Competitiveness of the bids in terms of price discounts, warranties and aftersales services had a rating of 16.3% while production capacity of goods and services as well as technical requirements had the same rating of 7.7%.

These results concur with section 86 (1) (a) (b) (c) and (d) of PPADA, 2015 which indicate that successful tender should be the one with the lowest evaluated price, the responsive proposal with the highest score in regard to the technical and financial considerations, the tender with the lowest evaluated total cost of ownership. Finally, the results reflected the key consideration in the act, which states that the successful tender should be the one with the highest technical score where a tender is to be evaluated based on the procedures regulated by an Act of Parliament which provides guidelines for arriving at applicable professional charges.

4.5.3 Frequency of Contract Variations during Contract Implementation

Contract variations should be marginal and as per PPADA, 2015 should not exceed 25% of the absolute value in any project. In order to establish the frequency of contract variations during contract implementation, the study deduced diverse opinions from the respondents (see Table 4.11).

Table 4.11: Frequency of Contract Variations during Contract Implementation

Frequency of Contract Variations during Contract Implementation	Frequency	Percent
Very often (Regularly)	19	18.3
Often	17	16.3
Sometimes (Not often, Less often)	16	15.4
Rarely (Not many times, Minimal)	38	36.5
Very rarely	14	13.5
Total	104	100

Majority of respondents (36.5%) noted that contract variations rarely occurs during contract implementation, 18.3% said contract variations ensues very often during contract implementation, 16.3% indicated that contract variations often takes place during contract implementations. Additionally, 15.4% and 13.5% of the respondents said that contract variations sometimes and very rarely happen during contract implementation respectively. In total 86.5% of the respondents noted that contract variations ordinarily occur during contact implementation in public universities in Kenya.

These results deviates slightly with Bakr (2014) who indicated that 80% of the contracts varies during implementation process. Kimathi (2016) also carried out a research study on investigation into estimation of building projects variation contract period and found out that 70% of the contracts normally varies during implementation.

4.5.4 Causes of Contract Variations in Contract Implementation

Several facets in project management prompts causes of contract variations in public universities in Kenya. The intensity and extensity of these incidence have far reaching implications to the success of the implementations of the contracts (see Table 4.12).

Table 4.12: Causes of Contract Variations in Contract Implementation

Causes of Contract Variation in Contract Implementation	Frequency	Percent
Price fluctuations in the market	16	15.4
Complexity of the contracts	13	12.5
Lack of professional probity	10	9.6
Delays of disbursement of funds by the exchequer	5	4.8
Omission of the required information in the Bill of quantities	9	8.7
Unanticipated changes in the market	38	36.5
Not applicable	13	12.5
Total	104	100

According to the study, the majority of respondents (36.5%) confirmed that unanticipated changes in the market causes contract variations during contract implementation. This was followed by price fluctuations in the market that had 15.4%. Complexity of the contracts had 12.5% and also 12.5% of the respondents deemed the causes of contract variations in contract implementation not applicable. 9.6% of the respondents indicated that lack of professional probity was the cause of contract variations while 8.7% of the respondents confirmed that omission of the required information in the bill of quantities (BQs) was the cause of contract variations. Lastly 4.8% of the respondents said delays of disbursement of funds by the exchequer was the cause of contract variations during contract implementation.

These findings are supported by Yadeta (2014) who assessed the impact of variation orders on public building projects in Addis Ababa and found out that complexity of the contracts, poor procurement process, change in design by consultants and errors and omissions in design are the prime causes of contract variations in public entities. These findings are also evidenced in research study conducted by Mohammed et al. (2017) who also confirmed that the main causes of contract variations comprise: lack of stability of prices and exchange rate change as well as errors in design.

4.5.5 Special Committee for Handling Complex and Specialized Contracts

The study sought to demystify the existence of special committee for handling complex and specialized contracts. This was a tactical move to ascertain whether public universities have these committees since PPADA, 2015 envisages constitution of working groups for intricate and expert-oriented contracts (see Table 4.13).

Table 4.13: Special Committee that Handles Complex and Specialized Contracts

Response	Frequency	Percent
Yes	103	99
No	1	1
Total	104	100

In regard to the study, the respondents unanimously indicated that there is existence of special committee for handling complex and specialized contracts. This was attested by enormous number (99%) of the respondents who confirmed the existence of these special committee. On the flip side of that 1% of the respondents indicated that there is no existence of special committee for handling complex and specialized contracts in their universities. These findings support (PPADA, 2015) section 151 (1) which indicates that for every complex and specialized procurement contract, the accounting officers of procuring entities shall appoint a contract implementation team.

4.5.6 The Role of Special Committee that Handles Complex and Specialized Contracts

The committee members have special responsibilities that are based on handling multifaceted contracts. The rallying call is always to safeguard the interest of the public universities (see Table 4.14).

Table 4.14: Role of Special Committee that Handles Complex and Specialized Contracts

Role of Special Committee that Handles Complex and Specialized Contracts	Frequency	Percent
Monitoring and evaluation of the procurement contracts	44	42.3
Modification of the contract	3	2.9
Provision of technical expertise	39	37.5
Contract review to determine the accomplished milestone	3	2.9
Ensure compliance of the stipulated terms and conditions of the contract	11	10.6
Not applicable	4	3.8
Total	104	100

The majority of the respondents (42.3%) indicated that the role of special committee for complex and specialized contracts is to monitor and evaluate the procurement contracts while 37.5% of the respondents said that the special committee provide

technical expertise on complex and specialized contracts. In addition to that, 10.6% of the respondents confirmed that the special committee ensure compliance of the stipulated terms and conditions of the contract. Respondents in tune of 3.8% alluded that the special committee is not very much applicable in handling complex and specialized procurement. Lastly, 2.9% of the respondents indicated that modification of the contract and contract review to determine the accomplished milestone of the projects are key considerations by the special committee formed to handle complex and specialized contracts. These findings are in tandem with the listed responsibilities of the contract implementation team in (PPADA, 2015) section 151 (1) and therefore, this signifies that public universities in Kenya adhere to the stipulated guidelines.

4.5.7 Remedial Actions for Breach of Contract

The regulatory bodies on public procurement in Kenya (National treasury on PPADA, 2015, Public procurement regulatory authority and public procurement administrative review board) have a very important responsibility of ensuring compliance of the procurement act and are also duty bound to establish practicable disciplinary actions to the suppliers or contractors that deviate from the contracts. These action plans are geared to enforce the contracts fully or seizure non-committal parties in public procurement transactions and this initiative ensures a smooth flow of procurement related activities. The results are illustrated in Table 4.15.

Table 4.15: Remedial Actions for Breach of Contract

Remedial Actions for Breach of Contract	Frequency	Percent
Debarment on future contracts	7	6.7
Cancellation of the contract	49	47.1
Seek legal redress for the liquidated damages	16	15.4
Withholding of payments	3	2.9
Warning of the suppliers	12	11.5
Call meeting for arbitration	17	16.3
Total	104	100

Majority of respondents (47.1%) affirmed that the remedial actions for breach of contract is cancellation of the contract (see Table 4.14). This was followed by 16.3% of the respondents who indicated that they always call for meeting for arbitration. Another remedial action for the breach of contract was seeking legal redress for the liquidated damages was supported by 15.4% of the respondents. Further, 11.5% of the respondents said that they give warnings to the suppliers while 6.7% of the respondents confirmed that they subject the suppliers to a debarment on future contracts. Lastly, 2.9% of the respondents said that they withhold payment of the suppliers. These findings support the remedial actions for breach of contracts reflected in the PPADA, 2015 act section 61 (3), 140, 144 and 153.

4.5.8 Rating of Suppliers Performance on Contract Administration

Public universities just like any other public entities in the country have the obligation to introduce key performance indicators (KPI) on contractual engagements with suppliers and contractors. These metrics justifies why the suppliers or contractors can be deemed to be excellent, very good, good, fair or very poor (see Table 4.16).

Table 4.16: Rating of Suppliers Performance on Contract Administration

Rating of Suppliers Performance on Contract Administration	Frequency	Percent
Excellent	4	3.8
Very good	25	24
Good	56	53.8
Fair	18	17.3
Very poor	1	1
Total	104	100

The majority of the respondents (53.8%) said that supplier’s performance on contract administration is good while 24% of the respondents indicated that supplier’s performance on contract administration is very good. Further, 17.3% and 3.8% of the respondents had the view that supplier’s performance on contract management is fair

and excellent respectively. A marginal rate (1%) of the respondents indicated that supplier's performance on contract administration is very poor. Cumulatively, the results that were deemed good, very good and excellent amounted to 81.6%.

These results concur with (Cherotich, 2014) who conducted research study on contract management practice and operational performance of state corporations in Kenya. The study revealed that suppliers/contractors are highly rated in terms of performance by most of the state corporations. According to the study, suppliers and even contractors that are engaged on various activities in state corporations in Kenya account for 83.6% of service level.

4.6 Descriptive Analysis of the Study Variables

Descriptive statistics is the term given to the analysis of data that helps describe, show or summarize data in a meaningful way and this allows the researcher to visualize what the data is showing hence simplification and proper interpretation of the data of the study (Sekaran, 2006). The descriptive statistics enabled the researcher, to meaningfully describe a distribution of scores or measurements using statistics. The type of statistics used depended on the types of variables in the study and the scale of measurements. The study used mean, frequencies and standard deviations to present the study findings. The general objective of this study was to examine the influence of contract management on procurement performance in public universities in Kenya. The study analyzed descriptive statistics for the following observed variables: buyer-supplier collaboration, procurement risk management, transparency and accountability, contract records management, legal compliance and procurement performance.

Table 4.17: Descriptive Statistics

Descriptive Statistics							
	N	Minimum	Maximum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Buyer supplier collaboration	104	23.00	35.00	30.6346	0.28402	2.89646	8.389
Procurement risk management	104	19.00	35.00	29.8365	0.31460	3.20833	10.293
Transparency and accountability	104	20.00	35.00	32.8173	0.28062	2.86175	8.190
Contract records management	104	25.00	35.00	32.0192	0.27156	2.76939	7.670
Legal compliance	104	25.00	35.00	32.2500	0.27388	2.79302	7.801
Procurement Performance	104	14.00	35.00	29.5288	0.36047	3.67610	13.514
Valid N (list wise)	104						

The researcher carried out consolidated descriptive statistics for independent variables, moderating variable and dependent variable (see Table 4.17). Buyer supplier collaboration had a maximum value of 35.00 with a minimum value of 23 and a standard deviation of 2.89646 and a variance of 8.389 for the sample period 2013-2018. The mean value (30.6346) implied that the constructs of buyer supplier collaboration (commitment, trust and continuous improvement) highly contributed to procurement performance across the sample period. Procurement risk management had a mean of 29.8365 with a standard deviation of 3.20833 and a variance of 10.293. Transparency and accountability on the other hand had a mean of 32.8173 with a standard deviation of 2.86175 and a variance of 8.190. Contract records management recorded a mean of 32.0192 with as standard deviation of 2.76939 and a variance of 7.670. Legal compliance had a mean of 32.2500 with a standard deviation of 2.79302 and a variance of 7.801. Lastly, procurement performance registered a mean of 29.5288 with a standard deviation of 3.67610 and a variance of 13.514 across the sample period.

4.6.1 Buyer Supplier Collaboration

The study sought the opinion of the respondents on the various aspects of buyer supplier collaboration in relation to procurement performance. The respondents were required to rate each statement that match the application of buyer-supplier collaboration in their institution using a preceding 5 points likert scale were a rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree. The analysis is depicted in Table 4.18.

Table 4.18: Opinion of the respondents on the various aspects of Buyer-Supplier Collaboration in relation to Procurement Performance

Buyer-Supplier Collaboration	SA	A	N	D	SD	Mean	SD
	%	%	%	%	%		
We invariably advocate for strong commitment with our suppliers	71.2	26.9	1.9	0	0	4.69	0.504
We believe that a full commitment leads to buyer supplier collaboration	67.3	28.8	2.9	1	0	4.62	0.594
Maintaining credibility with our suppliers paves way to strong buyer supplier collaboration initiative	56.7	40.4	2.9	0	0	4.54	0.556
We have inculcated a culture of trust with our suppliers	47.1	41.3	11.5	0	0	4.36	0.681
We leverage our suppliers capability by analyzing their performance	31.7	55.8	11.5	1	0	4.18	0.665
We share information with our suppliers subject for implementation on contractual activities	36.5	51.9	9.6	1	1	4.22	0.737
We provide feedback to suppliers in terms of their performance	36.5	41.3	11.5	8.7	1.9	4.02	1.005
Average Score						4.38	0.677

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree.

From the basis of Table 4.10 majority (71.2%) of respondents strongly agreed, 26.9% agreed while 1.9% were neutral with a mean of 4.69 and with a standard deviation of 0.504 that they invariably advocate for strong commitment with their suppliers on contractual obligations. On the opinion that they believe that a full commitment on transactional activities leads to buyer supplier collaboration, 67.3% strongly agreed, 28.8% agreed, 2.9% were neutral while 1% disagreed with the

statement with a mean 4.62 and a standard deviation of 0.594. On the statement that they have confidence that buyer-supplier collaboration builds credibility, 56.7% strongly agreed, 40.4% agreed while 2.9% were neutral with a mean of 4.54 and a standard deviation of 0.556.

On the statement that the institutions have inculcated a culture of trust with suppliers on contractual activities in procurement processes, 47.1% strongly agreed, 41.3% agreed while 11% were neutral with a mean of 4.36 and a standard deviation of 0.681. On the statement that the institution consistently leverage supplier's capability by analyzing their performance, 51.9% agreed, 36.5% strongly agreed, 9.6% were neutral while 1% disagreed and strongly disagreed with a mean of 4.22 and a standard deviation of 0.737. Finally, 41.3% of respondent agreed, 36.5% strongly agreed, 11.5% neither agreed nor disagreed, 8.7% disagreed while 1.9% strongly disagreed on the statement that the institutions always provide feedback to their suppliers in terms of their performance with a mean of 4.02 and a standard deviation of 1.005.

These findings correspond with Stella et al. (2013) who indicated that, a vibrant and productive relationship between buyers and suppliers is as a result of teamwork, dispute resolution mechanisms, communication and mutual understanding that builds credibility on the transactional activities in the holistic business sector. Waithaka (2015) partly differed with this results and emphasized more on the performance metrics to be the key indicators of sustainable relationship between buyers and suppliers in the business environment. This meant that successful relationship between the buying organizations and suppliers depends primarily on the service performance levels from time to time.

4.6.2 Procurement Risk Management

The study sought the opinion of the respondents on the various aspects of procurement risk management in relation to procurement performance. The respondents were required to rate each statement that match the application of procurement risk management in their institution using 5 points likert scale were a

rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree. The analysis is illustrated in Table 4.19.

Table 4.19: Opinion of the respondents on the various aspects of Procurement Risk Management in relation to Procurement Performance

Procurement Risk Management	SA %	A %	N %	D %	SD %	Mean	SD
We adopt a supplier data base in acquisition of goods, services and works	51	42.3	3.8	1.9	1	4.4	0.744
We are in constant contact with our suppliers as a contingency plan tactic of understanding the changes in the market	23.1	50	20.2	5.8	1	3.88	0.862
We have in built quality control systems to verify consignments from our suppliers	35.6	51	9.6	3.8	0	4.18	0.760
We segregate responsibilities to all the staff who participate in procurement processes	62.5	31.7	3.8	1.9	0	4.55	0.667
Specified staff generate requisitions to initiate procurement process	53.8	28.8	9.6	2.9	4.8	4.24	1.066
We encourage multiple sourcing as a means of diversifying risks	57.7	34.6	6.7	0	1	4.48	0.710
We outsource non-core activities as a strategy for risk sharing	45.2	32.7	12.5	5.8	3.8	4.10	1.075
Average Score						4.26	0.841

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree.

From Table 4.18, the common number (51%) of respondents strongly agreed 42.3% agreed, 1.9% neither agreed nor disagreed, 3.8% disagreed while 1% strongly disagreed with a mean of 4.4 and with a standard deviation of 0.744 that they have a vibrant supplier data base that act as the reference point in acquisition of goods, services and works. On the statement that they are in constant contact with our suppliers as a contingency plan tactic of understanding the changes in the market majority of respondents (50%) agreed, 23.1% strongly agreed, 20.2% neither agreed nor disagreed, 5.8% disagreed while 1% strongly disagreed with a mean of 3.88 and with a standard deviation of 0.862.

On the statement that they have in built quality control systems to verify all consignments from our supplier's majority of respondents (51%) of respondents agreed 35.6% strongly agreed, 9.6% neither agreed nor disagreed, while 3.8% disagreed with a mean of 4.18 and with a standard deviation of 0.760. On the statement they emphasize segregation of responsibilities to all the staff who participate in procurement processes majority of respondents (62.5%) of respondents strongly agreed 31.7% agreed, 3.8% neither agreed nor disagreed, while 1.9% disagreed with a mean of 4.55 and with a standard deviation of 0.667. On the statement that only specified employees are mandated to generate requisitions to initiate the procurement process majority of respondents (53.8%) strongly agreed 28.8% agreed, 9.6% neither agreed nor disagreed, 2.9% disagreed while 4.8% strongly disagreed with a mean of 4.24 and with a standard deviation of 1.066.

On the statement that they encourage multiple sourcing as a means of diversifying risks majority of respondents (57.7%) of respondents agreed 34.6% strongly agreed, 6.7% neither agreed nor disagreed, while 1% strongly disagreed with a mean of 4.48 and with a standard deviation of 0.710. On the statement they outsource non-core activities as a strategy for risk sharing majority of respondents (45.2%) of respondents strongly agreed 32.7% agreed, 12.5% neither agreed nor disagreed, 3.8% disagreed while 4.10% strongly disagreed with a mean of 4.10 and with a standard deviation of 1.075. These results concurred with Chemoiwo (2016) study that revealed that procurement risk is as a result of complacency of suppliers when the buying organization does not have a framework to appraise the suppliers.

4.6.3 Transparency and Accountability

The study sought the opinion of the respondents on the various aspects of transparency and accountability in relation to procurement performance. The respondents were required to rate each statement that match the application of Transparency and Accountability in their institution using 5 points likert scale were a rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree as seen in table 4.20.

Table 4.20: Opinion of the respondents on the various aspects of Transparency and Accountability in relation to Procurement Performance

Transparency and Accountability	SA	A	N	D	SD	Mean	SD
	%	%	%	%	%		
We award the contract to the lowest evaluated responsive bidders	86.5	11.5	1.9	0	0	4.85	0.413
We write bid rejection letters to suppliers who are not successful within a reasonable time frame	81.7	15.4	1	1.9	0	4.77	0.561
We conduct due diligence after tender evaluations	65.4	27.9	6.7	0	0	4.59	0.617
We validate or dismiss the suppliers in pursuant to the due diligence report	63.5	29.8	5.8	1	0	4.56	0.651
We have procurement probity guidelines that govern contractual activities	72.1	21.2	3.8	2.9	0	4.62	0.699
We subscribe to the rules and regulations in our procurement probity guidelines	74	20.2	4.8	1	0	4.67	0.614
Our procurement probity guidelines is to promote transparency and accountability	81.7	12.5	5.8	0	0	4.76	0.549
Average Score						4.69	0.586

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree.

The majority of respondents (86.5%) strongly agreed 11.5% agreed while 1.9% were neutral with a mean of 4.85 and with a standard deviation of 0.413 that they award the contract to the lowest evaluated bidders except when circumstances of the contract warrant use of other provisions supported by PPADA, 2015. On the opinion that they normally write bid rejection letters to all suppliers that are not successful within a reasonable time frame (81.7%) of respondents strongly agreed 15.4% agreed, 1% neither agreed nor disagreed while 1.9% disagreed with a mean of 4.77 and with a standard deviation of 0.561.

On the opinion that they always conduct due diligence, after tender evaluations but prior to the award of contracts majority of respondents (65.4%) strongly agreed, 27.9% agreed while 6.7% were neutral with a mean of 4.59 and with a standard deviation of 0.617. On the statement that they validate or dismiss the suppliers in pursuant to the due diligence report majority of respondents (63.5%) strongly agreed 29.8% agreed, 5.8% neither agreed nor disagreed while 1% disagreed with a mean of

4.56 and with a standard deviation of 0.651. On the statement that they have procurement probity guidelines that strictly govern all the contractual activities, majority of respondents (72.1%) strongly agreed 21.2% agreed, 3.8% neither agreed nor disagreed while 2.9% disagreed with a mean of 4.62 and with a standard deviation of 0.699.

On the statement that they usually subscribe to the rules and regulations anchored in the procurement probity guidelines, majority of respondents (74%) strongly agreed 20.2% agreed, 4.8% neither agreed nor disagreed while 1% disagreed with a mean of 4.67 and with a standard deviation of 0.614. Finally, on the statement that the premise of their procurement probity guidelines is to promote transparency and accountability in the procurement process (81.7%) strongly agreed 12.5% agreed while 5.8% were neutral with a mean of 4.76 and with a standard deviation of 0.549 (see Table 4.12). The findings of the study, connect well with the findings of (Oberoi, 2013) who found out that transparency is central for making the system of public service delivery effective.

4.6.4 Contract Records Management

The study sought the opinion of the respondents on the various aspects of contract records management in relation to procurement performance. The respondents were required to rate each statement that match the application of contract records management in their institution using 5 points likert scale were a rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree.

Table 4.21: Opinion of the respondents on the various aspects of Contract Records Management in relation to Procurement Performance

Contract Records Management	SA	A	N	D	SD	Mean	SD
	%	%	%	%	%		
We file and secure all the records used in contract process to ensure smooth audit trail	79.8	19.2	1	0	0	4.79	0.433
Our professional probity makes us to be exonerated of any wrongdoing every time an audit trail is conducted	40.4	40.4	10.6	3.8	4.8	4.08	1.049
We provide documentary evidence of all contractual transactions during internal and external audits	78.8	19.2	1.9	0	0	4.77	0.467
We provide all the required records to the oversight bodies for auditing on contract related activities	74	25	1	0	0	4.73	0.467
Ease on information access on contractual activities is enhanced by structured records management system	51	37.5	8.7	1.9	1	4.36	0.799
We provide accurate information to internal and external auditors and any other investigative authorities	75	24	1	0	0	4.74	0.462
We authenticate the information in the university contract records before handing over to the parties concerned	62.5	31.7	4.8	1	0	4.56	0.636
Average Score						4.58	0.616

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree.

From Table 4.20, majority of respondents (79.8%) strongly agreed 19.2% agreed, 1% while neither agreed nor disagreed with a mean of 4.79 and with a standard deviation of 0.433 that they always file and secure all the records used in procurement process to ensure smooth audit trail. On the statement the professional probity makes them to be exonerated of any wrongdoing every time an audit trail is conducted majority of respondents (40.4%) strongly agreed as well as agreed, 10.6% neither agreed nor

disagreed, did 3.8% disagree while 4.8% strongly disagreed with a mean of 4.08 and with a standard deviation of 1.049.

On the statement they provide vast documentary evidence of all procurement transactions during internal and external of audits majority of respondents (78.8%) strongly agreed 19.2% agreed, 1.9% while neither agreed nor disagreed with a mean of 4.77 and with a standard deviation of 0.467. On the statement they We constantly provide all the required records to the constituted oversight bodies for auditing on procurement related activities majority of respondents (74%) strongly agreed 25% agreed, 1% while neither agreed nor disagreed with a mean of 4.73 and with a standard deviation of 0.467. On the statement the Ease on information access on contractual activities in the university is enhanced by our well-structured records management system majority of respondents (51%) strongly agreed ,37.5% agreed, 8.7% neither agreed nor disagreed, did 1.9% disagree while 1% strongly disagreed with a mean of 4.36 and with a standard deviation of 0.799. On the statement they normally provide accurate information to internal and external auditors and any other investigative authorities majority of respondents (75%) strongly agreed 24% agreed, 1% while neither agreed nor disagreed with a mean of 4.74 and with a standard deviation of 0.462.

Finally, on the statement they normally authenticate the information replicated in the university procurement records before handing over to the parties concerned majority of respondents (62.5%) strongly agreed 31.7% agreed, 4.8% neither agreed nor disagreed while 1% disagreed with a mean of 4.56 and with a standard deviation of 0.636. These results compliment Dewah and Mutula (2015) study that explored the link between records management and the discharge of justice and found that the courts jurisprudence is guided by the range of records presented to the court.

4.6.5 Legal Compliance

The study sought the opinion of the respondents on the various aspects of legal compliance in relation to procurement performance. The respondents were required to rate each statement that match the application of legal compliance in their

institution using 5 points likert scale were a rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree. The analysis is described in Table 4.22.

Table 4.22: Opinion of the respondents on the various aspects of Legal Compliance in relation to Procurement Performance

Legal Compliance	SA	A	N	D	SD	Mean	SD
	%	%	%	%	%		
We normally comply with PPADA, 2015	85.6	14.4	0	0	0	4.86	0.353
Compliance score on the act is as per public procurement regulatory authority	67.3	29.8	2.9	0	0	4.64	0.538
Compliance score of PPADA, 2015 depends on the inherent culture of the university on procurement activities	51.9	37.5	8.7	1	1	4.38	0.767
We adhere to professional fidelity on contractual responsibilities as a way of complying with PPADA, 2015	66.3	29.8	3.8	0	0	4.62	0.561
We believe that legal compliance is based on procurement standards set by the public procurement regulatory bodies	73.1	25	1.9	0	0	4.71	0.496
We are confident that the conduct of executives in procurement process forms the basis of legal compliance	60.6	27.9	6.7	2.9	1.9	4.42	0.889
Legal compliance framework assists the staff involved on procurement process to manage their obligations effectively	66.3	27.9	5.8	0	0	4.61	0.598
Average Score						4.61	0.600

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree

The majority (85.6%) of the respondents strongly agreed while 14.4% agreed with a mean of 4.86 and with a standard deviation of 0.353 that they continuously comply with PPADA 2015. On the statement that the compliance score in line with PPADA, 2015 on contractual obligations is in tandem with the public procurement regulatory authority majority of the respondents (67.3%) strongly agreed, 29.8% agreed while 2.9% neither agreed nor disagreed with a mean of 4.64 and a standard deviation of

0.538. The statement that they have the conviction that compliance score of PPADA, 2015 depends primarily on the inherent culture of the university on procurement activities majority of respondents (51.9%) strongly agreed, 37.5% agreed, 8.7% neither agreed nor disagreed, 1% disagreed while 1% strongly disagreed with a mean of 4.38 and a standard deviation of 0.767.

Majority of respondents (66.3%) strongly agreed, 29.8% agreed while 3.8% neither agreed nor disagreed with a mean of 4.62 and a standard deviation of 0.561 on the statement that in the realm of procurement process, they adhere to professional fidelity on contractual responsibilities as a way of complying with the PPADA, 2015. On the account of the fact that they believe that legal compliance is based on procurement standards set by the public procurement regulatory bodies majority of respondents (73.1%) strongly agreed, 25% agreed while 1.9% neither agreed nor disagreed with a mean of 4.71 and a standard deviation of 0.496. On the statement that they have confident that the conduct of executives in procurement process forms the basis of legal compliance majority of respondents (60.6%) strongly agreed, 27.9% agreed, 6.7% neither agreed nor disagreed, 2.9% disagreed while 1.9% strongly disagreed with a mean of 4.42 and a standard deviation of 0.889.

Lastly, on the statement that they are certain that legal compliance framework assists all the executives who are involved on procurement process to confidently manage their obligations effectively majority of the respondents (66.3%) strongly agreed, 27.9% agreed while 5.8% neither agreed nor disagreed with a mean of 4.61 and a standard deviation of 0.598. The results of this study are in line with (Abere, 2015) who conducted a research study on factors affecting compliance with the public procurement and disposal regulations in Kenya. The study found out that training on public procurement and disposal regulations, ethical practices during tendering process and enforcement mechanisms influences the compliance of procurement and disposal regulations in public entities in Kenya.

4.6.6 Procurement Performance

The study sought the opinion of the respondents on the various aspects of procurement performance. The respondents were required to rate each statement that

match the application of procurement performance in their institution using 5 points likert scale were a rate of 5 represented, Strongly Agree and 1 represented Strongly Disagree as seen in table 4.23.

Table 4.23: Responses on the various aspects of Procurement Performance

Procurement Performance	SA	A	N	D	SD	Mean	SD
	%	%	%	%	%		
We register cost effectiveness in all contractual activities	31.7	51.9	15.4	1	0	4.14	0.703
We have a framework of ensuring cost effectiveness in procurement activities	29.8	57.7	9.6	2.9	0	4.14	0.703
Our synergy drive in procurement forms the basis of customer satisfaction	33.7	52.9	10.6	2.9	0	4.17	0.730
Our customer satisfaction index induces vibrant working relationship	32.7	51	14.4	1	1	4.13	0.764
We always respond to our internal customers complaints to enhance customer satisfaction	46.2	41.3	9.6	2.9	0	4.31	0.764
We constantly embrace procurement agility in contractual obligations	40.4	51	7.7	1	0	4.31	0.655
Our strategies on procurement agility enhances our procurement performance	39.4	53.8	5.8	1	0	4.32	0.627
Average Score						4.22	0.707

Where: SA=Strongly Agree, A= Agree, N=Neutral, D=Disagree, SD=Strongly Disagree.

According to the study, 31.7% strongly agreed, 51.9% agreed, 15.4% neither agreed nor disagreed while 1% of the respondents disagreed with the statement that they often register cost-effectiveness in all contractual activities with their suppliers/contractors with a mean of 4.14 and a standard deviation of 0.703 (see Table 4.23). On the statement that they have a framework of ensuring cost-effectiveness in procurement activities 29.8% strongly agreed, 57.7% agreed, 9.6% neither agreed nor disagreed while 2.9% disagreed with a mean of 4.14 and a standard deviation of 0.703.

The statement that the inherent synergy-focused drive in procurement process forms the basis of customer satisfaction 33.7% strongly agreed, 52.9% agreed, 10.6% neither agreed nor disagreed while 2.9% of the respondents disagreed with a mean of 4.17 and a standard deviation of 0.730. From the basis of the statement that their customer satisfaction index necessitates vibrant working relationship 32.7% strongly agreed, 51% agreed, 14.4% neither agreed nor disagreed, 1% disagreed while 1% of the respondents strongly disagreed with a mean of 4.13 and a standard deviation of 0.764. Majority of the respondents (46.2%) strongly agreed, 41.3% agreed, 9.6% neither agreed nor disagreed while 2.9% disagreed with the statement that they always respond to their internal customer's complaints as a way of sustaining and enhancing customer satisfaction with a mean of 4.31 and a standard deviation of 0.764.

On the statement that they constantly embrace procurement agility in contractual obligations 40.4% strongly agreed, 51% agreed, 7.7% neither agreed nor disagreed while 1% of the respondents disagreed with a mean of 4.31 and a standard deviation of 0.655. Finally, on the account of the statement that the respondent's strategies on procurement agility enhances their procurement performance 39.4% strongly agreed, 53.8% agreed, 5.8% neither agreed nor disagreed while 1% disagreed with a mean of 4.32 and a standard deviation of 0.627.

These results connect fully with Mbae (2014) who conducted a research study on public procurement law and procurement performance of county governments in Kenya. The results strongly support the researcher's findings in the sense that when two parties strike a bargain, there must be some mechanism to ensure that each party will stick to the terms and conditions of the contract in order to ensure a smooth flow of the contract. On another study conducted by Kiage (2013) on factors affecting procurement performance the research study differed slightly with the results of this study. The researcher revealed that procurement planning has a significant impact on procurement performance since it accounts to 26%. Also the study revealed other attributes that affect procurement performance whereby contract management resulted to 23.3%, staff competency 20.1% while resource allocation registered 17.2%.

4.7 Diagnostic Tests (Test of Multivariate Assumptions)

Diagnostic test has become a basic requirement in the realm of econometrics discipline. The advances of the distinct multivariate assumptions in a research study shows whether the coefficients of the estimates are consistent and could be relied upon when making statistical inferences (Greene, 2002). Diagnostic tests are conducted to ensure that the assumptions of ordinary least squares (OLS) are not violated before conducting a multiple linear regression. Therefore, the data was tested for adherence to the OLS assumptions and it was found to be free from; linearity, normality, autocorrelation, heteroscedasticity and multicollinearity. The outcome of these results enabled the researcher to proceed with other analysis of the research study.

4.7.1 Linearity Test

The linearity test was ascertained by use of the correlation coefficient statistics which is a statistical measure of the strength of the relationship between the relative movements of two variables (Stock & Watson, 2007). The decision making process was guided by the assumption that if the value sig. deviation from linearity >0.05 , then the relationship between the independent variables are linearly dependent and if the value sig. deviation from linearity <0.05 , then the relationship between independent variables with dependent variable is not linear (see Table 4.24).

Table 4.24: Model Summary Statistics and Coefficients

		ANOVA TABLE					
			Sum of Squares	Df	Mean of Squares	F	Sig.
Procurement performance* Buyer Supplier Collaboration	Between Groups	(Combined)	505.484	11	45.953	4.769	0.000
		Linearity	400.244	1	400.244	41.540	0.000
		Deviation from Linearity	105.240	10	10.524	1.092	0.376
	Within Groups		1069.466	92	11.624		
	Total		1391.913	103			
Procurement Performance* Procurement Risk Management	Between Groups	(Combined)	386.938	13	29.764	2.666	0.003
		Linearity	269.958	1	269.958	24.176	0.000
		Deviation from Linearity	116.980	12	9.748	0.873	0.577
	Within Groups		1004.975	90	11.166		
	Total		1391.913	103			
Procurement Performance* Transparency & Accountability	Between Groups	Combined)	322.448	11	29.313	2.522	0.008
		Linearity	122.954	1	122.954	10.577	0.002
		Deviations from Linearity	116.980	10	19.949	1.716	0.089
	Within Groups		1069.466	92	11.6		
	Total		1391.913	103			
Procurement Performance* Contract Records Management	Between Groups	(Combined)	436.490	10	43.649	4.249	0.000
		Linearity	326.605	1	326.605	31.791	0.000
		Deviations from Linearity	109.885	9	12.209	1.188	0.312
	Within Groups		955.424	93	10.273		
	Total		1391.913	103			
Procurement Performance* Legal Compliance	Between Groups	(Combined)	439.069	10	43.907	4.285	0.000
		Linearity	295.473	1	295.473	28.839	0.000
		Deviations from Linearity	143.596	9	15.955	1.557	0.140
	Within Groups		952.844	93	10.246		
	Total		1391.913	103			

The analysis of variance (ANOVA) output of the variables (Buyer supplier collaboration, procurement risk management, transparency and accountability, contract records management and legal compliance) had p-values of 0.376, 0.577, 0.089, 0.312 and 0.140 respectively. These results showed sig. values deviating from linearity (p-value>0.05) and therefore, we rejected the null hypothesis that all variables have no linear relationship with procurement performance in public universities in Kenya. We concluded that all the variables of the study have a linear relationship with procurement performance.

4.7.2 Test of Normality

The normality test used in this study was Kolmogorov-Smirnov (KS), Shapiro Wilk (SW) as well as Q-Q plot. If the significant value of the K-S and S-W Test is more than the p-value 0.05, the data is normally distributed hence the null hypothesis is not rejected since the data sets follow a normal curve. On instances when the (p-value<0.05) the data is deemed not to be normal and therefore, the null hypothesis is not rejected. Further, if the Q-Q plot is within the straight line then the study shows a positive correlation (Thode, 2002). The analysis of normality test is shown in Table 4.25.

Table 4.25: Test of Normality

Variable	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Buyer Supplier Collaboration	0.156	104	0.200*	0.904	104	0.078
Procurement Risk Management	0.214	104	0.200*	0.860	104	0.076
Transparency and Accountability	0.155	104	0.200*	0.933	104	0.198
Contract Records Management	0.126	104	0.200*	0.936	104	0.248
Legal Compliance	0.224	104	0.200*	0.854	104	0.134

The study results of normality which assesses the normalcy of the distribution of scores provided significant results that supported the K-S and S-W assumptions (see

Table 4.25). The hypothesis was tested at 5% level of significant and p-value for the former and latter assumption were more than 0.05 and therefore, the null hypothesis was not rejected. It was concluded that the data was normally distributed. Also the study used the Q-Q plot to establish the degree of normality of residuals. The standardized data was measured against the standard normal distribution. The study measured, the correlation between the sample data and normal quantiles (measure of the goodness of fit) which examines how well the data are modeled by a normal distribution. The results showed that the plotted Q-Q were within the straight line thus indicating positive correlation.

4.7.2.1 Buyer Supplier Collaboration

The predictor variable (Buyer supplier collaboration) registered normal Q-Q plots since the distribution of the scores does not deviate from normality to a very big extent (see Figure 4.1). This denotes that the distributions are linearly related in the sense that the Q-Q plot lie approximately on the line. Basically, data clustering around the line shows normality of the distribution of scores.

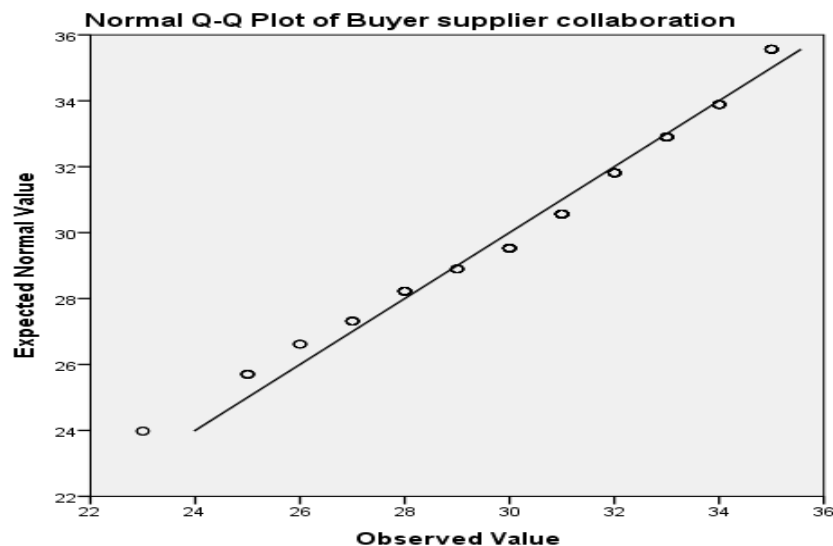


Figure: 4.1: Normal Q-Q Plot of Buyer Supplier Collaboration

4.7.2.2 Procurement Risk Management

The distribution of the scores that are based on procurement risk management are not skewed (see Figure 4.2). Therefore, all the scores fall closely to the straight line and basically this means that the set data of the study is well modeled by normal distribution hence reflecting better regression results of the study.

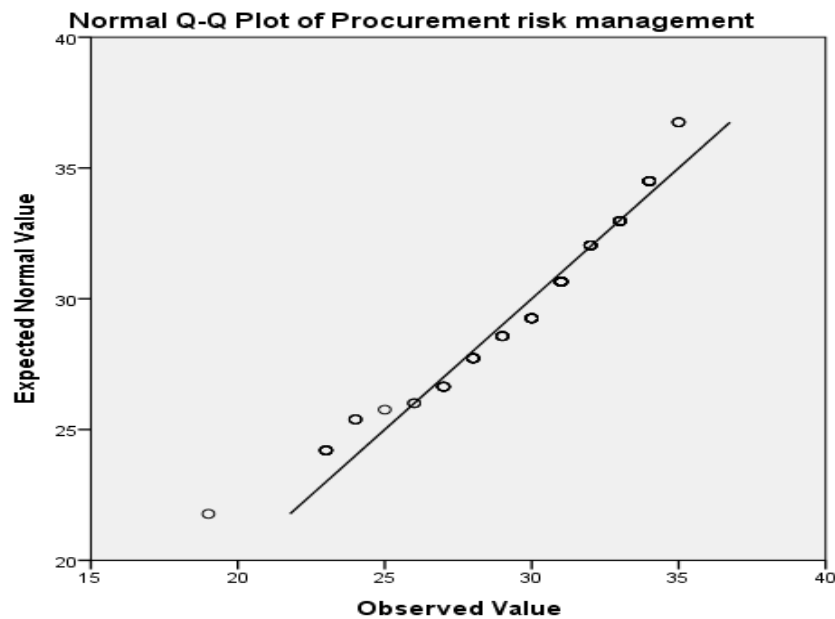


Figure 4.2: Normal Q-Q Plot of Procurement Risk Management

4.7.2.3 Transparency and Accountability

The dispersal of scores in line with transparency and accountability illustrates a normal Q-Q plot randomly generated with the standard normal data on the vertical axis to a standard normal population on the horizontal axis (see Figure 4.3). The linearity of the points suggests that the data is normally distributed.

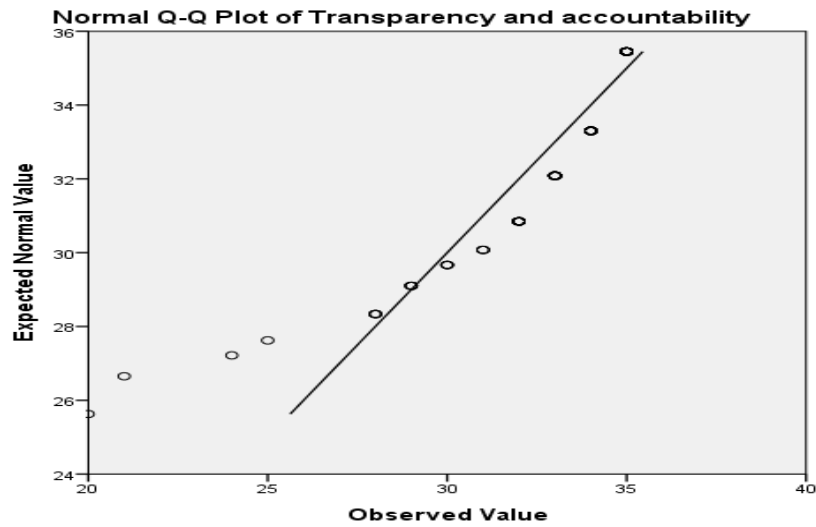


Figure 4.3: Normal Q-Q Plot of Transparency and Accountability

4.7.2.4 Contract Records Management

The general trend of the Q-Q plot follows a straight line (see Figure 4.4). This signifies a good indicator of normal distribution based on contract records management data derived from the study. This conforms to the stipulated normality assumption that values along the linear line presents a normal distribution scores.

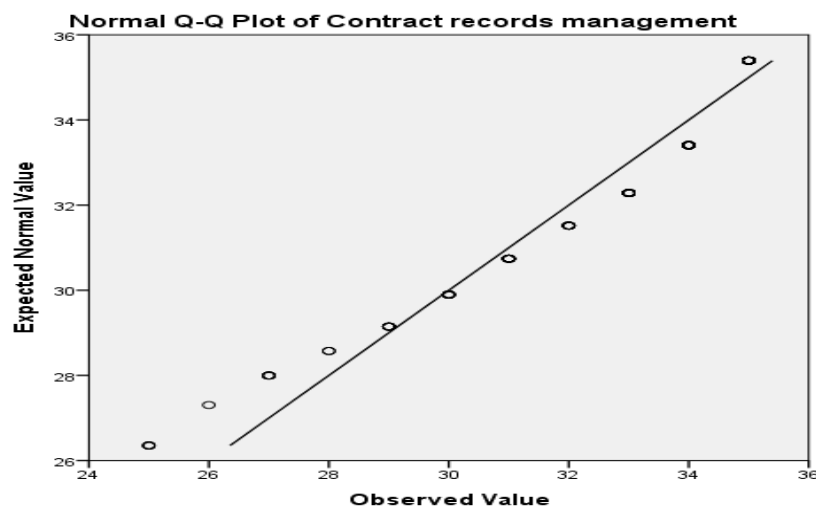


Figure 4.4: Normal Q-Q Plot of Contract Records Management

4.7.3 Autocorrelation Test

Autocorrelation test was performed to establish whether the error terms were serially interdependent. Basically, Durbin Watson statistics is normally used to establish the degree of autocorrelation in the study. Autocorrelation is present if the DW statistics is close to 0 and 4. A value of 0 shows evidence of perfect positive autocorrelation while 4 shows evidence of perfect negative autocorrelation. A Durbin Watson value between 2 and 2.5 indicates absence of autocorrelation. Absence of autocorrelation implies that the data is reliable and suitable for estimation (Mukras, 2003).

Table 4.26: Autocorrelation Test

Model	Durbin-Watson
1	1.913
a. Predictors: (Constant), Legal compliance, Procurement risk management, Transparency and accountability, Buyer supplier collaboration, Contract records management	
b. Dependent Variable: Procurement Performance	

Table 4.26 indicates that the model had a Durbin Watson value of 1.913 which implies weak positive autocorrelation. The existence of weak positive autocorrelation does not have statistically significant effect on the model estimation and prediction. This results indicates that the data used in this study was reliable and suitable for estimation purposes.

4.7.4 Homoscedasticity Test

Data with identical variances is said to be homoscedastic and data sets yields more accurate regression results while heteroscedastic data present standard errors that are already biased (Maddala, 2009). Levene Statistic (LS) was applied to test the homogeneity of variance in the data sets. This study was guided by the assumption of homogeneity of variance which states that the p-value for Levene's Test should be above 0.05 and if Levene's Test yields a p-value below 0.05, then the assumption of homogeneity of variance is deemed to be violated (see Table 4.27).

Table 4.27: Test of Homogeneity of Variance

		Test of Homogeneity of Variance			
		Levene Statistic	df1	df2	Sig.
Buyer Supplier Collaboration	Based on Mean	2.376	1	102	0.141
	Based on Median	1.816	1	102	0.194
	Based on Median and with adjusted df	1.816	1	12011	0.203
	Based on trimmed mean	1.871	1	102	0.122
		2.240	1	102	0.152
Procurement Risk Management	Based on Mean	1.752	1	102	0.145
	Based on Median	1.752	1	70.243	0.148
	Based on Median and with adjusted df	1.871	1	102	0.122
	Based on trimmed mean	2.095	1	102	0.087
Transparency and Accountability	Based on Mean	2.026	1	102	0.115
	Based on Median	1.710	1	60.336	0.170
	Based on Median and with adjusted df	1.710	1	102	0.174
	Based on trimmed mean	1.94	1	102	0.132
Contract Records Management	Based on Mean	2.095	1	102	0.087
	Based on Median	1.752	1	102	0.145
	Based on Median and with adjusted df	1.752	1	70.243	0.148
	Based on trimmed mean	1.871	1	103	0.122
Legal Compliance	Based on Mean	2.095	1	103	0.087
	Based on Median	1.752	1	103	0.145
	Based on Median and with adjusted df	1.752	1	70.243	0.148
	Based on trimmed mean	1.871	1	103	0.122

The p-value of levene's test on test of homogeneity variance showed that all the variables had (p-value>0.05) hence the null hypothesis was not rejected. Since all the variables had no homogeneity of variance, we conclude that heteroscedastic data was not existing in the study meaning that the data sets had equal variances according to the robust tests for homoscedasticity. This also implied that the data that was presented was unbiased.

4.7.5 Test of Multicollinearity

Multi-collinearity is a problem in multiple regressions that develops when one or more of the predictor variables are highly correlated with one or more of the other independent variables. The collinearity statistics that were used include the Tolerance Statistic and Variance Inflation Factor (VIF). The standard rule for this test is that Tolerance Statistic considerably larger than 1 indicates possibility of multicollinearity between the predictor variables, and if any of the variables VIF is larger than 10 multicollinearity is definitely present (Brooks (2008)). The analysis of test of multicollinearity is shown in Table 4.28.

Table 4.28: Test of Multicollinearity

Model Factors	Collinearity Statistics	
	Tolerance	VIF
Buyer Supplier Collaboration	0.640	1.562
Procurement Risk Management	0.715	1.399
Transparency and Accountability	0.706	1.416
Contract Records Management	0.611	1.638
Legal Compliance	0.664	1.505

Dependent Variable: Procurement Performance

According to the study's results, the tolerance statistics for buyer supplier collaboration had tolerance of 0.640 and a VIF of 1.562, procurement risk management recorded tolerance of 0.715 and a VIF of 1.399. Transparency and accountability registered tolerance of 0.706 and a VIF of 1.416 while contract records management had tolerance of 0.611 and a VIF of 1.638. Lastly, legal compliance had tolerance of 0.644 and a VIF of 1.505 (see Table 4.28). This shows that all of the predictor variables and the moderating variable had a tolerance of less than 1 and the VIFs were all below 10. This indicates that there is no multicollinearity among the study variables.

4.8 Inferential Statistics

Inferential statistics allows the researcher to make predictions (inferences) and generalization from the data drawn from the population. Inferential statistics use statistical model to help the researcher compare sample data to other samples of previous research (Sekaran, 2010). In line with this study, correlation analysis and regression analysis were adopted. The correlation analysis was used to establish strength relationships between independent variables and dependent variable. In particular Pearson correlation was applied to establish the strength of the linear relationship. Multiple linear regression model was employed to establish the relationship among predictor variables on the dependent variable. Test statistics was also used to determine the relative importance of each independent variable in influencing procurement performance. In this case t-test and F-test, statistics were considered to be statistically significant when the value of the test statistic falls in the critical region.

4.8.1 Correlation Analysis

In statistics, coefficients of correlation R and R square measure the direction and strength of a linear relationship between two variables. Their numerical value is indicator of the direction and strength of the relation between variables. The value of R and R square can vary from -1.00 to $+1.00$. Generally, $R > 0$ indicates positive relationship. Correlation coefficients enable a researcher to quantify the strength of the linear relationship between two or more variables (Saunders et al., 2009). Correlation is a measure of the degree of relatedness of variables. Several measures of correlation are available, the selection of which depends mostly on the level of data being analyzed. For only ordinal-level or ranked data, Spearman's rank correlation (r), can be used to analyze the degree of association of two continuous variables. Pearson product-moment correlation coefficient r , requires at least interval level of measurement for the data (Sekaran, 2010).

Correlation coefficients provide a numerical summary of the direction and the strength of the linear relationship between two variables. Pearson correlation coefficients (r) range from -1 to $+1$. The sign at the front indicates whether there is a

positive or a negative correlation. The size of the absolute value provides information on the strength of the relationship where; (r=0.1 to 0.29 weak; r=0.30 to 0.49 Medium; r=0.5 to 1.0 strong). A value of zero (0) mean that the variables are perfectly independent that is no relationship exists, a value of +1 represents a perfect positive correlation and a value of -1 represents a perfect negative correlation (Kothari, 2004). To determine the strength and direction of the linear relationship between independent and dependent variables. For this study, Pearson Product Moment Correlation was used to calculate bivariate correlation values and the results obtained are summarized in Table 4.29.

Table 4.29: Pearson Product Moment Correlation

Procurement Performance		Procurement Performance	Buyer Supplier Collaboration	Procurement Risk Management	Transparency & Accountability	Contract Records Management	
	Pearson Correlation	1	0.536**	0.440**	0.297**	0.484**	
	Sig. (2-tailed)		0.000	0.000	0.002	0.000	
	N	104	104	104	104	104	
Buyer Collaboration	Supplier	Pearson Correlation	0.536**	1	0.512**	0.102	0.357**
		Sig. (2-tailed)	0.000		0.000	0.303	0.000
		N	104	104	104	104	104
Procurement Management	Risk	Pearson Correlation	0.440**	0.512**	1	0.198*	0.271**
		Sig. (2-tailed)	0.000	0.000		0.044	0.005
		N	104	104	104	104	104
Transparency & Accountability		Pearson Correlation	0.297**	0.102	0.198*	1	0.487**
		Sig. (2-tailed)	0.002	0.303	0.044		0.000
		N	104	104	104	104	104
Contract Management	Records	Pearson Correlation	0.484**	0.357**	0.271**	0.487**	1
		Sig. (2-tailed)	0.000	0.000	0.005	0.000	
		N	104	104	104	104	104

The results show that the correlation between buyer supplier collaboration on procurement performance had R of 0.536 and p-value of 0.000 at 95% confidence levels. The coefficient value was between 0.5 to 1.0 and this indicated a strong correlation between Buyer supplier collaboration and procurement performance hence variables are associated. The results concur with Stella et al. (2013) who found

that there is strong correlation between buyer supplier collaboration on procurement performance.

The results further showed that procurement risk management on procurement performance had R of 0.440 and p-value of 0.000 at 95% confidence levels. The coefficient value was between 0.30 to 0.49 and this indicated a medium correlation between procurement risk management and procurement performance hence variables are associated. These results correspond with Okonjo (2014) who established that there a moderate correlation between procurement risk management on procurement performance.

On transparency and accountability on procurement performance R was 0.297 and p-value of 0.002 at 95% confidence levels. The coefficient value was between 0.1 to 0.29 which indicated a weak correlation between transparency and accountability and procurement performance hence variables were deemed to be slightly associated. The results are supported by Mukoruru (2014) who found that there is a weak correlation between transparency and accountability on procurement performance in public sector.

Contract records management and procurement performance had R of 0.484 and p-value of 0.000 at 95% confidence levels. The coefficient value was between 0.30 to 0.49 and this indicated a medium correlation between contract records management and procurement performance hence variables are associated. These findings concur with Dzifa and Reindof (2015) who found that there is moderate correlation between contract records management on procurement performance.

4.8.2 Regression Analysis

Regression analysis is a set of statistical techniques that allow one to assess the relationship between more than one independent variable and one dependent variable. Regression is often used when the intent of the analysis is prediction. The goal of regression is to arrive at the set of regression coefficients (Beta values), for the independent variables that bring the Y values predicted from the equation as close as possible to the Y values obtained by measurement. The regression

coefficients that are computed minimize the sum of the squared deviations between predicted and obtained Y values and they optimize the correlation between the predicted and obtained Y values for the data set (Barbara & Linda, 2007).

4.7.2.1 Overall Model Summary of Inferential Analysis

The linear regression analysis models the relationship between the dependent variable which is procurement performance and independent variable which is influence of contract management (Buyer supplier collaboration procurement risk management, transparency and accountability and contract records management). Coefficient of determination explains the extent to which changes in the dependent variable that is explained by all the four independent variables (Buyer supplier collaboration procurement risk management, transparency and accountability and contract records management).

Table 4.30: Overall Model Summary

Overall Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.764 ^a	0.741	0.717	0.85927

a. Predictors: (Constant), Buyer Supplier Collaboration, Procurement Risk Management, Transparency and Accountability and Contract Records Management

The correlation of coefficient (R) was 0.764, the coefficient of correlation (R^2) was 0.741 and the adjusted R square was 0.717. The correlation of coefficient indicated that all the predictor variables accounted to 76.4% of variations on procurement performance in public universities in Kenya. Further, the correlation of determination indicated that all the independent variables accounted to 74.1% of variations on procurement performance in public universities in Kenya. Lastly, the adjusted R square showed that all the explanatory variables accounted to 71.7% of variations on procurement performance in public universities in Kenya. This correlation showed the explanatory power of the model.

The R square (R^2) was computed as the preliminary test for multiple linear regression model. The goodness of fit of the model explained by R square 0.741 implies that the independent variables accounted to 74.1% of variations on procurement performance at 5% significance level. Only 25.9% of variations on procurement performance in public universities is determined by the stochastic terms not included in the model. Therefore, the independent variables greatly influence procurement performance in public universities in Kenya which makes the model fit for policy inferences.

4.7.2.2 Analysis of Variance of Independent Variables

Gujarati (2004) confirms that analysis of variance is a collection of statistical models and the associated estimation procedures used to analyze the differences among group means in a sample. ANOVA provides a statistical test of whether two or more population means are equal and therefore generalizes the t-test beyond two means. Basically, t-test is a special case of the ANOVA and it is used to test whether there are significant differences between two means derived from two samples or groups at specified probability level. Further, F-test is also applicable in ANOVA and it comprises any statistical test in which the test statistic has an F-distribution under the null hypothesis.

Table 4.31: Analysis of Variance

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	582.547	4	145.637	17.814	0.000 ^b
	Residual	203.616	99	8.175		
	Total	786.163	103			

a. Dependent Variable: Procurement Performance
b. Predictors: (Constant), Buyer Supplier Collaboration, Procurement Risk Management, Transparency and Accountability and Contract Records Management

The regression results of the ANOVA indicate an F-statistic of 17.814 which was significant at 5% significance level (p -value $0.000 < 0.05$). This implied that the null hypothesis was rejected and we concluded that the overall model was significant at

5% significance level. The coefficients fitted in the multiple regression model were not equal to zero. Therefore, the model used was significant and of a good fit for the variables being tested. The findings inferred that the influence of buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management had a significant influence on procurement performance in public universities Kenya.

4.7.2.3 Regression Analysis of the Variables

The dependent variable of the model was procurement performance of public universities in Kenya and the independent variables of the study were buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management. The model is presented algebraically as follows:

$$PP_{it} = \beta_0 + \beta_1 BSC_{it} + \beta_2 PRM_{it} + \beta_3 TA_{it} + \beta_4 CRM_{it} + \varepsilon \dots \dots \dots 3.1.$$

Where;

β_0 =Constant

PP=Procurement Performance

BSC= Buyer Supplier Collaboration

PRM= Procurement Risk Management

TA= Transparency and Accountability

CRM= Contract Records Management

ε = Error term (the residual error of the regression)

Table 4.32: Regression Analysis

Model	Coefficients ^a		Beta	T	Sig.
	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error			
1 (Constant)	5.198	4.392		1.183	0.240
Buyer Supplier Collaboration	0.434	0.119	0.342	3.662	0.000
Procurement Risk Management	0.199	0.104	0.173	1.915	0.048
Transparency and Accountability	0.126	0.114	0.098	1.099	0.044
Contract Records Management	0.355	0.125	0.268	2.854	0.005

a. Dependent Variable: Procurement Performance

The results in Table 4.32 generates a regression equation as follows:

$$PP=5.198 + 0.342BSC + 0.173PRM+ 0.098TA + 0.268CRM$$

The regression equation above implies that, *ceteris paribus*, procurement performance had a constant of 5.198. This shows that procurement performance is deemed to change by 5.198 units holding other factors constant in the model implying that there exist other explanatory variables that result to variations in procurement performance other than the study variables (Buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management).

Objective 1: To find out the Influence of Buyer Supplier Collaboration on Procurement Performance in Public Universities in Kenya

The regression results indicate that buyer supplier collaboration had a statistically significant influence on procurement performance (p-value $0.000 < 0.05$). Holding other factors constant, a unit change in buyer supplier collaboration would lead to change in procurement performance by 0.342. This implies that 1% change in buyer supplier collaboration results to 34.2% change in procurement performance in public universities in Kenya. The results concur with Otieno (2012) who conducted a research on buyer supplier relationship in Kenya's public universities and found that buyer supplier relationships are very significant in enhancing procurement performance. Further, Mejooli and Senelwa (2022) in a study entitled effect of supplier relationship on procurement performance of public universities in Nairobi County, established that buyer supplier relationship had a significant effect on procurement performance. The significant value in ANOVA results was (p-value $0.000 < 0.05$).

Objective 2: To find out the Influence of Procurement Risk Management on Procurement Performance in Public Universities in Kenya

The results equally show that procurement risk management had a statistically significant effect on procurement performance (p-value $0.048 < 0.05$). Holding other

factors constant, a unit change in procurement risk management would lead to change in procurement performance by 0.173 units. This implies that 1% change in procurement risk management leads to 17.3% change in procurement performance in public universities in Kenya *ceteris paribus*. This result corresponds with Odongo and Chepkwony (2019) study which affirmed that risk reduction was statistically significant ($p\text{-value } 0.051 < 0.05$). This results indicated that risk reduction had a positive influence on procurement performance. Also, Owuor et al. (2019) found that supply chain risk management practices had $R^2=0.483$ on supply chain performance. This meant that 48.3% of supply chain performance of public universities in Kenya is accounted for by supply chain risk management practices. This finding represent a slight high index of supply chain risk management practices on supply chain performance in public universities in Kenya.

Objective 3: To find out the Influence of Transparency and Accountability on Procurement Performance in Public Universities in Kenya

Further, the regression results showed that transparency and accountability had a statistically significant effect on procurement performance ($p\text{-value } 0.044 < 0.05$). The results revealed that a unit change in transparency and accountability would lead to change in procurement performance by 0.098 units. This implies that 1% change in transparency and accountability leads to 9.8% change in procurement performance in public universities in Kenya. This meant that the transgression of the ethical principles that included impartiality, due diligence and procurement probity affects procurement performance in public universities in Kenya. These results are commensurate with Chesseto et al. (2019) study that showed that transparency was statistically significant on influencing procurement performance in public universities in Kenya ($p\text{-value } 0.0205 < 0.05$). To add on that, according to Wanyonyi et al. (2018) study transparency and accountability had a positive significant effect on procurement performance. The results showed ($p\text{-value } 0.012 < 0.05$). The results implied that a unit increase in the adoption of transparency practice would lead to an increase in procurement performance.

Objective 4: To find out the Influence of Contract Records Management on Procurement Performance in Public Universities in Kenya

Contract records management had a statistically significant effect on procurement performance ($p\text{-value } 0.005 < 0.05$). The regression results showed that a unit change in contract records management would lead to change in procurement performance by 0.268 units. This implies that 1% change in contract records management leads to 26.8% change in procurement performance in public universities in Kenya *ceteris paribus*. This implied that a total departure from ascertaining audit trail, information accessibility and information accuracy adversely affects procurement performance in public universities in Kenya. This result concurred with Chegugu and Kwasira (2019) study that revealed a positive statistical significance on influence of procurement records keeping practices on corporate goals ($p\text{-value } 0.000 < 0.05$). On the same breadth, a study conducted by Kyalo et al. (2021) on the influence of records management on tendering process in public sector showed that records management had a statistically positive influence on tendering process in the public sector ($p\text{-value } 0.000 < 0.05$).

4.8.3 Test for Moderating Effect of Legal Compliance

Moderator variables influence the relationship between dependent variable and other independent variables. The direction and the magnitude of the relationship between the dependent variable and the independent variable is reliant on the value of a moderator (Saunders et al., 2009). The legal compliance on procurement performance is underlined under the threshold of Above Average Complaint (81-99%), Average Complaint (51-80%) and Non-Complaint (Below 50%) in regard to PPADA, 2015 (PPRA, 2018). The study objective was to examine the moderating influence of legal compliance on the relationship between procurement contract management on procurement performance in public universities in Kenya. In this study, legal compliance was hypothesized to be a moderator affecting the relationship between dependent (procurement performance) and the independent variables (Buyer supplier collaboration, Procurement risk management, Transparency and accountability and Contract records management) for purpose of

testing moderating effect. The moderating effect of legal compliance was represented in regression equation below:

$$PP_{it} = \beta_0 + \beta_1 BSC_{it} * LC + \beta_2 PRM_{it} * LC + \beta_3 TA_{it} * LC + \beta_4 CRM_{it} * LC + \epsilon \dots 3.2.$$

The null hypothesis (H₀₅) was that legal compliance has no significant moderating influence on the relationship between contract management and procurement performance in public universities in Kenya. In order to achieve this objective, the researcher first tested whether there is a relationship between the independent variables and the dependent variable without a moderator. Afterwards, the researcher tested the relationship between independent variables and dependent variable with a moderator and the regression results (see Table 4.33).

Table 4.33: Summary of Regression Output

Model	Coefficients				
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
1 (Constant)	5.198	4.392		1.183	0.240
Buyer Supplier Collaboration	0.434	0.119	0.342	3.662	0.000
Buyer Supplier Collaboration*M	(0.387)	(0.120)	(0.305)	(3.216)	(0.002)
Procurement Risk Management	0.199	0.104	0.173	1.915	0.048
Procurement Risk Management*M	(0.191)	(0.103)	(0.167)	(1.858)	(0.006)
Transparency & Accountability	0.126	0.114	0.098	1.099	0.044
Transparency & Accountability*M	(0.079)	(0.116)	(0.062)	(0.684)	(0.046)
Contract Records Management	0.355	0.125	0.268	2.854	0.005
Contract Records Management*M	(0.289)	(0.129)	(0.218)	(2.243)	(0.027)
a. Dependent variable: Procurement Performance					
R ² before moderation	0.741		R ² after moderation		(0.759)
Adjusted R ² before moderation	0.717		Adjusted R ² after moderation		(0.730)
F ratio before moderation	17.814		F ratio after moderation		(15.191)
					(0.000)

The results in Table 4.33 indicates the moderating effect of legal compliance on the relationship between (predictor variables) and procurement performance in public

universities in Kenya. The goodness of fit of the model given by adjusted R squared (0.730) implies that 73.0% of the relationship between (Predictor) and procurement performance was moderated by the legal compliance. The overall significance of the model given by the F-statistic (15.191) indicate that the model was significant since the (p-value $0.000 < 0.05$) at 5% significance level.

The result also indicates statistically significant effect of interaction term of BSC*LC on procurement performance (p-value $0.002 < 0.05$). This implies that BSC*LC has a positive contribution to a unit change in procurement performance ($\beta=0.305$). Therefore, *ceteris paribus*, a unit increase in interaction term of legal compliance and buyer supplier collaboration leads to appreciation of procurement performance by 30.5% holding other factors constant. The study results imply that legal compliance has positive significant moderating effect on the relationship between buyer supplier collaboration and procurement performance in public universities in Kenya. Similarly, the significant effect of PRM*LC on procurement performance (p-value $0.006 < 0.05$). This infers that PRM*LC has a positive contribution to a unit change in procurement performance ($\beta=0.167$). Therefore, holding other factors constant, a unit increase in interaction term of legal compliance and procurement risk management leads to appreciation of procurement performance by 16.7%.

Further, the significant effect of TA*LC on procurement performance (p-value $0.046 < 0.05$). This denotes that TA*LC has a positive contribution to a unit change in procurement performance ($\beta=0.062$). Therefore, holding other factors constant, a unit increase in interaction term of legal compliance and transparency and accountability leads to appreciation of procurement performance by 6.2%. Lastly, the significant effect of CRM*LC on procurement performance (p-value $0.027 < 0.05$). This shows that CRM*LC has a positive contribution to a unit change in procurement performance ($\beta=0.218$). Therefore, *ceteris paribus*, a unit increase in interaction term of legal compliance and contract records management leads to appreciation of procurement performance by 21.8% holding other factors constant.

4.9 Hypothesis Testing

Gujarati (2004) confirms that hypothesis testing is a method of statistical inferences on the basis of observing testable data that is modeled in a set of random variables. It is a set of proposition put forth as an explanation for the occurrence of some specified group of phenomena either asserted merely as provisional conjecture to guide some investigation. Hypothesis is a predictive statement and is accepted as highly probably in the light of established facts after objective and thorough verification. An alternative hypothesis is proposed for the statistical relationship between the two data sets and is compared to null hypothesis that proposes no relationship between two data sets.

To draw inferences about the population of the sampled data t-test is widely adopted for hypothesis testing. This test-of significance method is to verify the truth or falsity of a null hypothesis by using sample results, showing that the means of two normally distributed populations are equal. As a result, the key idea behind tests of significance is that of a test statistic (estimator) and the sampling distribution of such a statistic under the null hypothesis. In all the tests, the decision rule is that if the p-value observed is less than the set alpha (α) that is the confidence level of 0.05, then the null hypothesis is rejected and if the p-value observed is greater than the set alpha of 0.05, we fail to reject the null hypothesis (Sekaran, 2010). The testing of the hypotheses was done at level of significance of 0.05 and comprised the following stated null hypothesis:

H₀: There is no significant influence of Buyer Supplier Collaboration on Procurement Performance in Public Universities in Kenya

The study used multiple linear regression analysis, and result on Table 4.24, show that influence of buyer-supplier collaboration on procurement performance in public universities in Kenya from 104 respondent drawn from 31 universities was statistically significant. This is because it had p-value of 0.000 which is less than the designated threshold of significance that is 0.05 and therefore, we reject the null hypothesis and conclude that there is significant influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.

H₀2: There is no significant influence of Procurement Risk Management on Procurement Performance in Public Universities in Kenya

The second null hypothesis indicated that there is no significant influence of procurement risk management on procurement performance in public universities in Kenya. The p-value of the study was 0.048 which is below the alpha level of 0.05 and therefore, we reject the null hypothesis and conclude that there is significant influence of procurement risk management on procurement performance in public universities in Kenya.

H₀3: Transparency and Accountability has no significant influence on Procurement Performance in Public Universities in Kenya

The null hypothesis that transparency and accountability has no significant influence on procurement performance in public universities in Kenya was equally rejected since the p-value was $0.044 < 0.05$. Therefore, we concluded that there is significant influence of procurement risk management on procurement performance in public universities in Kenya.

H₀4: Contract Records Management has no significant influence on Procurement Performance in Public Universities in Kenya

The p-value of null hypothesis was 0.005 below the significance level of 0.05. This implied that the null hypothesis of the study was statistically significant and therefore, we reject the null hypothesis and conclude that contract records management has significant influence on procurement performance in public universities in Kenya.

4.10 Optimal Model

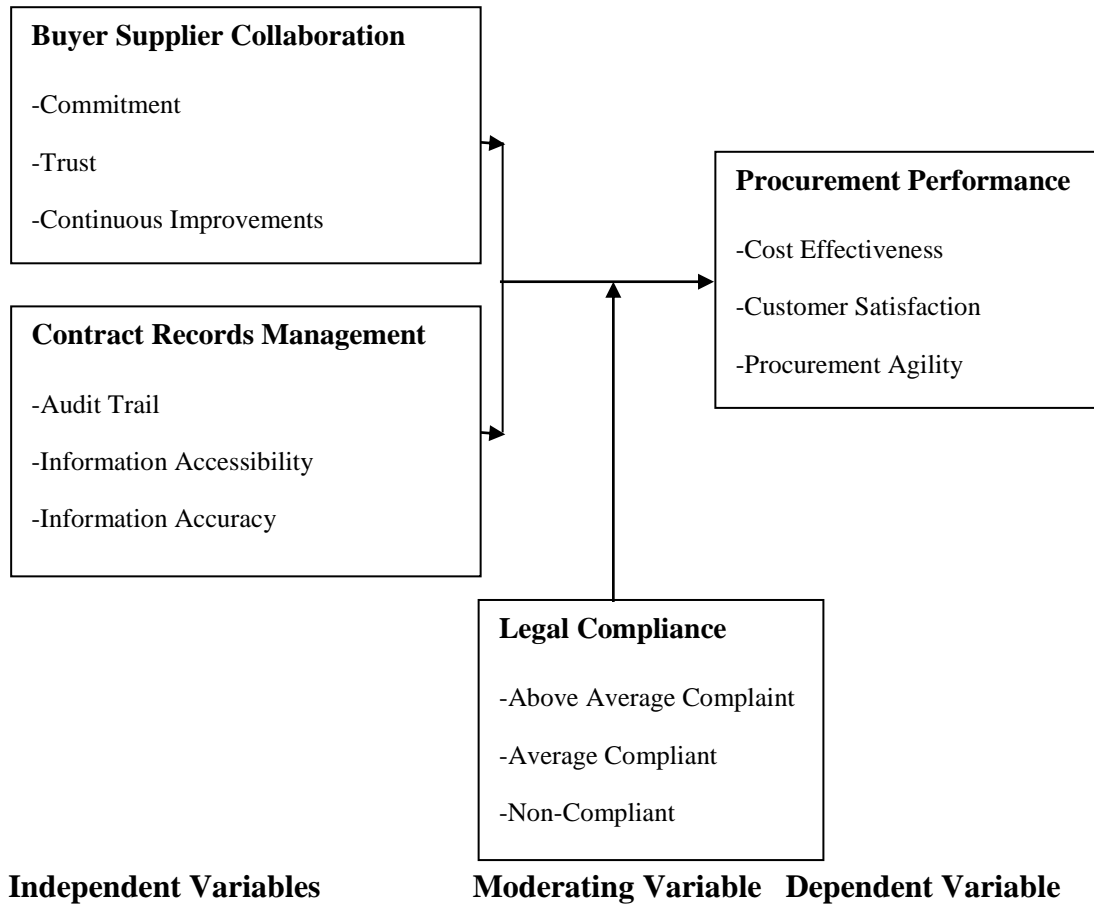


Figure 4.5: Optimal Model

Based on the tests carried out and concluded in this study, the overall regression results established that from the four independent variables (Buyer supplier collaboration, Procurement risk management, Transparency and accountability, Contract records management) and the moderating variable (Legal compliance) used in the study, two predictor variables and the moderating variable had statistical significance with dependent variable. The proposed study model was therefore, revised based on the significance of the independent variables on dependent variable (see Figure 4.5).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1.Introduction

This chapter provides a summary of the major findings of this study and also sets to draw conclusions and make recommendations for practice and suggestions for further research based on the results of this study. The summary captures the key findings which are categorized based on the study objectives buyer-supplier collaboration, procurement risk management, transparency and accountability and records management on procurement performance in public universities in Kenya. Further, conclusions are presented which are based on the study findings and finally recommendations drawn from the conclusions as per the study objectives are presented.

5.2.Summary

The overall objective of this study was to determine the influence of contract management on procurement performance in public universities in Kenya. In particular, the study sought to determine the influence of buyer-supplier collaboration, procurement risk management, transparency and accountability and contract records management on procurement performance in public universities in Kenya. The study found that contract management increases value for money in the ordering process, enhances adherence to the terms and conditions of the contract, builds a vibrant relationship with suppliers, improves timely delivery of goods and services, creates customer satisfaction, minimizes occurrence of procurement risks and improves transparency and accountability of procurement processes.

The study also established that the key considerations when constituting an award of contract to suppliers comprise: responsiveness of the tenders, track record of the suppliers or contractors, competitiveness of the bids, technical requirements as well as production capacity in terms of goods and services. Further, the study revealed that the frequency of contract variations in public universities is minimal and in

unlikely event these variations occurs the main cause is in line with unanticipated changes in the market, price fluctuations in the market, complexity of the contracts, lack of professional probity, omission of the required information in the BQs and delays of disbursement of funds by the exchequer.

As anchored in the PPADA, 2015 section 151 (1) all public universities except one case have special committee members that handles complex and specialized contracts. The role of this committee members is to: monitor and evaluate the procurement contracts, provide technical expertise, ensure compliance of the stipulated terms and conditions of the contract, review the contracts to determine the accomplished milestones and modify the contracts in case there are some changes in scope of the work design. Public universities in some cases face partial performance or even non-performance from the suppliers or contractors in line with the existing contracts. The remedial actions for breach of contract consist: cancellation of the contract, call meeting for arbitration, legal redress for the liquidated damages, warning of the suppliers, debarment on future contracts or withholding of payments. However, these litigation advancements don't occur often since the rating of the suppliers in terms of their overall performance in public universities in Kenya is considered to be good.

In regard to procurement performance the respondents had the view that public universities in Kenya have a framework of ensuring cost-effectiveness which result to seamless contractual activities with suppliers and contractors. The inherent synergy-focused drive in procurement process forms the basis of customer satisfaction. Further, the respondents opined that customer satisfaction index necessitates vibrant working relationship, public universities always respond to their internal customer's complaints as a way of sustaining and enhancing customer satisfaction. Lastly, the study showed that public universities in Kenya, constantly embrace procurement agility in contractual obligations and hence strategies on procurement agility enhances the general procurement performance.

From inferential statistics results the regression model had strong adjusted R square and this denoted that the four predictor variables (Buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management) that were studied could explain high influence of contract management on procurement performance in public universities in Kenya. This revelation, therefore, means that other factors not studied in this research study contribute to minimal percentage of procurement performance in public universities in Kenya. The results of the ANOVA for the regression model used showed an F statistic within the expected range. This meant that the explanatory variables had significant joint influence upon consolidation and this implied that the model fitted in the multiple regression model was fit.

5.2.1 To find out the Influence of Buyer Supplier Collaboration on Procurement Performance in Public Universities in Kenya

From the findings, buyer-supplier collaboration influences procurement performance in public universities in Kenya. For example, the respondents had the opinion that full commitment on transactional activities leads to buyer supplier collaboration, public universities have inculcated a culture of trust with suppliers on contractual activities in procurement processes, public universities consistently leverage supplier's capability by analyzing their performance and the universities always provide feedback to their suppliers in terms of their performance. From regression results the study found that a unit increase in Buyer supplier collaboration would lead to increase in procurement performance by a positive factor. The study, further, indicated that influence of buyer-supplier collaboration on procurement performance in public universities in Kenya was significant because it had a p-value within the expected range and therefore, we concluded that there is significant influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.

5.2.2 To establish the Influence of Procurement Risk Management on Procurement Performance in Public Universities in Kenya

From the findings, public universities in Kenya have a vibrant supplier data base that act as the reference point in acquisition of goods, works and services, public universities are in constant contact with suppliers as a contingency plan tactic of understanding the changes in the market. Also, the public universities have in built quality control systems to verify all consignments the suppliers, emphasize segregation of responsibilities to all the staff who participate in procurement processes and only specified employees are mandated to generate requisitions to initiate the procurement process. Further, the public universities encourage multiple sourcing as a means of diversifying risks and outsource non-core activities as a strategy for risk sharing. From the regression results the study found that a unit increase in procurement risk management would lead to increase in procurement performance by a positive factor. The study further, found that influence of procurement risk management on procurement performance in public universities in Kenya was significant because it had a p-value which was less than the set threshold and therefore, resolved that there is significant influence of buyer-supplier collaboration on procurement performance in public universities in Kenya.

5.2.3 To determine the Influence of Transparency and Accountability on Procurement Performance in Public Universities in Kenya

The study found that public universities award the contract to the lowest evaluated bidders except when circumstances of the contract warrant use of other provisions supported by PPADA, 2015. Also, the study revealed that public universities normally write bid rejection letters to all suppliers that are not successful within a reasonable time frame and always conduct due diligence after tender evaluations but prior to the award of contracts. Similarly, public universities validate or dismiss the suppliers in pursuant to the due diligence report and have procurement probity guidelines that strictly govern all the contractual activities. Further, public universities usually subscribe to the rules and regulations anchored in the procurement probity guidelines that promote transparency and accountability in the

procurement process. From regression results the study found that unit increase in transparency and accountability would lead to increase in procurement performance by a positive factor. The study also established that influence of transparency and accountability on procurement performance in public universities in Kenya was significant because it had a p-value which was commensurate with the standard range. Therefore, the study concluded that there is significant influence of transparency and accountability on procurement performance in public universities in Kenya.

5.2.4 To establish the Influence of Contract Records Management on Procurement Performance in Public Universities in Kenya

The study found that public universities always file and secure all the records used in procurement process to ensure smooth audit trail and the professional probity makes the universities to be exonerated of any wrongdoing every time an audit trail is conducted. Equally, the universities normally provide vast documentary evidence of all procurement transactions during internal and external of audits and also provide all the required records to the constituted oversight bodies for auditing on procurement related activities. Further, the study revealed that the universities have ease on access of information on contractual activities through well-structured records management system and provide accurate information to internal and external auditors and any other investigative authorities. The universities also authenticate the information of the procurement records before handing over to the parties concerned for audit review. From regression results the study found that a unit increase in contract records management would lead to increase in procurement performance by a positive factor. Further, the study found that the influence of contract records management on procurement performance in public universities in Kenya was significant because it had a p-value which is less than the standard indicator and therefore the null hypothesis was rejected. The study concluded that there is significant influence of contract records management on procurement performance in public universities in Kenya.

5.2.5 To examine the Moderating Influence of Legal Compliance on the relationship between Contract Management and Procurement Performance in Public Universities in Kenya

The study established that legal compliance influences the relationship between contract management and procurement performance in public universities in Kenya. For instance, the respondents had the view that public universities continuously comply with PPADA 2015 and the compliance score on contractual obligations is in tandem with the public procurement regulatory authority. Further, the respondents had a strong conviction that compliance score of PPADA, 2015 depends primarily on the inherent culture of the universities on procurement and in the realm of procurement process the universities adhere to professional fidelity on contractual responsibilities as a way of complying with the PPADA, 2015. Also the respondent had a believe that legal compliance is based on procurement standards set by the public procurement regulatory bodies and the conduct of executives in procurement process forms the basis of legal compliance. Further, the study denoted that certain legal compliance framework assists all the executes who are involved on procurement process to confidently manage their obligations effectively.

The moderating role of legal compliance had slight influence on the relationship between contract management and procurement performance in public universities in Kenya. This implied that there is no significant difference on the coefficients of parameters after being moderated by the legal compliance. Therefore, the study concluded that legal compliance has moderating influence on the relationship between contract management on procurement performance in public universities in Kenya.

5.3. Conclusions

The general objective of the study was to assess the influence of contract management on procurement performance in public universities in Kenya. The specific objectives included the influence of buyer supplier collaboration, procurement risk management, transparency and accountability contract records management and moderating influence of legal compliance on the relationship

between contract management and procurement performance in public universities in Kenya.

5.3.1 Buyer Supplier Collaboration

The general findings from the regression analysis is that the buyer supplier collaboration positively influences procurement performance, the relationship is strong at 95% confidence levels that implies that the stronger the relationship between buyer supplier collaboration, the higher the procurement performance. Thus, the general conclusion of the analysis is that stronger buyer supplier collaboration, positively influence the procurement performance. Therefore, public universities in Kenya should aim to establish a good working collaboration with their suppliers or contractors for better contract and procurement processes since close mutual relationship adds significant value to each of the transacting organizations.

5.3.2 Procurement Risk Management

Procurement risk management had a moderate influence on procurement performance in public universities in Kenya at 95% confidence levels. Thus, the general conclusion of the analysis is that procurement risk management moderately influences procurement performance. Public universities procurement practices have established inbuilt controls designed to deal with risks for instance open tendering, due diligence practices, segregation of responsibilities etc. Equally, it is important to identify risk factors associated with each procurement practices, analyze the probability of the risk occurring and consider the impending impacts. The risk assessment is therefore a requirement for determining how the risks should be managed and mitigated.

5.3.3 Transparency and Accountability

Transparency and accountability positively influences procurement performance at 95% confidence levels though the relationship according to the study is weak. Thus, the general conclusion of the analysis is that transparency and accountability slightly influences procurement performance. Transparency and accountability constitutes a

central pillar of any procurement system. Without transparent and accountable systems public universities cannot serve the stakeholders diligently and therefore, the vast resources channeled through public procurement systems run the danger of increased corruption and misuse of funds. Even in a system with low levels of corruption an oversight can help to identify inefficiencies, thereby increasing procurement efficiency and effectiveness and ultimately improvement of the general procurement performance.

5.3.4 Contract Records Management

Contract records management had a moderate influence on procurement performance in public universities in Kenya at 95% confidence levels. Thus, the general conclusion of the analysis is that contract records management moderately influences procurement performance. Contract records management present an essential function to public universities. The records should provide authentic information to compliment the resolutions taken. Similarly, the deliberations carried out and the outcome of such dealings during procurement processes should be supported by the proper records management. Records forms the main source of information and are the most dependable and lawfully verifiable source of data that can serve as evidence of actions, decisions and transactional obligations of public universities. The service provided by contract records management is of vital significance to both employees and public universities success. Contract records management platform therefore, acts as a control structure that reinforces internal and external auditing processes and provide a trail for investigators to track the sources of frauds. Nevertheless, for records to be meaningful in this capacity, its accessibility is mandatory.

5.3.5 Legal Compliance

The moderating role of legal compliance had a slight influence on the relationship between contract management and procurement performance in public universities in Kenya. In reference to the study findings, it can be concluded that, within the realm of public entities strong legal governance helps procurement professionals to comply with the stipulated guidelines an attribute that paves way to consistent procurement performance. The legal compliance on procurement performance is underlined under

the threshold of full compliance, partial compliance and non-compliance of PPADA, 2015. However, from the findings of the study, it can be concluded that full compliance or non-compliance of legal requirements on procurement performance does not apply in practical sense. More particularly, legal discourse in procurement processes is a herculean task in public universities and it is simply a matter of what extent compliance score is achieved hence implying that partial compliance is the resultant phenomenon.

5.3.5 Procurement Performance

From the basis of the explanatory variables of the study, contract management practices had a moderate influence on procurement performance in public universities in Kenya at 95% confidence levels. Thus, the general conclusion of the analysis is that contract management practices moderately influences procurement performance. In regard to the findings of the study it can be concluded that cost effectiveness, synergy oriented mechanism, consistent customer satisfaction index, internal customer complaints review and procurement agility are yardstick of evaluating procurement performance in public universities in Kenya.

5.4. Recommendations

This study was premised on assessing the specific objectives that included the influence of buyer supplier collaboration, procurement risk management, transparency and accountability, contract records management and moderating influence of legal compliance on the relationship between contract management and procurement performance in public universities in Kenya.

Buyer supplier collaboration had a strong influence on procurement performance in public universities in Kenya. Therefore, the study recommends that public universities should maintain the existing synergy based initiatives with suppliers with focus on long-term collaborations through framework agreement and working closely with them over time to achieve high levels of quality and productivity. This should involve communicating intentions and expectations clearly, defining

measures of success, obtaining regular feedback and implementing corrective action plans to improve performance.

Procurement risk management had positive moderate influence on procurement performance in public universities in Kenya. Therefore, the study recommends that public universities should sustain the existing management strategies to avert any imminent crisis in procurement process. In the same breadth, universities should create more focus on identify risk factors associated with each procurement, analyze the probability of the risk occurring and consider the impending impacts. Further, universities should develop risk management plans based on the decision to avoid, assume, or transfer the established risks.

Transparency and accountability slightly influences procurement performance in public universities in Kenya. It constitutes a central pillar of any public entity procurement system. The study recommends that public universities managers should instill professional probity policies that ought to be the reference point in all transactional activities in the holistic supply chain management. The guidelines should reflect on the fundamental ethical principles in procurement that addresses issues of impartiality, confidentiality, full disclosure, due diligence, conflict of interest, business gifts and hospitality as well as fidelity to professional responsibility. A greater disclosure, accuracy and clarity into communications with stakeholders on transactional activities will invariably build public trust and confidence in all public universities in Kenya.

Contract records management had a moderate influence on procurement performance in public universities in Kenya. Automation of contract records management should be a priority of every public university. As a dependable tool of evidence automated procurement records are geared to ensure that the universities have visible audit trail in all transactional activities. Therefore, members of the public and all the stakeholders should rely heavily on procurement records available to question, criticize, and hold staff of the universities accountable. Authentic procurement records present an ideal connection between an approval assigned to a particular person and the date of the activity hence public universities managers should

maintain complete procurement file. Further, public universities management staff should develop and make use of quotation and tender registers and more importantly submit statutory reports to PPRA as prescribed.

Legal compliance had a modest influence on the relationship between contract management and procurement performance in public universities in Kenya. The study therefore, recommends that public universities should ensure high degree of adherence of the procurement law as anchored in PPADA, 2015. The adherence of the procurement law can be effected well if the universities management remain steadfast on establishing inherent culture that govern all the employees. This should include regular sensitizations of the procurement guidelines that ought to be practiced as well as advocacy for the rule of law. The public universities have also an obligation of undertaking regular stock of legal compliance score in order to work on continuous improvement discourse.

Procurement performance in public universities in Kenya is pegged on concerted efforts inculcated by different stakeholders in the entire procurement process. Since the clarion call in public procurement is advocacy on value for money the study recommends adoption of the best practices of averting unnecessary costs. These practices comprise procurement planning, cost benefit analysis contract negotiation, consortium buying, value analysis, value engineering, total cost of ownership review and standardization.

5.5. Areas for Further Research

The study's general objective was to assess the influence of contract management on procurement performance in public universities in Kenya. The respondents comprised the implementers of contract management that included procurement officers, finance officers, legal officers and registrars-administration and planning. It could be imperative for a similar study to be undertaken but respondents to be sampled from signatories of procurement contracts in public universities who include: Vice chancellors (accounting officers), chief procurement officers, chief legal officers and deputy vice chancellor finance planning and development. The

underpinning proposition is to provide an unequivocal ground for triangulation in regard to the researcher's topical issue.

The specific objectives of this study focused on the following building blocks of contract management: influence of buyer supplier collaboration, procurement risk management, transparency and accountability and contract records management on procurement performance. The results of the explanatory variables accounts to 74.1% of variations on procurement performance at 5% significance level. This revelation means that other factors not studied in this research contribute 25.9% of procurement performance in public universities in Kenya. Therefore, there is need for further studies on other facets of contract management on procurement performance in institutions of higher learning in Kenya. Further studies could focus on other sectors of the economy in line with contract management and procurement performance. The prime topical issues could comprise: influence of contract management on procurement performance in county governments in Kenya and effect of contract management on procurement performance in state corporations in Kenya.

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APPENDICES

Appendix I: Letter of Authorization

The Vice Chancellor

Name of the University.....

P.O. Box

Dear Sir/Madam,

RE: ACADEMIC RESEARCH DATA ON “INFLUENCE OF CONTRACT MANAGEMENT ON PROCUREMENT PERFORMANCE IN PUBLIC UNIVERSITIES IN KENYA”

I am a student pursuing a Doctorate Degree in Supply Chain Management at Jomo Kenyatta University of Agriculture and Technology. I am undertaking a research thesis as partial fulfillment for the award of this doctoral degree. The purpose of this letter therefore is to request for permission to collect relevant data from the following staff members: Procurement officers, Finance officers, Legal officers and Registrars-administration and planning. The information collected will be treated with utmost confidentiality and will be exclusively used for purposes of this academic research study.

Attached find the request letter for data collection from department of Procurement and Logistics-JKUAT, Research Authorization letter and Research License from National Commission for Science, Technology and Innovation.

Thank you for your time and cooperation.

Yours faithfully,

Mathias Nzomo Muinde

Appendix II: Letter of Introduction

Date.....

To.....

Dear Sir/Madam,

RE: REQUEST FOR PARTICIPATION IN ACADEMIC RESEARCH

I am a Ph.D. student in Supply Chain Management at Jomo Kenyatta University of Agriculture and Technology. Currently, I am carrying out a research study on the *“Influence of contract management on procurement performance in public universities in Kenya”*. I am in the process of gathering relevant data for this study. You have been identified as one of the collaborators and respondents in this study. I request for your assistance towards making this study a success. I therefore request you to take some time to respond to the attached questionnaire. I wish to assure you that your responses will be treated with confidentiality and will be used solely for the purpose of this study.

I will appreciate so much if you fill the questionnaire within the next 10 days since this will enable me to finalize the study at the stipulated time.

Yours faithfully.

Mathias Nzomo Muinde

Reg No: HD411-1354/2012, Phone No: 0724309134

Appendix III: Questionnaire

This questionnaire seeks to collect data from public universities with the explicit goal of examining “**Influence of Contract Management on Procurement Performance in Public Universities in Kenya**”. To achieve this objective, relevant questions have been provided to gather data for analysis. Kindly spare some time to provide the requested information as accurately as possible. Data obtained will be treated with utmost confidentiality and the identity of the respondents will be kept anonymous. Your cooperation in data collection exercise is highly appreciated.

SECTION A: DEMOGRAPHICS AND GENERAL INFORMATION

Respondents Details:

1. Please state your designation.....
2. Kindly indicate your highest academic qualification. Tick (√) as appropriate.
 Certificate Diploma Bachelor’s Degree Master’s Degree Doctorate Degree Any other. Please indicate.....
3. Indicate your membership category in your professional body.
 KISM CIPS ICPAK LSK IHRM NONE Any other. Kindly specify.....
4. How often do you participate in sensitization forums of Public Procurement and Asset Disposal Act, 2015?.....
5. How would you regard your knowledge on contract management in Kenyan context?
 Excellent Very good Good Adequate Inadequate
6. How many years have you been involved in contractual activities in procurement process?.....

SECTION B: CONTRACT MANAGEMENT

7. How does contract management influence procurement performance in your institution?.....
.....
.....
.....

8. What do you consider when constituting an award of contract to suppliers in your institution?.....
.....
.....
.....

9. How often do you encounter contract variations during procurement proceedings? Please explain.....
.....
.....
.....

10. What are the causes of contract variations in a procurement process in your institution?.....
.....
.....
.....

11. Does your institution appoint contract implementation team especially when handling complex and specialized procurement contracts? Kindly explain.....
.....
.....
.....

12. What is the role of contract implementation team especially when handling complex and specialized procurement contracts?.....

.....

13. What are the remedial actions you apply against the suppliers who fails to comply with terms and conditions of the contract?.....

.....

14. Explain the overall performance of the suppliers in terms of contract administration in your institution?.....

.....

SECTION C: BUYER-SUPPLIER COLLABORATION

15. This section seeks your response to various aspects of Buyer-Supplier Collaboration in relation to Procurement Performance. Kindly indicate the extent to which each statement matches the application of buyer-supplier collaboration in your institution. Please tick as appropriate in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Buyer Supplier Collaboration	SA	A	N	D	SD
a)We invariably advocate for strong commitment with our suppliers on contractual obligations					

b)We believe that a full commitment on transactional activities leads to buyer supplier collaboration					
c) Our concerted efforts on maintaining credibility with our suppliers paves way to strong buyer supplier collaboration initiative					
d)We have inculcated a culture of trust with our suppliers on contractual activities in procurement processes					
e)We consistently leverage our suppliers capability by analyzing their performance					
f)We share information with our suppliers in line with the best practices that are subject for implementation on contractual activities					
g)We always provide feedback to our suppliers in terms of their performance					

SECTION D: PROCUREMENT RISK MANAGEMENT

16. The following statements relate to Procurement Risk Management characteristics. Kindly indicate the extent to which each of the statement connects to procurement risk management in your institution. Please record your answers by ticking in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Procurement Risk Management	SA	A	N	D	SD
a)We have a vibrant supplier data base that act as the reference point in acquisition of goods, services and					

works					
b)We are in constant contact with our suppliers as a contingency plan tactic of understanding the changes in the market					
c)We have inbuilt quality control systems to verify all the consignments from our suppliers					
d)We emphasize segregation of responsibilities to all the staff who participate in procurement processes					
e)Only specified employees are mandated to generate requisitions to initiate the procurement process					
f)We encourage multiple sourcing as a means of diversifying risks					
g)We outsource non-core activities as a strategy for risk sharing					

SECTION E: TRANSPARENCY AND ACCOUNTABILITY

17. This section contains a number of statements regarding transparency and accountability. Please indicate how your organization rates each statement. Kindly record your answers by ticking in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Transparency and Accountability	SA	A	N	D	SD
a) We award the contract to the lowest evaluated responsive bidders					
b)We always write bid rejection letters to all suppliers that					

are not successful within a reasonable time frame					
c)We always conduct due diligence, after tender evaluations but prior to the award of contracts					
d)We validate or dismiss the suppliers in pursuant to the due diligence report					
e)We have procurement probity guidelines that strictly govern all the contractual activities					
f)We usually subscribe to the rules and regulations anchored in our procurement probity guidelines					
g)The premise of our procurement probity guidelines is to promote transparency and accountability in the procurement process					

SECTION F: CONTRACT RECORDS MANAGEMENT

18. Please indicate the extent to which contract records management influence procurement performance in your institution. Kindly record your answers by ticking in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Contract Records Management	SA	A	N	D	SD
a) We file and secure all the records used in contract process to ensure smooth audit trail					
b)Our professional probity makes us to be exonerated of any wrongdoing every time an audit trail is conducted					
c)We provide vast documentary evidence of all procurement transactions during internal and external					

audits					
d)We constantly provide all the required records to the constituted oversight bodies for auditing on procurement related activities					
e)Ease on information access on contractual activities in the university is enhanced by our well-structured records management system					
f)We normally provide accurate information to internal and external auditors and any other investigative authorities					
g)We normally authenticate the information replicated in the university procurement records before handing over to the parties concerned					

SECTION G: LEGAL COMPLIANCE

19. Please indicate the extent to which legal compliance influence procurement performance in your institution. Kindly record your answers by ticking in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Legal Compliance	SA	A	N	D	SD
a)We continuously comply with PPADA, 2015					
b)Our compliance score in line with PPADA, 2015 on contractual obligations is in tandem with the public procurement regulatory authority					
c)We have a conviction that compliance score of PPADA, 2015 depends primarily on the inherent culture of the university on procurement activities					

d)In the realm of procurement process, we adhere to professional fidelity on contractual responsibilities as a way of complying with the PPADA, 2015					
e)We believe that legal compliance is based on procurement standards set by the public procurement regulatory bodies					
f)We are confident that the conduct of executives in procurement process forms the basis of legal compliance					
g)We are certain that legal compliance framework assists all the executes who are involved on procurement process to confidently manage their obligations effectively					

SECTION H: PROCUREMENT PERFORMANCE

20. This section contains a number of statements regarding procurement performance. Please indicate how your organization rates each statement. Kindly record your answers by ticking in the spaces provided, where: 5=Strongly Agree (SA), 4= Agree (A), 3=Neutral (N), 2=Disagree (D), 1=Strongly Disagree (SD).

Procurement Performance	SA	A	N	D	SD
a)We often register cost-effectiveness in all contractual activities with our suppliers/contractors					
b)We have a framework of ensuring cost-effectiveness in procurement activities					
c)Our inherent synergy-focused drive in procurement process forms the basis of customer satisfaction					
d)Our customer satisfaction index necessitates vibrant working relationship					

e)We always respond to our internal customers complaints as a way of sustaining and enhancing customer satisfaction					
f)We constantly embrace procurement agility in contractual obligations					
g)Our strategies on procurement agility enhances our procurement performance					

THANK FOR YOUR COOPERATION

Appendix IV: Interview Guide

Introduction:

I am a Ph.D student in Supply Chain Management at Jomo Kenyatta University of Agriculture and Technology. I am carrying out a research study on the “*Influence of contract management on procurement performance in public universities in Kenya*”.

Kindly allow me to ask you few questions pertaining my area of study.

i) Name..... (Optional).

ii) Designation.....

iii) Department.....

iv) Name of Public University.....

a) **Buyer- Supplier Collaboration**

i) Does your institution embrace buyer-supplier collaboration on contractual related activities? If yes or no, please explain the extent to which this supplies phenomenon is handled in your institution.

ii) What is your view on the statement that contract management influences procurement performance in public universities in Kenya?

b) **Procurement Risk Management**

i) What are the common procurement risks that your institution faces during contract management?

ii) What are the mitigation measures that your institution has put in place to curb the escalation of risks on contractual activities?

c) Transparency and Accountability

- i) How do you ensure transparency and accountability in your institution prior and during contract implementation?
- ii) Are there staffs in your institution who have been seized for disciplinary matters on grounds of flouting contract and procurement management guidelines?

d) Contract Records Management

- i) How do you manage procurement records on contractual activities in your institution?
- ii) Do you provide fully procurement records on contract and procurement activities to internal and external auditors for audit review?

e) Legal Compliance

- i) How often does the internal and external auditors declare unqualified opinion on contract and procurement activities during the audit reviews?
- ii) What are the corrective actions does your institution embrace in order to ensure marginal cases of qualified opinion on matters of contract management on procurement performance?

f) Procurement Performance

- i) What strategies do you apply in your institution in order to ensure sustainable value for money (VFM) on contract and procurement related activities?
- ii) What is the blueprint of ensuring internal and external customer satisfaction in your institution?

THANK FOR YOUR COOPERATION

Appendix V: Secondary Data Collection Form

Part 1: Buyer Supplier Collaboration

Fiscal years	Supplier Visits (%)	Debt Settlement (%)
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		
(d) 2014/2015		
(e) 2013/2014		

Part 2: Procurement Risk Management

Fiscal years	Contract Variations (%)	Stalled Projects (%)
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		
(d) 2014/2015		
(e) 2013/2014		

Part 3: Transparency and Accountability

Fiscal years	Audit Queries (%)	Corrective Measures
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		
(d) 2014/2015		
(e) 2013/2014		

Part 4: Contract Records Management

Fiscal years	Information Accessibility (%)	Information Accuracy (%)
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		

(d) 2014/2015		
(e) 2013/2014		

Part 5: Legal Compliance

Fiscal years	Unqualified Opinion (%)	Qualified Opinion (%)
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		
(d) 2014/2015		
(e) 2013/2014		
Total		

Part 6: Procurement Performance

Fiscal years	Value for Money (%)	Cost Overruns (%)
(a) 2017/2018		
(b) 2016/2017		
(c) 2015/2016		
(d) 2014/2015		
(e) 2013/2014		
Total		

Appendix VI: Analysis of Data Tables

Overall Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.764 ^a	0.741	0.717	0.85927

a. Predictors: (Constant), Buyer Supplier Collaboration, Procurement Risk Management, Transparency and Accountability and Contract Records Management

Analysis of Variance Results

ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	582.547	4	145.637	17.814	0.000 ^b
	Residual	203.616	99	8.175		
	Total	786.163	103			

a. Dependent Variable: Procurement Performance

b. Predictors: (Constant), Buyer Supplier Collaboration, Procurement Risk Management, Transparency and Accountability and Contract Records Management

Regression Analysis Results

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.198	4.392		1.183	0.240
	Buyer Supplier Collaboration	0.434	0.119	0.342	3.662	0.000
	Procurement Risk Management	0.199	0.104	0.173	1.915	0.048
	Transparency and Accountability	0.126	0.114	0.098	1.099	0.044
	Contract Records Management	0.355	0.125	0.268	2.854	0.005

a. Dependent Variable: Procurement Performance

Appendix VII: List of Public Universities in Kenya

S/N	PUBLIC CHARTERED UNIVERSITIES
1	Chuka University
2	Dedan Kimathi University of Technology
3	Egerton University
4	Garissa University
5	Jaramogi Oginga Odinga University of Science and Technology
6	Jomo Kenyatta University of Agriculture and Technology
7	Karatina University
8	Kenyatta University
9	Kibabii University
10	Kirinyaga University
11	Kisii University
12	Laikipia University
13	Maasai Mara University
14	Machakos University
15	Maseno University

16	Masinde Muliro University of Science and Technology
17	Meru University of Science and Technology
18	Moi University
19	Multimedia University of Kenya
20	Murang'a University of Technology
21	Pwani University
22	Rongo University
23	South Eastern University of Kenya
24	Taita Taveta University
25	The Co-Operative University of Kenya
26	Technical University of Kenya
27	Technical University of Mombasa
28	University of Eldoret
29	University of Embu
30	University of Kabianga
31	University of Nairobi
PUBLIC CONSTITUENT UNIVERSITY COLLEGES	

1	Alupe University College
2	Bomet University College
3	Kaimosi Friends University College
4	Tom Mboya University College
5	Turkana University College

Source: CUE, 2021