

**EFFECT OF CONTRACT MANAGEMENT PHASES ON SUPPLY CHAIN  
PERFORMANCE AMONG MANUFACTURING FIRMS  
IN NAIROBI COUNTY, KENYA**

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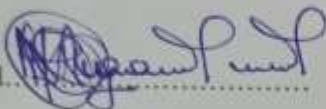
**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF  
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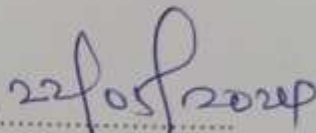
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## DECLARATION AND APPROVAL

### Declaration by the Student

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

Signed.....

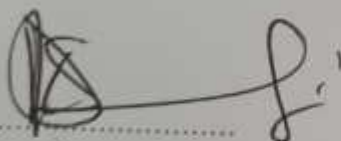
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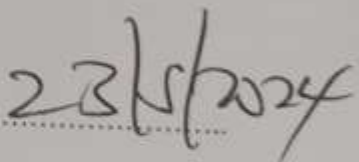
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### Approval by the Supervisor

I confirm that the work reported in this thesis was carried out by the candidate under my supervision.

Signed.....

Date.....

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## DEDICATION

This project is dedicated to my wife Susan Kabura and my children Stephen, Samuel, Julius Joyce and Joy for every effort.



## **ACKNOWLEDGEMENTS**

Thanks to almighty God who have seen me through the course of my studies. I acknowledge support from my supervisor Dr. David Kiarie Mburu diligently guiding me and going beyond the call of duty in the wake of assisting me develop this proposal. Special thanks to my family and friends and all who have supported me while developing this proposal. God bless you all



## ABSTRACT

Contract management entails process which ensures parties to the contract undertake the contracts as per the objectives and obligations in the contract. Contract management also involves execution of roles and responsibilities through creation of conducive working relationship to all parties in the agreement. The objective of the study was to establish effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. The population of the study was manufacturing companies which are based in Nairobi, Kenya. Nairobi has 640 manufacturing firms. The sample size of this study consisted of 246 supply chain managers in manufacturing firms in the Nairobi, obtained through stratified sampling and randomly selected. Self-administered questionnaire were used to collect data from the respondents. The quantitative data was coded and grouped into to various categories, percentages, frequencies, means were derived and presentation done through tables for compiling the study. The study found that pre-contract phase, solicitation, contract execution phase, post award phase influenced supply chain performance as per correlation analysis. The findings indicted buyer specifications are emphasized at pre-contract stage, the contract is signed at execution stage and deliverable during post ward phase and all the stages are crucial for supply chain performance at manufacturing firms. The study concludes that manufacturing firms depend highly on the clear contract signing and fulfillment of the contractual obligations by all parties across the phases. The study also concludes that the success of the firm will depend on efficiency in supply chain therefore; the management should ensure that there are no lapses in the procurement process. The study recommends that there is need for manufacturing firms in Kenya to invest in constant training of their employees on effective contract management across all the phases to enhance their performance. The study also recommends that manufacturing firms in Kenya should put in place appropriate measures that ensure that potential risks regarding contract management phases, detected in advance, and mitigated to enhance operational performance.

## TABLE OF CONTENTS

<b>DECLARATION AND APPROVAL .....</b>	<b>ERROR! BOOKMARK NOT DEFINED.</b>
<b>DEDICATION .....</b>	<b>III</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>IV</b>
<b>ABSTRACT .....</b>	<b>V</b>
<b>TABLE OF CONTENTS .....</b>	<b>VI</b>
<b>LIST OF TABLES.....</b>	<b>IX</b>
<b>LIST OF FIGURES.....</b>	<b>X</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS.....</b>	<b>XI</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.1.1 Global Perspective on Contract Management .....	3
1.1.2 Regional Perspective on Contract Management.....	4
1.1.3 Local Perspective on Contract Management.....	6
1.1.4 Manufacturing Firms in Kenya .....	7
1.2 Statement of the Problem .....	9
1.3 Purpose of the study .....	10
1.4 Objectives of the Study .....	10
1.4.1 General Objective.....	10
1.4.2 Specific Objective of the study.....	10
1.5 Research Questions .....	11
1.6 Significance of the Study.....	11
1.7 Scope of the Study.....	12
1.8 Study Limitations .....	12
1.9 DE-limitations .....	13
1.10 Assumptions of the Study.....	14
1.11 Operational Definition of Key Terms.....	15
<b>CHAPTER TWO.....</b>	<b>16</b>
<b>LITERATURE REVIEW .....</b>	<b>16</b>
2.1 Introduction .....	16
2.2 Empirical Literature.....	16
2.3 Theoretical Literature .....	28

2.3.1 Transaction Cost Theory .....	28
2.3.2 Agency Theory .....	29
2.4 Conceptual Framework .....	30
2.4.1 Contract Management Phases.....	31
2.4.2 Pre-contract Phase .....	33
2.4.3 Contract Execution Phase.....	34
2.4.4 Post Award Phase .....	34
2.4.5 Supply Chain Performance.....	35
2.5 Summary of Literature Review .....	37
<b>CHAPTER THREE.....</b>	<b>38</b>
<b>RESEARCH METHODOLOGY.....</b>	<b>38</b>
3.1 Introduction .....	38
3.2 Research Design .....	38
3.3 Location of the Study .....	39
3.4 Target Population .....	39
3.5 Sampling Procedures and Techniques.....	40
3.6 Sample Population.....	41
3.7 Construction of Research Instruments.....	42
3.8 Testing of Validity and Reliability of Research Instruments .....	43
3.8.1 Reliability of the Research Instruments .....	43
3.8.2 Validity Instrument.....	43
3.9 Data Collection Methods and Procedures .....	44
3.10 Data Analysis and Procedures .....	44
3.10.1 Data Processing .....	44
3.10.2 Quantitative Analysis .....	45
3.11 Ethical Considerations.....	45
<b>CHAPTER FOUR .....</b>	<b>47</b>
<b>RESEARCH FINDINGS AND DISCUSSIONS.....</b>	<b>47</b>
4.1 Introduction .....	47
4.2 Response Rate .....	47
4.3 Pilot Study Results .....	48
4.4 Demographic Information .....	49
4.4.1 Gender Representation of Respondents.....	49

4.4.2 Age of Respondents.....	49
4.4.3 Respondents' Level of Education.....	50
4.4.4 Respondents' Years of Experience.....	51
4.5 Descriptive Results of Variables .....	52
4.5.1 Pre-Contract Phase Descriptive Results .....	52
4.5.2 Contract Execution Descriptive Results .....	54
4.5.3 Post Award Descriptive Results .....	56
4.5.4 Supply Chain Performance Descriptive Results.....	59
4.6 Correlation and Regression Analysis .....	63
4.6.1 Correlation Results .....	63
4.6.2 Multiple Regression Analysis.....	66
<b>CHAPTER FIVE .....</b>	<b>70</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>70</b>
5.1 Introduction .....	70
5.2 Summary of the Result Findings .....	70
5.2.1 Effect of Pre-contract phase on supply chain performance among manufacturing firms in Nairobi County.....	71
5.2.2 Effect of contract execution phase on supply chain performance among manufacturing firms in Nairobi County. ....	71
5.2.3 Effect of post award phase on supply chain performance among manufacturing firms in Nairobi County.....	72
5.3 Conclusions .....	72
5.4 Recommendations of the Study.....	73
5.5 Recommendations for further Studies .....	74
<b>REFERENCES .....</b>	<b>75</b>
<b>APPENDICES.....</b>	<b>78</b>
Appendix I: Introduction Letter.....	78
Appendix II: Questionnaire .....	79
Appendix III: ERC Letter .....	83
Appendix IV: Introduction Letter.....	84
Appendix V: NACOSTI Authorization.....	85
Appendix VI: Similarity Index .....	86

## LIST OF TABLES

Table 1: Target Population .....	40
Table 2: Sample Size .....	42
Table 3: Response Rate .....	48
Table 4: Reliability Coefficients .....	48
Table 5: Pre- contract Phase and Supply Chain Performance .....	53
Table 6: Contract Execution Phase and Supply Chain Performance .....	55
Table 7: Post Award Phase on Supply Chain Performance .....	57
Table 8: Order Fulfillment.....	59
Table 9: Correlation Results .....	64
Table 10: Model Summary (Joint Model) .....	66
Table 11: ANOVA (Joint Model).....	67
Table 12: Regression Coefficient (Joint Model) .....	68

## LIST OF FIGURES

Figure 1: Conceptual Framework .....	31
Figure 2: Respondents by Gender .....	49
Figure 3: Age of Respondents .....	50
Figure 4: Education Level for Respondents .....	51
Figure 5: Respondents Years of Experience .....	51
Figure 6: Supply Chain Cost Reduction .....	60
Figure 7: Lead Time .....	62



## LIST OF ABBREVIATIONS AND ACRONYMS

B <sub>2</sub> B	Between two Companies
B <sub>2</sub> C	Company and end Consumer
GDP	Gross Domestic Product
KMA	Kenya's manufacturers Association
TFP	Total factor productivity
QM	Quality Management
UK	United Kingdom



# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Contract management entails process which ensures parties to the contract undertake the contracts as per the objectives and obligations in the contract. Contract management also involves execution of roles and responsibilities through creation of conducive working relationship to all parties in the agreement. The management has responsibility of ensuring that the contract can forecast any future unforeseen event which might call for renegotiation of contract by adopting needs to make necessary adjustments to the contract (Cruz & Marques, 2012).

According to Cleland and Bidanda (2009), in high and competitive global projects should function through interactions with environments which could as well involve alliances, subcontractors and multinational sourcing which intricate vendor relations. The companies are in a position to have relationships with other external organizations through contracts. This implies that organizations are in a position to supply goods and services based on contract negotiations with the client. When writing a proposal in any profit-making venture one of the key considerations is the nature of the contract anticipated. According to Germaine (2017), contracts face numerous challenges in Sub Saharan Africa; contractors fail to perform as per the contract. Most of them are not fully equipped in terms of personnel, equipment and financial capacity which is mainly not disclosed while signing the contracts. Where contracts are poorly managed in all the phases of contract management or in any of the phases there is high likelihood of loses or dissatisfaction among the stakeholders in the project. A study conducted by Fapo`hunda and Stephenson (2015) in UK found that some projects are affected if there is disagreements relating to the projects stated objectives with respect cost, time and

value. In Ghana, Ofori (2015) diagnosed delays in honoring contractual obligations. They embody month-to-month rate problems to contractors, terrible contract management, material procurement issues, and horrific technical performance and fabric rate escalations. Terrible professional management, fluctuation of costs, developing price of substances and negative web page manage have moreover been diagnosed as factors contributing to undertaking not being complete on time.

There is evidence that the performance of contractual obligations in Kenya is poor. One study established that over 70percent of the projects initiated are likely to escalate with time and costs (Nyangilo, 2014). This has been justified through research in the Kenya's enterprise that have made findings to the impact that value overrun, not on time of completion duration, conflicts in the complex vendor relationship, poor agreement control practices, extortion and corruption, awful risk mitigation and awful best work are the norm instead of exception in the task of contracted creation tasks (Kibuchi & Muchungu, 2015).

The contractor is in a position to estimate the risk of will undertake depending on the nature of the contract. Because onerous risks exist, some contracts provide relief for the contractor (Kerzner, 2009). According to the study, the availability of qualified staff contractors, as well as other factors, should be carefully considered during contract negotiations. The benefits of contractual agreements must be recognized in order to make the best decision on a specific project.

The Project Management Institute claims (2013), there are three types of contract which include fixed or cost reimbursable, time and material contracts. Majority of contractors prefer a fixed contract type though some project managers prefer their teams to come up with ground rules in the contract. It is common to find parties combining two types of contract in a single contract. After the parties sign the contract it becomes legally binding

in terms of the obligations stipulated in the contract. The contractor has the responsibility of ensuring there is compliance to the purchaser set contractual terms and conditions which will ensure the final products meet the specified requirements of the project. Further according to Project Management Institute (2013) under fixed-price arrangements, the purchaser should only alter the scope of contract when there agreement of increasing contract price, so specify the product or service being procured. A contract administrator, according to Kerzner (2009), with responsibility of making reports regarding the progress of the project and has responsibility of ascertaining that all the deliverables in the project are ascertained and acceptable to buyers satisfaction.

### **1.1.1 Global Perspective on Contract Management**

Globally, the contract management practices are practices that ensure both parties to a contract fully meet their respective obligations as efficiently and effectively as possible, in order to deliver the business and operational objectives required from the contract and in particular to provide value for money therefore as a result developing and managing contracts is a skill required in order to enhance procurement performance in public institutions. Contract management is not an end in itself and it is important that all contracting decisions and actions focus on the outcomes that entities are seeking to achieve (Adrienne Watt, 2018) successful and efficient contract management practices are those that meet the needs of the company's stakeholders, achieve optimum conditions and value in regard to the allocation of scarce tax payers resources (best value for money), ensure rational and efficient of funds available, (Benon & Basheka, 2014).

In the United Kingdom, contract management deals with the formalization of a contract awarding process by creating and entering into formal contracts or service level agreements. According to Hugo, Van Rooyen and Badenhorst (1997) as cited by Nieman (2008) contract management also deals with the day-to-day administration of contracts

geared towards ensuring compliance by the appointed contractors to the terms and conditions of their contracts which will ensure that the correct goods and services are procured timeously, delivered at the correct address, from the right sources, and ensure those goods and services are of the expected quantity, quality and price.

In China, contract management deals with the performance of contractors, problem solving, risk management, provides for preventive and corrective measures as well as punitive measures including seeking recourse through the courts and obtaining reparations where such are due (Office of the Premier, 2011). Nieman (2008) contends that supplier performance management takes place to ensure early detection of potential performance failure by a supplier and that early remedial measures are initiated. Contract management governs the reciprocal relationship between the Department as the purchaser and the contractor as the supplier or vendor.

### **1.1.2 Regional Perspective on Contract Management**

In Africa, worldwide contract management faces different performance issues like: delays of contract implementation, unresponsiveness to the contract terms and conditions, deserting from employment execution duties, managing costs to ensure that the contract is delivered within the contract price. Ideally, the contract management system should be integrated with the financial management system of the government or the project (Jela, 2013). For instance, Rwanda public institutions lose a lot of millions of tax payer's money through cancelled contracts, unfinished projects, poor service or product delivery, corruption and extended contract periods each year. The government of Rwanda spends between 60%–70% of its budget on procurement alone, however due to poor contract management the government loses a lot of its funds (Auditor General, 2015).

In South Africa, the contract management can be described as the process of maintaining control over the contractual arrangements between a department (purchaser) and the appointed supplier (contractor) being the other contracting party by performing the contractual management or administration activities commencing at the conclusion of a contract (Western Cape Government, 2013). The contract management function which resides within the supply chain management function includes the following activities (National Treasury, 2010b); negotiations; □ formalizing of contracts and document management; □ monitoring of contractual performance milestones; □ risk management; □ price adjustments; □ managing variations to the contract; □ managing and monitoring payments; □ dealing with poor and/or non-performance by contractors; □ enforcement of the terms and conditions of the contract; □ applying contractual default penalties; □ managing cessions of contracts and/or payments; □ providing support during litigation; and □ contract close-out and reporting.

In Ghana, contract management has a significant role to play in ensuring that contracts for the goods and services being procured in order to guarantee the right to basic education are executed in terms of the conditions of contract. Contract management must also be aimed at achieving cost efficient and effective utilization of educational resources whilst eliminating wastage, inefficiency, maladministration and corruption (Okudo & Okuyo, 2019). As such, it is important that the Department has a fully-fledged and efficiently 16 functioning contract management component and an effective contract management function which complies with relevant laws, prescripts and good governance principles (Institute of Directors in Southern Africa (IoD), 2009). However, it would appear that there are challenges relating to contract management within the Department.

### **1.1.3 Local Perspective on Contract Management**

In Kenyan scenario, contracts serve as the legal and commercial foundation for any project or supply chain engagement. They outline the terms and conditions, deliverable, timelines, and responsibilities of all parties involved. By meticulously managing contracts the project managers and supply chain professionals enable themselves to sort out and establish clear expectations, align stakeholders, logistic supports, procurement arrangements and minimize or in most cases to get rid of any ambiguity from commercial perspective. This clarity reduces the potential for disputes and enhances overall project and supply chain performance.

According to PPOA, (2007) procurement contract is a written agreement between a procurement entity and a supplier, a contractor which is enforceable by law. Contract management pertains to preparation of procurement documentation, the processing and approval of such documentation, monitoring contract implementation approving and administering contract variations and modifications and possibly canceling or terminating contracts. Contract administration is the management of contracts made with vendors, customers, employees or partners. Contract management involves negotiating the conditions in contracts and terms and ensuring obedience with the terms and conditions, as well as documenting and harmonizing on any changes or adjustments that may come up during execution or implementation.

The foundations for effective and successful post-award contract management in the Kenyan public entities rely upon careful, comprehensive and thorough implementation of the upstream or pre-award activities. At the pre-award stages, the emphasis should be concentrated on why the contract is being developed on whether the supplier is capable to deliver in service and technical terms. However, cautious consideration must be given to how the contract will work once awarded (PPOA, 2007). PPOA (2007) points out that,

sound contract management of a project revolves around control of cost, time, quality and resources. Cost control means the execution and completion of the project within the agreed time schedule; quality control means execution of the project in conformance with technical requirement and specification; resource control refers to the management resources personnel, equipment, and supplies. Taking the case of procurement audits conducted by PPOA in 2007, it was attested that procurement contracts in 33% of the audited procurement (in 30 Public Entities) were not implemented as per the terms of the contract, including institutions of higher learning. Poor contracts management was contributed by inadequate human and financial resources, weak contract terms, poor supervision and quality control, inadequate contracts management skills and corruption (PPOA, 2007).

#### **1.1.4 Manufacturing Firms in Kenya**

After agriculture, transport and communication, manufacturing is forth biggest sector in Kenya. Despite Kenya being the most industrialized country in East Africa its manufacturing segment contributing only 10% to GDP. Manufacturing sector is identified by Kenya Vision 2030 as of the key driver for realizing a sustainable GDP growth. Nairobi, Mombasa and Kisumu being three largest urban centers in Kenya has unexploited potential and significant in the manufacturing sector which contribute to employment and GDP growth.

Kenyan economy experienced a strong period from 2003 to 2007 with 7% economic growth acceleration which was due to long period of virtual stagnation. Total factor productivity (TFP) in manufacturing improved by up to 20% within the same period of time (Orege, 2016). In 2011 manufacturing industry fell from 3.3% to 4.4% in 2010, owing primarily to a hostile business environment (KNBS, 2012).

Through 2006-2013, growth in manufacturing sector had an average of 4.1% per year which was definitely lower than the 4.6% annual growth rate in overall real GDP according to KRMG (2014) Hence leading to decreasing of manufacturing share output in recent years. A gap is revealed in the country's capacity in achieving full industrialization by 2030 as per US Department of State. If business environment reforms are implemented to account for the impact of contingencies in Kenya's manufacturing sector. (KPMG) there will be a room for the expansion of Kenya's manufacturing sector (KPMG, 2014). Manufacturing sector has ability to spearhead growth and competitiveness in a country like. Due to various contingent nature in financial conditions the sector has experienced fluctuations. General growth is drugged down by inactive growth in the manufacturing sector according to World Bank.

According to world bank report (2014), Kenya fell from 9% in 2009 to 7% in 2013 importing manufactured goods to EAC's. Kenya being the largest EAC's exporter of various goods has decreased its exports due to uncertainty in operating environment. Some like Cadbury and others have announced to relocate to other countries. Hence ending in the fiscal year ending of 58.7%. Tata Chemicals Magadi has also reduced operations by closing its main plant (Tunga, 2013). There was an annual downfall from 180 million units to 50 million units which lead to closure if the main plant. Statistics shows that 70% of the manufacturing firms have lost their market share in East Africa due to unforeseen situations. For instance, Unilever have relocated their operations to low-cost manufacturing countries like Egypt (Nyabiage & Kapchanga, 2014).

## **1.2 Statement of the Problem**

Any organization with an aim of gaining competitive advantage in addition to value of money should deploy contract management practice. Firm's procurement process is incomplete in absence of adherence to proper contract management practices. The activities of ensuring adherence to contract as per the agreement between parties to the contract is known as contract management (Cropper, 2008). Contract management involves managing alterations which can arise as the contract is being executed, errors, payment specification and policy specifications. Its phases are part in of Kenya manufacturing routines.

Over the last five years stagnation declined profits has been experienced by Kenyan manufacturing firms as a result of volatile operating environment this according to statistics made by the World Bank (Orege, 2016). It has been projected that manufacturing companies in East Africa have lost 70% of market share due to contingencies which are resulting from poor supply chain management among other factors (Vernon, 2017). Kenya's low growth and development in the manufacturing sector is weighing on its economic growth; the country is also losing its ground in East African Community market where previously it has previously dominated. This is due to inefficiencies and unpredictable operating environment according to World Bank (2014). There are limited studies that have focused on the contract management phases and supply chain performance. For instance, Kimani (2013), manufacturing companies face challenges in dealing with the globalization and supply chain while maintaining speed and flexibility, meeting the needs of customers without holding more inventories, eliminating long lead time, efforts and material from all points in the supply chain. Many companies have not succeeded in maximizing their supply chain potential and honoring their contractual obligations. Were and Ngugi (2015) investigated the influence of

technology on the performance of construction projects in Nairobi County. These studies are limited to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya. It is on this premise the study focused on the relationship between contract management phases and supply chain performance among manufacturing firms in Kenya to fill the existing knowledge gap.

### **1.3 Purpose of the study**

The purpose of this study is to assess the different contracting phase as part of the procurement process and their level of effect in allowing manufacturing firms optimize the process without losing sight of what's important for their supply chains growth and performance.

### **1.4 Objectives of the Study**

The study was guided by the following general and specific objectives;

#### **1.4.1 General Objective**

The general objective of the study was to establish relationship between contract management phases and supply chain performance among manufacturing firms in Nairobi County.

#### **1.4.2 Specific Objective of the study**

- i. To determine the relationship between pre-contract phase and supply chain performance among manufacturing firms in Nairobi County.
- ii. To establish the relationship between contract execution phase and supply chain performance among manufacturing firms in Nairobi County.

- iii. To find out the relationship between post award phase and supply chain performance among manufacturing firms in Nairobi County.

### **1.5 Research Questions**

- i. What are the effects of pre-contract phase on supply chain performance among manufacturing firms in Nairobi County?
- ii. How does contract execution phase affect supply chain performance among manufacturing firms in Nairobi County?
- iii. To what extent does post award phase affect supply chain performance among manufacturing firms in Kenya?

### **1.6 Significance of the Study**

The study will provide information to the management of manufacturing organizations that may enable them to conduct their functions and duties in a more efficient and effective manner. This in turn may lead to better performance and profitability in the industry. It may also provide insight on the various supply chain practices that can be adopted so as to achieve a competitive advantage and operational excellence.

The study will enable suppliers understand how manufacturing entities conduct their operations with regards to supply chain management, thus they may be in a better position to also plan their operations in terms of lead time, logistics, tendering and quoting. In addition, the academicians and other researchers may benefit from this research since it provides more insight on contract management and supply chain management especially in the Kenya context. This research will be used as a basis of further study in the future. This study's recommendations will generate more research in the field of supply chain management in manufacturing industry. It may also create ways

of resolving emerging problems in this field.

The study would be relevant to policy makers in the private and public sector by providing information on supply chain performance. The information may enable them to formulate better policies with regards to contract management, and supply chain management.

Supply chain professionals will be in a position to obtain informed knowledge pertaining to contract management owed to the fact the study was undertaken when supply chain management is evolving despite many challenges facing the industry. The findings would also aid in growth and development of supply chain management in Kenya and other parts of the world.

### **1.7 Scope of the Study**

The study focused on employees working among manufacturing firms in Nairobi County. The study will be confined on the effects of contract management phases on supply chain performance in manufacturing firms. The study targeted 640 manufacturing firms based in Nairobi and its environs (KAM, 2023). The unit of analysis was manufacturing firms and unit of observation were the supply chain managers in the manufacturing firms. Conceptually, the study focused on the effect of pre-contract, contract execution and post-award phases on supply chain performance among manufacturing firms in Nairobi City County, Kenya. The findings will generalize to manufacturing industry in Kenya.

### **1.8 Study Limitations**

The researcher encountered a number of challenges while undertaking the research study. However, the limitations did not have a significant interference with the outcome of the study. The first challenge was that some of the respondents did not feel comfortable to

share some classified information regarding their firms as they had fears that the information, they provided could be used against them or bear some adverse effects on their firms and therefore they did not wish to participate in the study. However, this situation was diagnosed by the researcher as the participants were well briefed on the confidentiality of the information they were to give and that it would be used for academic purposes only. Similarly, the researcher outlined the necessary steps put in place to ensure the information was kept confidential without revealing the participants identity in any way.

The third limitation was accessing the respondents targeted for the research study in their respective firms. Due to the busy schedule of the managers, the researcher encountered difficulties of accessing them since most of the time the senior managers offices were manned by office secretaries and junior officers who could not allow the researcher to access the manager's offices without official appointment. To mitigate this situation, the researcher booked for appointments at the convenience of the targeted firm managers and used an introductory letter from the University and also a research permit from National Commission for Science, Technology and Innovation to facilitate the exercise. The researcher also deployed excellent communication and interpersonal skills with the respondents and explained to them the importance of the study and promised them of high confidentiality of the information they gave.

### **1.9 DE-limitations**

In managing the challenges encountered through the research process, while undertaking the research study, the study adopted various strategies to ensure the results and objectives were achieved as expected.

On data and information confidentiality, the respondents were advised that the information were for only purposes of research and will not be used against them. Ethical consideration forms were signed to affirm confidence on respondents information sharing.

However, this situation was diagnosed by the researcher as the participants were well briefed on the confidentiality of the information they were to give and that it would be used for academic purposes only. Similarly, the researcher outlined the necessary steps put in place to ensure the information was kept confidential without revealing the participants identity in any way.

To ensure the study was able to collect the relevant data adequately from respondents out of their tight schedule, the researcher booked for appointments at the convenience of the targeted firm managers and used an introductory letter from the University and also a research permit from National Commission for Science, Technology and Innovation to facilitate the exercise. The researcher also shared questionnaires online on request by some of the respondents.

#### **1.10 Assumptions of the Study**

The study assumed data was available to achieve the objectives of the study. This help on continuity of research without lapse and it created confidence in data collection. The argument that all respondents will cooperate and give the required information as required assisted the researcher in managing all sources of data adequately with respective tools and instruments of data collection. The study also assumed that the stakeholders will adopt its recommendations since the main object of the study was relevant to the current micro and macroeconomics environments and also done within the respective timelines.

### 1.11 Operational Definition of Key Terms

**Contract Management:** process of managing contract creation, execution, and analysis to maximize operational and financial performance at an organization, all while reducing financial risk in manufacturing companies.

**Contract execution:** Is the process of all necessary parties signing a finalized agreement. Once signed, the contract is fully executed and enforceable and all parties are obligated to carry out the terms agreed to in the contract.

**Supply Chain performance:** Refers to the extended supply chain's activities in meeting end-customer requirements, including product availability of raw materials as well as finished goods.

**Contracting phase:** is the last part of the procurement process where everything agreed on during the negotiation phase is placed on paper. This involves processes that allow the procurement team to list down all agreements, put those agreements into paper or data, and store them for future use.

**Pre-contract phase:** This is the phase at which a general idea starts to germinate. Here, the intent and concept of the work and relationship form. It structures the outline of why the two parties are coming together on a project.

**Post award phase:** This phase ensures that you are managing contract amendments properly. It focuses your attention on tracking to make certain that all requirements of your agreement are met throughout the life of the written commitment.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents theoretical review, conceptual framework, and literature review of variables, empirical review, and critique of existing literature, research gaps and summary. The review of literature is with respect to contract management phases and supply chain performance.

#### **2.2 Empirical Literature**

For accelerated performance in any given firm contract management is critical. Contract management in procurement is meant to aid organizations achieve goals as per strategic plan. Through operational measurement of performance efficiency and effectiveness in an organization can be realized. It is interesting to note that performance measures are boosted by contract management through supplier relationship. A study by Coste (2008) clearly shows suppliers are loyal to organizations that manage their contracts functions in a transparent manner, meeting contractual obligations with high efficiency hence improved organization performance. Wilson and Kusomo (2004) argues that tedious documentation work which is obvious in the pre-contract stage of procurement is expensive and consumes a lot of time to the customer which in turn lengthens the whole process of tendering. These studies failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

Further arguments have indicated a rise in performance measurements becoming more technical. The technicalities in performance measurement have led into ambiguities in establishing the costs which need to be factored in the tendering process. Again it becomes technical to exempt some of the contractual items which are not dependent on

some of performance measurements. According to Kakwezi (2012), pre-contract management can be broadly described in three sections which comprise of contract administration, relationship management and service delivery. This implies that service delivery management addresses the issue of contractual deliverables in terms of performance levels and quality of a contract. Contract management in a private partnership aims at optimizing efficiency and effectiveness in contract execution phase through cost reduction and management of contractual relationship taking into account cost benefit analysis that maintain procurement relationship between parties (Silvana, 2015). These studies failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

According to Aberdeen Group (2006), argues that through contractual agreements the firm is in a position to maintain high contractual commitment in its obligations which leads to high cost reduction and also minimizes entire purchasing costs. Therefore, this increases the chances of project success. External compliance in a project can take different forms which include but not limited to lack of materials, lack of human resources and failure to meet the project timelines. With reference to Erridge, Fee and McIlroy (2014), contract management practices in procurement department should lead to effectiveness in supply chain performance. According to Kyengo (2012), Supply Chain Performance should lead to a great understanding of the system and internal controls. Core competencies can be used to have effective supply chain performance. According to Kyengo (2012) research, a core competency is any function that a company excels at. These studies failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

Literature has shown that competitiveness of any organization in future will be based on effectiveness of supplier chain performance. The organizations should strive to work on

procurement policies and procedures in procurement which should include procurement strategies and they can go further by appointing procurement committee with each committee having designated duties and responsibilities which should have high supplier selection and every tender evaluation should consider enhancing supply chain performance in the organization. (Zuckerman, 2002). Many researches on contract management have a tendency to focus mainly on small and medium sized enterprises as compared to manufacturing firms. Wilson and Kusomo (2004) did a study on pre-contract stage of procurement in state corporations. Others research by Silvana (2015) in a study on the contract management focused on private public partnership and others on quality improvement on contract management by Liker (2004). It is evident that no research has been done on the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

Lesere (2018) study focused on investigating the effect of contract management practices on supply chain performance of manufacturing firms in Nairobi County. In addressing the latter, the study established the effect of relationship management, contract administration, contract appraisal and contract appraisal and contract closure on supply chain performance as the specific objectives of the study. Descriptive research design was used for the study and the questionnaire was the main data collection instrument. The study constituted a sample of manufacturing firms in Nairobi County, the number of employees in the sample was 198. Statistical analysis was carried out using statistical packages for social science SPSS version 22. Inferential statistics was used to make predictions or inferences about the population from observations and analyses. The study findings indicate that the four variables, that is relationship management, contract administration, post contract appraisal and contract closure positively and significantly

affect supply chain performance. As such, manufacturing firms should embrace more relationship management. This study failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

Nyaga and Mwangangi, (2019) carried out a study on the influence of contract management practices on performance of public sector in Kenya. The findings of the study indicated that procurement regulators admitted that many PEs were not managing their contracts properly and among areas of concern included failure to appoint inspection and acceptance committees to inspect delivery of goods so as to ascertain quantity and quality as per contract requirements. They pointed out that in works procurement contracts where more funds were normally committed relative to goods and services, works supervisors to oversee the implementation of construction works were not appointed. Kimundu and Moronge, (2019) carried out a research on Influence of contract management on procurement performance in manufacturing firms of Kenya. The findings of the study indicated that procurement contracts performance indicators involves attainment of value for money, quality products and services, reduced lead time, procurement contracts cost reduction, timely contract closure and termination. The study also noted that for a successful contract management the contracting parties should consider; appropriate contract administration, management of service and products delivery, managing relationships with suppliers, conflict resolutions, contract monitoring and effective contract termination procedures in line with public procurement Act. This study failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

Ruchiu (2008) argues that despite the fact that contracts are made in good spirit, many contracts are not supervised. Aman, and Maelah (2012) asserts, contract management

may also suffer from inadequate skilled resources. Angeles and Nath (2007) reveal that contract managers often face the challenge due to unclear project scope and unrealistic timeline and budgets. Rendon (2010) further outlines critical success factors for both project and contract management as being qualified workforce, clear processes, relationships, resources, leadership and policies all of which have a direct impact on an organization's project management and contract management processes as well as resulting outcomes. Greve (2008) points out; organizations that achieve success in contract management ensure that they formulate a 'win win' situation for both the contracting authority and contractor. Studies relating to contract management have been done but a few deals with impact on supply chain performance. Gupta, Karayil and Rajendran (2008) reveal that poor contract management causes substantial loss of savings. This study failed to show the link between contract management phases and supply chain performance among manufacturing firms in Kenya.

Nyalita and Thogori (2023) main objective of the study was to establish the influence of contract management drivers on performance of cleaning service companies in Nairobi City County, Kenya. The study was guided by the following specific objectives; to examine the influence of contract planning and monitoring and evaluation, on performance of cleaning service companies in Nairobi City County, Kenya. The study was guided by Stewardship Theory and Resource based view theory. The study made use of descriptive research design. The unit of analysis was the 78 cleaning companies with population of 2000 employees. The study concludes that contract planning has a positive and significant effect on performance of cleaning service companies in Nairobi City County, Kenya. The study however focused on supply performance of cleaning services companies unlike the current study which is on supply performance among manufacturing firms in Kenya.

Nzomo (2022) 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, 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 public constituent university colleges. 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. 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. The study focused on the procurement performance in public universities while the current study examined the relationship between contract management phases and supply chain performance among manufacturing firms in Kenya.

Kwamesa et al (2021) study examined the contract management strategies o. project performance of KENHA. The study objectives were to determine the extent of implementation of CMS in KENHA and to establish the effect of CMS on project performance in KENHA. The study adopted a descriptive statics. The study adopted use of strategic choice and agency theory. In the research methodology, the study adopted use descriptive statics. The target population consisted of 40 staff at KENHA. The supply chain managers, procurement managers or their equivalent were the respondents in KENHA. The findings from the study revealed that CMS had been implemented in

KENHA to a large extent. The study findings revealed positive and significant relationship between CMS and project performance. The research also concludes that 83% of project performance is affected by implementation of CMS at KENHA. The study focused on the construction project while the current study focused on the contract management phases on supply chain performance among manufacturing firms in Kenya. Zou, Brax and Rajala (2019) did a study to investigate the influences of service complexity, contract structure and contracting process on the buyer-perceived supplier performance in business-to-business (B2B) services. A research model is developed based on transaction cost economics and the research on service contracting. The results indicate that three major contract dimensions and follow-up management practices positively influence buyer-perceived supplier performance. Furthermore, service complexity amplifies the effects of incentives designed in the contract and the buyer's follow-up contract management on perceived supplier performance. The study however focused on supply performance of cleaning services companies unlike the current study which is on supply performance among manufacturing firms in Kenya.

Domberger and Hall (2016) did a study on contracting for public services, a review of antipodean experience. The key findings, which are summarized in tabular form, indicate that the pace of implementation has varied widely across jurisdictions. This variability is largely a function of differences in political orientation of the governments in power, particularly in Australia. Despite these differences, the findings suggest that efficiency gains stemming from the application of ctc are substantial and widespread. Furthermore, quality of service has not, in general, been sacrificed to cost reductions. There is every indication that the current rate of progress of policy implementation is set to continue. In Australia, it may even accelerate with the onset of a national competition policy which will place competitive pressures on providers of public services. The study however was

done in Australia unlike the current study which is done in Kenya focusing supply chain performance among manufacturing firms.

Mwangi (2020) study sought fill the gap by empirically investigating the influence of contract management on performance of Kiambu County. This study was be guided by the following study objectives; to determine the influence of contract cost management on performance of Kiambu County, to establish effect of the contract relationship management on performance of Kiambu County. The study adopt descriptive survey design and draw on a quantitative inquiry. This study picked a sample of 96 respondents. The study findings indicate that contract relationship management and contract cost management positively and significantly affect performance. As such, Kiambu County should embrace more contract relationship management.

Njoki, Noor and Osor(2021) study sought to establish the influence of contract management on the performance of state corporations in Kenya. A descriptive survey research design was employed in the study with the target population of 187 state corporations in Kenya. A sample size of 374 respondents drawn from 187 state corporations in Kenya was surveyed. A structured questionnaire was used to collect the primary data. The findings revealed that contract management through contract administration, contract monitoring and contract documentation significantly influenced the performance of state corporations. It was concluded that contract management was an essential aspect of PPAD compliance that influenced firm performance hence the recommendation that the management of state agencies should uphold the use of contract management to achieve better performance

Kolani and Miroga (2019) study focused on investigating the influence of contract management practices on supply chain performance of state corporations in the ministry of energy. The researcher established the influence of relationship management, contract

administration, contract appraisal and contract closure on supply chain performance as the specific objectives of the study. The literature review introduced various dimensions on influence of contract management practices on supply chain performance. Descriptive research design was used for the study and the questionnaire was the main data collection instrument. Target population for this study was 395 professionals involved in contract management in the state corporations in the ministry of Energy. The study findings indicated that the four variables, that is relationship management, contract administration, post contract appraisal and contract closure positively and significantly affect supply chain performance.

Hassan and Omwenga (2023) literature review examines the impact of contract management practices on procurement performance. The study was guided by the principles of general systems theory, institutional theory, contract management theory, and transactional cost theory. The study employed a cross-sectional research design. The research revealed a statistically significant positive correlation between contract administration, contract dispute resolution, contract relationship management, contract monitoring, contract evaluation, and procurement performance. The findings of the study indicate that enhancing contract management practices will lead to enhanced procurement performance within State Corporations. The efficacy of contract management can be juxtaposed with the efficiency of procurement endeavors undertaken by governmental entities and private corporations. It is evident that no research has been done on the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

Rashid(2019) study intends to cover the relationship between contract management and performance characteristics from the context of Indonesia. To address this objective, contract management is observed as the main independent variable while performance

through nine items is considered as dependent variable. A sample of 70 respondents is finalized with no missing values. Empirical findings suggest that for the firm performance different variables such as nature of the solution, cost & benefit analysis are significantly associated with the contract length. While project delivery and project quality are negatively associated with the contract length. Findings of the study are highly recommended for the contract managers and similar individuals, responsible for the smooth business performance. However, future studies can be conducted with the addition of more explanatory factors for contract management with better sample size. Managerial implication of the study defines that Government and construction companies should reconsider the stated factors for the improved results through resolution of the conflict with the customers, cost benefit analysis and timely delivery of the project with budgetary compliance. It is evident that no research has been done on the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

In a study carried out by Rasheli (2017) on procurement contract management in the local government authorities (LGAs) in Tanzania A transaction cost approach. The aim of the study was examining the transaction costs involved in managing procurement contracts in the public sector. The study findings indicated that costs procurement contract management incurred were associated with poor accountability and a lack of competition, transparency and efficiency throughout public procurement chains. However, the study was solely based in the Tanzanian context and failed to look at KeNHA. Brun and Moretto (2012) carried out a study on contract design and supply chain management in the luxury jewelry industry. The purpose of the study was to ascertain the relationship between contract design and supply chain performance in the jewelry industry. The study established that demand management process is determined

by inadequate contract design are identified, thus highlighting their influence on the critical success factors of luxury companies. In addition to the characteristics the contract should have to overcome the critical issues have been proposed. However, the study was based on jewelry items only and failed to look at contract management strategies at KeNHA. It is evident that research focused on the KENHA and the current study will focus on contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

Rotich (2014) studied on contract management practices and operational performance of state corporations in Kenya. The purpose of the study was to ascertain the impact of contract management practices on operational performance of state corporations in Kenya and the extent to which the contract management practices had been adopted in the state corporations in Kenya. The findings indicated that to a great extent, all the contract management practices had been implemented in state corporations in Kenya and there existed a positive relationship between implementation of contract management practices and operational performance. Bakari (2012), carried out a study on procurement contracting practices and Service delivery of Government owned Entities in the Ministry of Transport and Infrastructure in Kenya. The purpose of the study was to establish the extent to which procurement contracting practices had been implemented in Government owned Entities in the Ministry of Transport and Infrastructure in Kenya and the impact it has on performance. The study findings indicated that performance contracting had been implemented to a moderate extent in Government owned Entities in the Ministry of Transport and Infrastructure in Kenya. However, the study failed to look at contract management strategies and project performance. Obongo (2014) carried out a study on factors influencing performance contracting on delivery of conservation projects in Lamu County, Kenya. The study purpose was to ascertain the factors that influence

performance contracting on delivery of public projects with consideration to conservation projects in Lamu County. The study findings indicated that involvement of employees in performance contract formulation, management procedures and practices, influence of implementation of performance contracting on staff performance and contribution of performance contracting on customer demands had tremendous influence on delivery of conservation projects. However, the study was solely based on performance contracting and failed to look at contract management strategies. Besides the study was solely based in Lamu and hence the findings would not be applicable to the road construction sector. It is evident that no research has been done on the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

Makori and Binale (2021) study focused on investigating the effect of contract management Imperatives on supply chain performance of manufacturing firms in Nairobi County. In addressing the latter, the study established the effect of relationship management, contract administration, contract appraisal and contract appraisal and contract closure on supply chain performance as the specific objectives of the study. Descriptive research design was used for the study and the questionnaire was the main data collection instrument. The study constituted a sample of manufacturing firms in Nairobi County, the number of employees in the sample was 198. Inferential statistics was used to make predictions or inferences about the population from observations and analyses. The study findings indicate that the four variables, that is relationship management, contract administration, post contract appraisal and contract closure positively and significantly affect supply chain performance. It is evident that no research has been done on the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. This study attempts to fill this gap.

## **2.3 Theoretical Literature**

A theory is a logically developed and elaborated network of interrelationships among variables significant to the area under study. The theories highlight and explain matters for easier understanding on otherwise complex issues. The main characteristic of a theory is that it provides an explanation about a phenomenon (Silvermann, 2012). The theoretical perspective relevant to this study was based on effect of contract management phases on supply chain performance among manufacturing firms. The theories discussed in this section were Transaction cost theory and agency theory from which the variables of the study were derived. The discussion of the theories is as follows;

### **2.3.1 Transaction Cost Theory**

Transaction cost theory was developed in (1937) by Coase it relates to the cost provision of a good service from the market as opposed to obtaining it within. Baily (2005) has provided a detailed clarification of the purchasing function activities on how transaction cost applies to acquiring critical decision points. Main transaction cost activities revolve around five processes which are; category strategy, supplier strategy, quotation strategy selection and negotiation, operative procurement and supplier ovulation. The buyer can determine a strategy for pooled group category strategy by keeping equal products into one pool in the first process (Schiele 2006). With organizations supply chain manager acting as organization and understands customer requirement it's possible to come up with right supplier strategy. Every procurement step supports the supplier in acting in accordance with what has been previously agreed upon. After component delivery to the buyer, the supplier performance is measured in terms of quality, cost and service (Papazoglou & Heuvel, 2007). After component delivery to the buyer, the supplier performance is measured in terms of quality, cost and service (Papazoglou & Heuvel, 2007). In case of low transaction cost, the company should be capable of making an

element. Depending on single or multiple suppliers, opportunities maybe identified by procurement officer (Ellram, Tate & Billington, 2008). The transactional cost theory explains the relationship between the cost efficiency of contract management phases and supply chain performance.

### **2.3.2 Agency Theory**

Agency theory is used to explain relations in other disciplines and same can be replicated within chain supply chain performance. Agency theory states illustrates it is the relationship between agents and principal. An agency relationship is where parties collaborate and act as one revelry ((Rungtusanatham et al., 2007). Agency theory are main assumptions is that principals and agency contribute to a conflicting goal (Ekanayake, 2004; Rungtusanatham *et al.*, 2007).

As organizations has used extended supply chain while making provision to their customers. Most of these supply chain are not in control of the organization simply because they are not within the scope of the organization. Due to the absence of control the organizations have to come up of ways of maintaining high quality of materials, goods and services supplied.

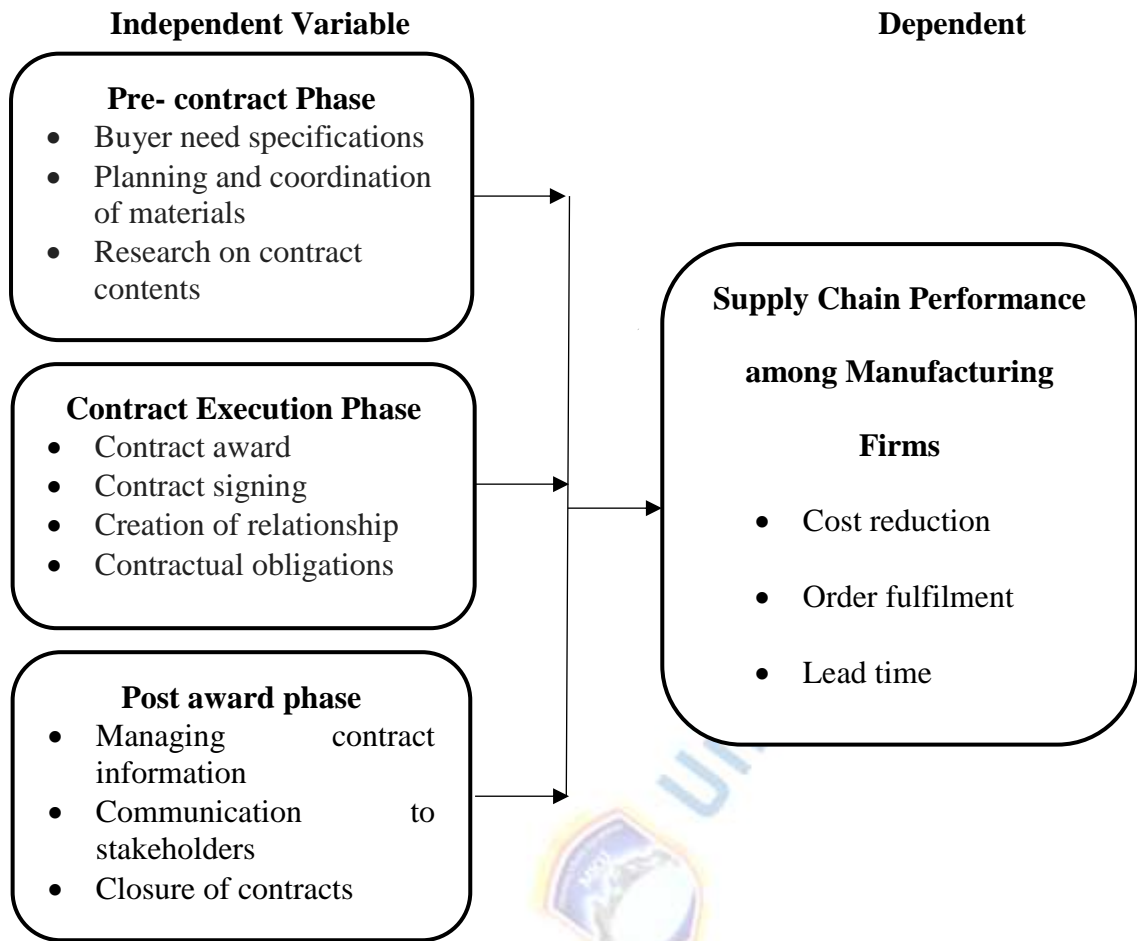
Traditional tactics alone are neither sustainable nor effective in the long run therefore firms need to establish cooperative relationships with supplier for QM an enhancement. Control of supplier is highly fundamental to the operations for manufacturing entities. Gaining competence and establishing long term relationships with supplier via the agency theory aspects can be better understood.

Despite the benefits of these assumption, two main problems may arise which include an agency problem and risk sharing problem. In agency problems, it occurs when the cost is high due to goals difference from the ideologies set trying to verify all the agents are clean. Nevertheless, the expense of the verification matters. Due to an effective

consideration, of the contract management in agency relationship there is need to minimizing the agents cost for instance through monitoring the agent's behaviors. Effective supervision of agents' problem such as preference mismatching, and information acquisition, imperative to any agreement management and supplier chain performance.

#### **2.4 Conceptual Framework**

The conceptual framework is developed to aid researcher in developing awareness and understanding of the effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County. The framework has been adopted to aid researcher make meaningful findings. The framework is based on three independent variables, and one dependent variable as shown diagrammatically in Figure 2.1 that illustrates the conceptualized relationship between the independent which include pre-contract phase, contract execution phase, post award phase and dependent variable, that is, supply chain performance. The conceptual framework shows how variables interact in a diagram format.



**Figure 1: Conceptual Framework**

### 2.4.1 Contract Management Phases

Contract management phases expounds contract-related tasks such as invitation to and evaluation of bids; awarding measurement, payment calculation as well as contract execution (Kakwezi, 2012). This further includes contract monitoring, dealing with related issues, and incorporating necessary contract changes. This is intended to ensure that parties to the contract work beyond each other expectations or meet the actual objectives of contract. This entails monitoring, practical management, reviewing terms of contract and agreements in procurement process to ensure proper delivery (Uher & Davenport, 2009). All Contract management activities have sole aim of ensuring the parties abide by the contractual terms and documentation of any agreeable changes to the

contract. Because contract management is a process certain activities, must be completed in order for the benefits to be realized. Contractor monitoring and acceptance management are common contract management practices since it deals with establishing and managing entire contract.

Contracts are a central component of modern business. Without them, there wouldn't be company partnerships, employment opportunities, or the exchange of goods and services. Since contracts play such a critical role in business today, it's essential to understand the 3 phases of contract management, allowing you to optimize the process without losing sight of what's important for your company's growth. The crucial process of contract management is composed of three phases: pre-award, award, and post-award. Each of these three phases of contract management covers a different step in an agreement's life cycle, and each is equally important to its success.

Effective contract management can help us through: providing a formal framework to standardize and streamline contract preparation, negotiations, and contract renewals. It also lower expenses and greater revenue through optimization of the entire contract process. T can also improve strategic sourcing through data analysis and pursuing mutually beneficial opportunities with your best suppliers. It is also known that it improves supplier relationship management through greater data transparency used to increase legal, performance, and regulatory compliance. The contract management ensure mean that one meet all your contractual obligations, and all other parties meet theirs. It can also reduce exposure to existing procurement, legal, and financial risks, while making it easier to create policies and contingencies to identify and reduce or eliminate new ones.

Moreover, the speeding other essential processes and improving overall process optimization by reducing the need for data entry and other low-value, time-consuming

tasks. It also creates of a centralized, digital contract repository (with contract management software) connecting contract data to other essential workflows, making it easy to analyze purchasing data, make accurate forecasts, reports, and audits, and ensure the best pricing and terms from the best vendors for all goods and services purchased. They also reduce need for legal department oversight and intervention during contract creation thanks to pre-approved boilerplate copy and templates. Formalizing and streamlining your contract management process supports a substantial improvement in your organization's overall business process management, productivity, and competitive performance.

#### **2.4.2 Pre-contract Phase**

Pre-contract management describes the managements of activities which are performed before commencement of a contract. This stage involves buyer need specifications, planning and coordination of materials, which invites bids by contractors for the work. When a prospective tenderer submits a tender and accepted as an offer. Negotiations to contract between the parties begin (Chong, 2011). Essentially, the pre-contract stage allows to evaluation and outlining of contract steps objectives for effective design which is appropriate for management operations which address potential pitfalls and maximize efficiency. Due to the legal nature of contracts, one must be prepared for strategic approach so that all the tools required in the other phases of the contract are in place and flawless.

Pre-award is the first of the three phases of contract management, and it differs depending on your business's role in an agreement depending on if it is the buyer or seller. Generally, this phase begins with the seller attempting to improve customer relations and their marketing strategy. After consideration, they have to decide whether or not to tender

an agreement with another company. If they choose to submit an offer, they must develop a winning strategy that covers execution and plans to minimize risk.

### **2.4.3 Contract Execution Phase**

This is the initial phase which maintains an up-to-date contract form; controls and manages contract variations; pays the contractor; manages assets; drafts reports; and terminates the contract (Hannan, 2014). The main purpose of contract execution is ensuring that the contract is satisfactorily performed and each of the parties to the contract undertakes its contractual obligations. Proper contract execution eliminates future potential claims and disputes. A major consideration during contract execution is communication. Its important during contract execution that all parties to the contract have clear understanding of contractual obligations for effective contract performance.

During the award step of the 3 phases of contract management, the buyer typically has various offers to consider. The length of this phase varies from contract to contract as it depends on the number of offers and the term's complexity. It could be straightforward, allowing you to move to the next phase quickly.

### **2.4.4 Post Award Phase**

The establishment of good contract is very important since it minimizes claims and potential claim in a contract. The parties to the contract should optimize contractual agreement (Azeem, 2010). Through proper contract review the parties can be in a position to review the contract specifications and contractual obligations (Abeeden, 2011). The contract should be closed when the contract reaches its final end and the work is completed when the work is no longer required or acceptable with quality reasons. When the contract is not completed the contractor may still insist for compensation for partial or fully executed contract at the close of the contract. This

involves certification between the contracting parties which also evaluates the success of contract achievement on the expected results (Chong, Balamuralithara & Chong, 2011). The last of the 3 phases of contract management is the post-award phase. This phase occurs after the contracts are signed and exchanged, moving to performance monitoring. It's important to note that just because the document has a signature doesn't mean that it no longer needs to be monitored and assessed. All contracts must be continually monitored after closure to ensure that both parties remain compliant and evaluate risk and performance. Therefore, the post-award phase of contract management is essential to every business

#### **2.4.5 Supply Chain Performance**

Supply chain performance can be termed as overall measurement of performance depicted in supply chain stages. This can be defined to describe profitability in supply chain which has the customer as the main source of revenue. According to Van der Orst (2000) argues supply chain performance should fulfill final user requirements with relevance performance indicators. Supply chain performance should be entirely measured to avoid effective decision making over estimating past behavior and prospect of benchmarking. Management requires proper information which they will use as guide in making decisions hence enough scores on performance should be observed to avoid continuousness of problems in long and short term. This calls for proper performance indicators in the supply chain which are prevalent in the procurement function should be authoritative

Through distinguished services and lower cost, a well-defined supply chain measurement system increases ensures high chance for success through profitable markets, aligning process across multiple firms and obtaining competitive advantage (Lambert & Pohlen, 2001). It is concluded by Chan (2003) that performance measurements are the feedback

from the activities with meeting customer expectations' and objectives. It has also mirrored the need for improving areas with unacceptable performance. Therefore, there is improvement of quality and efficiency. By measuring actual results (Wouters, 2009), performance measurement is vibrant in strategy formulation and communication in establishing diagnostic control mechanism. Moreover, performance measurement is important for supply chain performance for manufacturing entities in Nairobi, Kenya. Additionally, in Nairobi, Kenya performance measurements is critical for supply chain management manufacturing.

Shaw, Grant and Mangan (2021), view Supply Chain Performance Measurement as the overall set of measures used to estimate both the competence and capability of the supply chain. Supply Chain management and Performance are major components of competitive strategy that enhance organizational productivity and profitability among firms (Singhry, 2015). Researchers and practitioners have paid a lot of attention lately to organizational performance measurement and metrics. It is impossible to exaggerate the importance of these indicators for an organization's success because they have an impact on strategic, tactical, and operational planning and management. Supply chain Performance measurement and metrics play a crucial role in setting objectives, evaluating performance, and determining future courses of actions (Gunasekaran, et al. 2004). Competition is a constant issue for businesses. The focus of the market today is changing to supply chain performance from individual firm performance as they are more concerned with the entire chain's ability to meet end-customer needs through product availability and responsive, on-time delivery. To achieve that goal, an organization needs performance measures, or "metrics", for global supply chain performance improvements (Gunasekaran, et al. 2004). Performance indicators for the company must demonstrate

both how well it manages its business (speed, asset, inventory, and financial metrics) and how well it provides for its clients (service metrics).

## **2.5 Summary of Literature Review**

The literature reviewed by Kyengo (2012), indicated that supply chain performance should lead to a great understanding of the system and internal controls. The study could have been more specific and try to gauge each of the phases effect on the organization performance or more so on the performance of the sector. The study by fee and McIlroy (2014) contract management practices in procurement department should lead to effectiveness in supply chain performance. The study however did not indicate the effect of each stage on supply chain performance. A study by Coste (2008) clearly shows suppliers are loyal to organizations that manage their contracts functions in a transparent manner, meeting contractual obligations with high efficiency hence improved organization performance. Fee and McIlroy (2014), in a procurement department where contract management practices take place there should be effective supply chain performance According to Kakwezi (2012), pre-contract management can be broadly described in three sections which comprise of contract administration, relationship management and service delivery. According to Silvana (2015), contract management in a private partnership aims at optimizing efficiency and effectiveness in contract execution phase.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlined the research design and methodology that was used to carry out the study. The chapter also dealt with the target population, type of data collected, sampling frame, sample and sampling technique, the sample size, data collection procedures, pilot test, validity and reliability of the instrument as well as the data analysis techniques and how eventually data was presented.

#### **3.2 Research Design**

Creswell (2014), as cited by Omar et al. (2017), regards research designs as plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis. A research design is the master plan used when carrying out a research which connects the research questions to data. Its primary aim is to provide answers to the research questions and to give guidelines on how to answer these questions in the process (Matula, Kyalo, Mulwa & Gichuhi, 2018). This study utilized a quantitative survey research design specifically cross-sectional survey research design aimed at collecting large number of quantitative data at a point in time so as to establish the effect among key study variables namely; pre-contract phase, contract execution phase and post-award phase as independent variables and the dependent variable was supply chain performance among manufacturing firms in Nairobi City, Kenya.

### **3.3 Location of the Study**

The study was undertaken in Nairobi County. The study will focus on manufacturing firms located in Nairobi County. Manufacturing firms in Nairobi county operate within complex supply chains that involve multiple stages, including raw material sourcing, production, distribution, and customer delivery. These supply chains often involve both domestic and international partners, making them susceptible to various logistical, financial, and operational challenges. This research focused on studying the impact of contract management phases on the SC performance of manufacturing firms registered with KAM and whose operations are within Nairobi metropolitan area. This study targeted all the manufacturing firms listed with the Kenya Association Manufacturers in Nairobi region. According to KAM membership directorate. Nairobi was selected as it accommodates 62% of all the KAM members in the country providing a good representation of the manufacturing firms.

### **3.4 Target Population**

Target population consists of all members of a real or hypothetical set of people, events or objects from which a researcher wishes to generalize the results of their research while accessible population consists of all the individuals who realistically could be included in the sample (Sekaran & Bougie, 2011). The target population for this study was the 640 manufacturing firms based in Nairobi and its environs (KAM, 2023). The unit of analysis was manufacturing firms and unit of observation were the supply chain managers in the manufacturing firms. Table 3.1 presents the target population.

**Table 1: Target Population**

<b>Sector</b>	<b>Unit of Analysis(N)</b>
Building	40
Chemical	70
Energy	54
Food	71
Metal and Allied	96
Motor	27
Leather	27
Paper	63
Pharmaceuticals	49
Plastics	68
Textiles	65
Wood Products	37
<b>Total</b>	<b>640</b>

**Source:** Researcher (2023)

### **3.5 Sampling Procedures and Techniques**

A sampling frame is the list of elements from which the sample may be drawn (Cooper & Schindler, 2013). Cooper and Schindler (2013) also call it a working population because it provides the list that can be worked with operationally. The sampling frame for this study was the list of the 640 manufacturing firms comprising of building, chemical, energy, food, metal and allied, motor, leather, paper, pharmaceuticals, plastics, textiles and wood products as per the Kenya association of Manufacturers (2023)'s data base.

The stratified random sampling technique was utilized to select a sample size of 246 manufacturing firms. The stratified random sampling technique was appropriate for the study, because the target population was heterogeneous. The uneven distribution of firms gave rise to heterogeneity which if not properly accounted would have led to biased

parameter estimates. In this regard, stratified sampling enabled the researcher to avoid biasness consequently having unbiased parameter estimates.

### 3.6 Sample Population

In determining the sample size, Slovin's formula was used to calculate the sample size (at 95% confidence level and  $\alpha = 0.05$ ). With a confidence interval of 95 percent, the sample size was determined by using the Slovin's formula shown below (Omar et al., 2017). The Yamane (Yamane, 1967) sample size states that;

$$n = \frac{N}{1 + N(e)^2}$$

Where: Sample size =n,

Total population=N = and

Error tolerance (confidence level) =e

Therefore, based on the study population N = 640,

And Error tolerance at 0.05,

Then the sample size will be established as:

$$n = \frac{640}{1 + 640(0.05)^2} = 246$$

The sample size therefore is estimated to 246 manufacturing firms

**Table 2: Sample Size**

Building	40	15
Chemical	70	27
Energy	54	21
Food	71	27
Metal and Allied	96	37
Motor	27	10
Leather	27	10
Paper	63	24
Pharmaceuticals	49	18
Plastics	68	26
Textiles	65	24
Wood Products	37	14
<b>Total</b>	<b>640</b>	<b>246</b>

**Source:** Researcher (2023)

### 3.7 Construction of Research Instruments

The primary research data was collected using a structured questionnaire. A structured questionnaire is one in which the questions asked are precisely decided in advance and in this case the questions were decided in advance by the researcher as items in the questionnaire were arranged in a logical sequence according to the themes being studied and items that would elicit similar responses were grouped together (Bryman & Bell, 2015). The structured questionnaire was with closed ended questions and a customized five-part Likert scale which was used to collect data on the variables of study from the managers. Respondents were asked to indicate agreement with each item as each item had a five-point scale ranging from 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The questionnaires had been preferred because personal administration of questionnaires to individuals helped to develop close relationships with the respondents. The questionnaire also provided the clarifications sought by respondents on the spot by collecting the questionnaires soon after they were filled (Cooper & Schindler, 2013).

### **3.8 Testing of Validity and Reliability of Research Instruments**

According to Kothari (2004), pilot test is the study mainly done in order to establish reliability and validity of data collection instrument. Pilot test was conducted with sole aim of identifying any weakness and whether the research instrument is clear to the respondents. Prior to embarking on data collection, the researcher pretested the questionnaire using 25 supplier managers in manufacturing companies in Thika, Kiambu County, this forms 10% of the entire population, according to Mugenda and Mugenda (2003), 0-10% of the sample is ideal for pilot testing.

#### **3.8.1 Reliability of the Research Instruments**

The purpose of this test was improving the reliability the instruments and to establish the consistency of the items. The study used Cronbach alpha coefficient to determine reliability of the instrument in this study. According to (Dennick, 2011), Cronbach Alpha Coefficient is an appropriate measure because it is a better indicator of internal consistency of sample items. A Cronbach Alpha of 0.7 will be the minimum cut off point. Any item that will be below the 0.7 coefficient reliability will be addressed and changes made. The coefficient of 0.7 and above for the closed ended questions imply that there is a high reliability of data (Mugenda, 2011).

#### **3.8.2 Validity Instrument**

Information relating to the supply chain performance websites, in annual and published financial statements in national newspapers, during annual general meetings and in-house magazines was used to provide secondary data information on supply chain performance in Kenya. Other important business disclosures in journals, manuals and the various firm's documents were used for secondary data collection. The secondary data was collected using secondary data collection sheet. The secondary data collected was used to cross validate the primary data information collected.

### **3.9 Data Collection Methods and Procedures**

Questionnaire was used to collect data from the respondents. According to Saunders (2021) the study should determine the data collection method depending on the information required. Cooper and Schindler argues that investigative questions should be answered in the study through the appropriate data for each type of question that ought to be answered. This is simplifying the coding of questions as well as analysis of data (Gronhaug, 2015). The study mainly used questionnaires to collect information for each variable of the study from target respondents. The study questionnaire were self-administered to the respondents who were given adequate time to fill them before they are collected. Once the questionnaires are filled and collected they were cleaned of any errors.

### **3.10 Data Analysis and Procedures**

Quantitative methods of data analysis were used to analyze the research variables. A Likert scale was adopted to provide a measure for quantitative data. The scale helped to minimize the subjectivity and make it possible to use quantitative analysis. The numbers in the scale were ordered such that they indicated the presence or absence of the characteristic to be measured (Kothari & Garg, 2014). This mix of tools was necessary because the study was of quantitative nature.

#### **3.10.1 Data Processing**

Before processing the responses, data preparation was done on the completed questionnaire by editing, coding, entering and cleaning the data. Data collected was analyzed using descriptive statistics. The descriptive statistical tools helped in describing the data and determining the respondents' degree of agreement with the various statements under each factor. Data analysis was done with the help of SPSS version 24.0.

### 3.10.2 Quantitative Analysis

Correlation coefficient was used to analyze the strength of the relations between variables. Correlation coefficients was calculated to observe the strength of the association. A series of multiple regression analysis was used because they provided estimates of net effects and explanatory power. Analysis of variance (ANOVA) was used to test the significance of the model. R2 was used in this research to measure the extent of goodness of fit of the regression model. The multiple linear regression model used to estimate the coefficient was as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \dots\dots\dots \text{Equation 3.1}$$

Where:

Y = Performance of Supply Chain Performance

$\beta_0, \beta_1, \beta_2, \beta_3$  and  $\beta_4$  = Regression Coefficient to be estimated

X<sub>1</sub> = Pre-contract Phase

X<sub>2</sub> = Contract execution phase

X<sub>3</sub> = Post award phase

$\varepsilon$  = Stochastic term

### 3.11 Ethical Considerations

Authority to conduct this research was sought from, Mount Kenya University Research Committee and the NACOSTI (National Commission for Science and Technology). The respondents will be informed that participation in the study is voluntary and therefore no one will be forced to participate. The respondents will not include their names in the questionnaires for anonymity protection. The information obtained from respondents were treated with utmost confidentiality and strictly meant for academic use. The data collected was also be safely kept by the researcher.



## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presented the research findings and discussions of the study. Drawing on the Transaction cost theory, this quantitative research examined the effect of contract management phases on supply chain performance among manufacturing firms in Kenya. Data was entirely collected from the questionnaire, the research instrument. The questionnaire was designed in tandem with the study objectives. These include; To determine the effect of pre-contract phase on supply chain performance among manufacturing firms in Nairobi County; To establish the effect of contract execution phase on supply chain performance among manufacturing firms in Nairobi County; To find out the effect of post award phase on supply chain performance among manufacturing firms in Nairobi County, Kenya.

#### 4.2 Response Rate

The study administered 246 semi-structured questionnaires for data collection. However, 200 questionnaires were properly filled and returned. This represented a success rate of 81.30% which is high and sufficient for analysis in this study. This falls within the acceptable margins where response rate of over half (50 %) is good while a response of over 70 percent is very good (Bryman & Bell, 2015). The high response rate was realized, because of the constant reminders of potential respondents through phone calls, emails and follow ups by research assistants. This could also be attributed to the research topic which was eye catching and the timing was proper due to the ongoing contract management phases and performance of manufacturing firms debate in Kenya. Table 1 presents the response rate. Table1 shows the response rate.

**Table 3: Response Rate**

<b>Response</b>	<b>Frequency</b>	<b>Percentage</b>
Actual Response	200	81.30
Non- Response	46	18.70
<b>Total</b>	<b>246</b>	<b>100</b>

**Source:** Field Data (2023)

### 4.3 Pilot Study Results

Prior to the actual study, a pilot study was carried out to pre-test the validity and reliability of data collection tools which was the questionnaire. The pilot study allowed for pre-testing of this research instrument. The reliability of the questionnaire was evaluated through Cronbach's Alpha which measures the internal consistency. The Alpha measures internal consistency by establishing if certain item measures the same construct. The findings of the pilot study shows that all the four scales were reliable as their reliability values exceeded the prescribed threshold of 0.7 (Mugenda & Mugenda, 2013).

**Table 4: Reliability Coefficients**

<b>Scale</b>	<b>Cronbach's Alpha</b>	<b>Number of Items</b>
Pre-contract phase	0.836	7
Contract execution phase	0.787	6
Post award phase	0.734	6
Supply chain performance	0.813	6

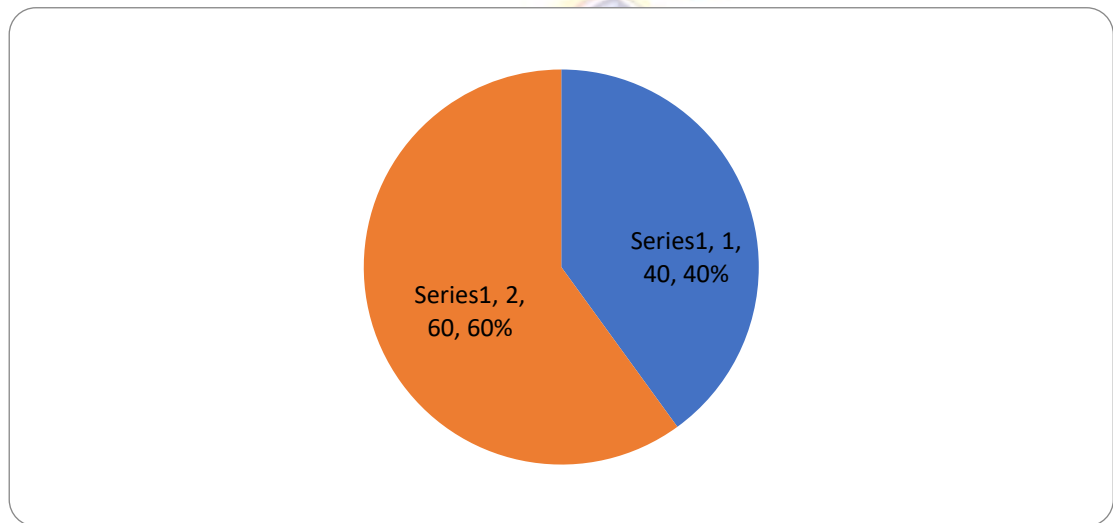
**Source:** Field Data (2023)

#### 4.4 Demographic Information

This section analyzes the demographic characteristics of the respondents. This section presents the descriptions of the respondents in terms of their gender, age and level of education of respondents.

##### 4.4.1 Gender Representation of Respondents

In this section, respondents were required to indicate their gender. 60% of the respondents were males with a female response rate of 40% of the entire population that responded. The gender gap percentage is not very significant and the possibility of gender bias it is therefore unlikely. In this research the gap was treated as inconsequential because the type of statistics required had little to do with gender. Nevertheless, these data imply that the personnel at manufacturing firms are male dominated.

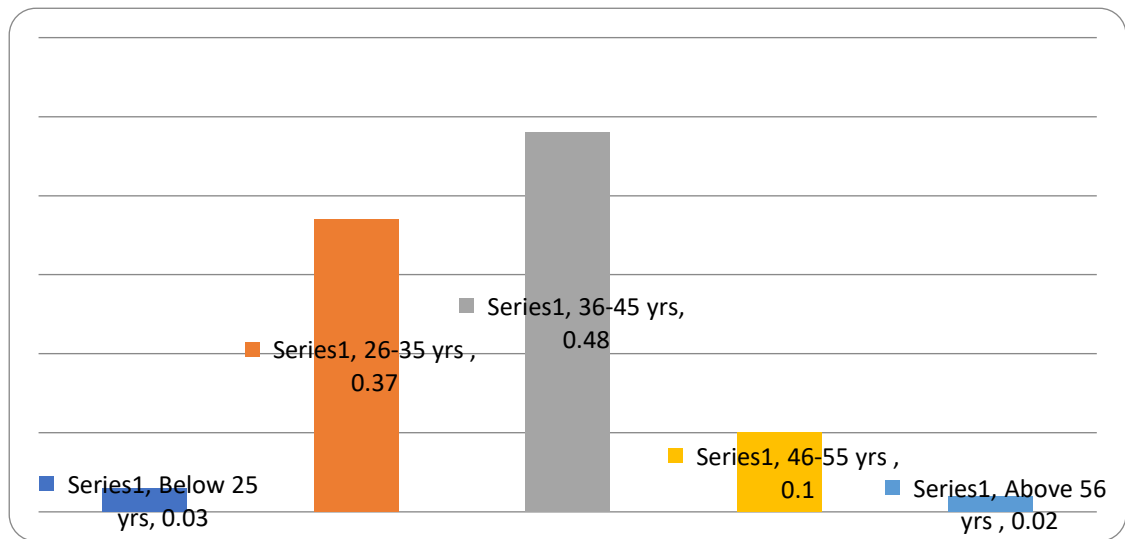


**Figure 2: Respondents by Gender**

##### 4.4.2 Age of Respondents

The respondents were requested to indicate their age. According to the finding's majority of the respondents, 48% were aged 36 to 45 years, 37% were aged 26 to 35 years, 10% were aged 46 to 55 years, 3 % were aged below 25 yrs, 2% were above 56 yrs. From

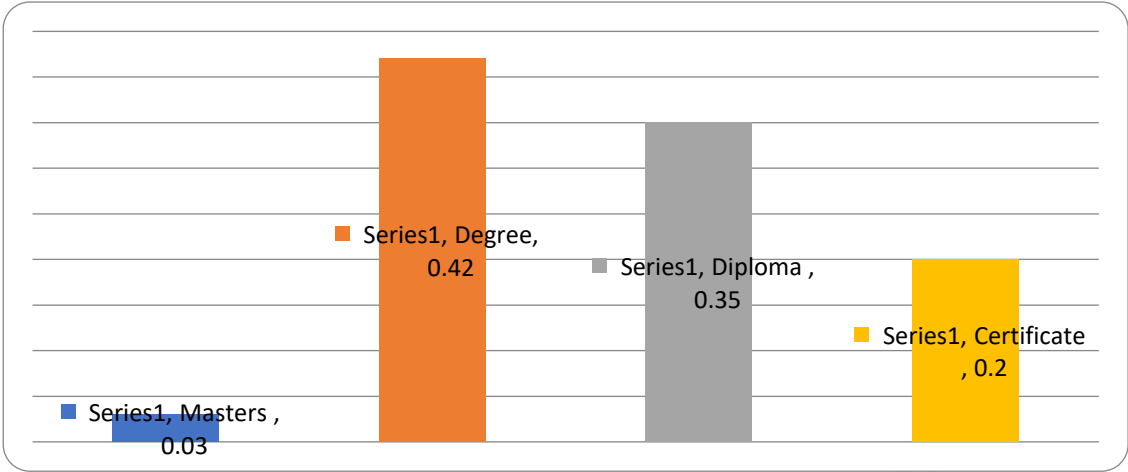
these findings we can deduce that the majority of the respondents were of age and therefore gave credible information based on their wealth of experience.



**Figure 3: Age of Respondents**

#### 4.4.3 Respondents' Level of Education

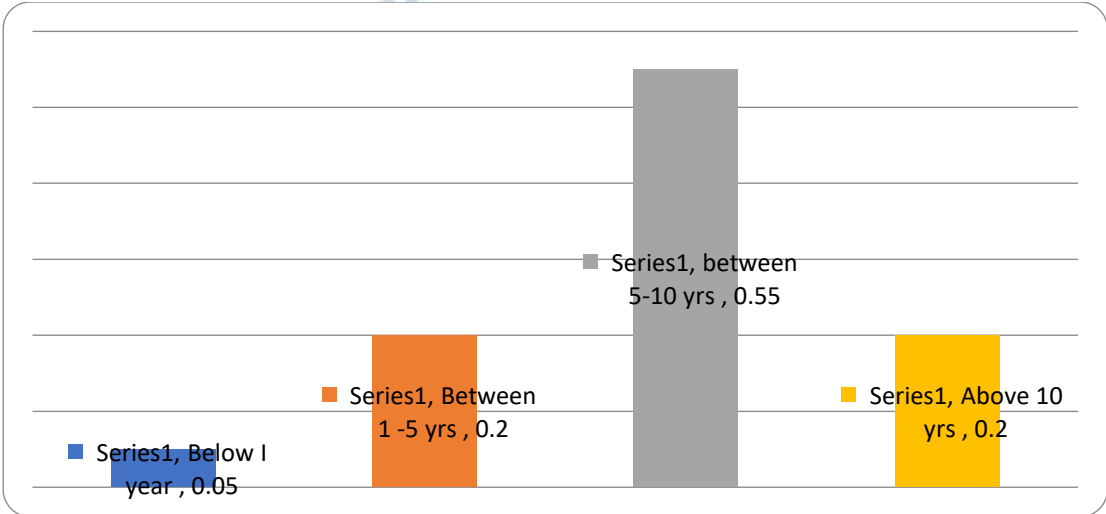
The respondents were also asked to state their level of education. All responded positively for having attended some college education as presented in Figure 3. The findings indicated that majority of the respondents 42% had degree as the highest level of education, 35% had diploma, 20% had certificate and 3% had master's degree. This is an indication that the respondents had sufficient literacy, therefore understood the contents of the research instrument, and therefore gave reliable information.



**Figure 4: Education Level for Respondents**

**4.4.4 Respondents' Years of Experience**

The respondents were told to indicate working experience. According to the findings in Figure 4 majority of the findings 55% had worked between 5 to 10 years, 20% of the respondents had worked between 1 to 5 years, 20% had worked between 1 to 5 years , 5 % of the respondents had worked below one year. From these findings we can deduce that the majority of the respondents had adequate.



**Figure 5: Respondents Years of Experience**

## **4.5 Descriptive Results of Variables**

Descriptive analysis is used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with simple graphics analysis, they form the basis of virtually every quantitative analysis of data (Portney, 2020). The study used descriptive statistics to present the frequency and the percentages of the gathered data on the effect of contract management phases on supply chain performance among manufacturing firms in Kenya.

### **4.5.1 Pre-Contract Phase Descriptive Results**

The first objective of the study was to determine the effect of pre-contract phase on supply chain performance among manufacturing firms in Nairobi County, Kenya. The respondents were requested to rate statements on effects of pre- contract phase on supply chain performance among manufacturing firms. To answer this objective, there are a number of questions that were asked. First, the respondents were asked to indicate their extent of agreement on various statements regarding the effect of pre-contract phase on supply chain performance among manufacturing firms in Nairobi County, Kenya. Employing a fivepoint Likert scale, statements were opinions which required the respondent to Strongly Disagree, Disagree, be neutral about it, Agree or Strongly Agree. Descriptive statistics such as means, standard deviation and percentages were used to present the findings. Pre-contract phase is without doubt critical in the provision of an enabling environment for effective supply chain performance among manufacturing firms in Nairobi County, Kenya. It is a precondition for both effective and quality supply chain performance among manufacturing firms. Various responses were provided as indicated in Table 5.

**Table 5: Pre- contract Phase and Supply Chain Performance**

<b>Statements</b>	<b>Mean</b>	<b>Std Dev.</b>
Management conducts thorough research before entering into contract	3.73	0.73
The management reads thoroughly the terms of engagements before making decision	3.69	0.64
The buyer is made aware of the content of the contract before the final draft is done	3.01	0.66
The procurement staff are well versed with general procurement procedures that pertain to the contract	4.00	0.63
Management identify buyer specifications in the contract	3.89	0.42
Procurement managers take into account supply chain consultants information and check for any discrepancies	2.89	0.35
Proper planning and coordination for materials that need to be procures	3.72	0.26
<b>Average</b>	<b>3.56</b>	<b>0.53</b>

**Source:** Field Data (2023)

From the study findings in table 5, the respondents agreed that management conducts thorough research before entering into contract (mean = 3.73, SD = 0.73)., the management reads thoroughly the terms of engagements before making decision (mean = 3.69, SD = 0.64)., the buyer is made aware of the content of the contract before the final draft is done (mean = 3.01, SD = 0.66). The respondents also agreed that the procurement staffs are well versed with general procurement procedures that pertain to the contract (mean = 4.00, SD = 0.63); management identify buyer specifications in the contract (mean = 3.89, SD = 0.42); proper planning and coordination for materials that need to be procures (mean = 2.89, SD = 0.35). The respondents however disagreed that procurement managers take into account supply chain consultants' information and

check for any discrepancies (mean = 3.72, SD = 0.26). The scores of responses for this section agreed at 75% indicating that most respondents agreed that pre-contract phase was a key driver of supply chain performance among manufacturing firms in Kenya.

The study results are in tandem with the literature review by Chong (2011) that pre-contract award stage is the initial phase in procurement and one of the most important. It's where the procurement process begins, and key decisions are made that will impact the entire project. During this stage, potential suppliers are identified, evaluated, and selected based on their ability to meet organization requirements. This involves issuing bids or requests for proposals(RFPs), reviewing supplier responses, conducting negotiations with shortlisted bidders and making a final decision on who to award the contract. This stage requires careful planning, communication between all stakeholders involved in procurement and adherence to established laws governing procurement activities. The outcome of this stage often determines whether or not an organization succeeds.

#### **4.5.2 Contract Execution Descriptive Results**

The second objective of the study was to determine the effect of Contract execution phase on supply chain performance among manufacturing firms in Nairobi County, Kenya. The respondents were requested to rate statements on effects of contract execution phase on supply chain performance among manufacturing firms. To answer this objective, there are a number of questions that were asked. First, the respondents were asked to indicate their extent of agreement on various statements regarding the effect of contract execution phase on supply chain performance among manufacturing firms in Nairobi County, Kenya.

Employing a five point Likert scale, statements were opinions which required the respondent to Strongly Disagree, Disagree, be neutral about it, Agree or Strongly Agree.

Descriptive statistics such as means, standard deviation and percentages were used to present the findings. Contract execution phase is without doubt critical in the provision of an enabling environment for effective supply chain performance among manufacturing firms in Nairobi County, Kenya. It is a precondition for both effective and quality supply chain performance among manufacturing firms. Various responses were provided as indicated in Table 6.

**Table 6: Contract Execution Phase and Supply Chain Performance**

<b>Statements</b>	<b>Mean</b>	<b>Std Dev.</b>
To execute contract award in accordance with the agreed terms and conditions	3.53	0.13
Parties to the contract are given time to read the agreements	4.00	0.31
The contract is signed by the required deadline to meet the material supply needs	3.64	0.15
The organization uses legally binding e-signature in the procurement contracts	3.89	0.37
The signing of contract facilitates procurement procedures in the organization	3.80	0.41
The signing of contracts creates new customer relationship for the finished goods	4.00	0.63
<b>Average</b>	<b>3.81</b>	<b>0.33</b>

**Source:** Field Data (2023)

From the study findings in Table 6, the respondents agreed that to execute contract award in accordance with the agreed terms and conditions (mean = 3.53, SD = 0.13); parties to

the contract are given time to read the agreements (mean = 4.00, SD = 0.31), the contract is signed by the required deadline to meet the material supply needs (mean = 3.64, SD = 0.15). The respondents also agreed that the organization uses legally binding e-signature in the procurement contracts (mean = 3.89, SD = 0.37); the signing of contract facilitates procurement procedures in the organization (mean = 3.80, SD = 0.41); the signing of contracts creates new customer relationship for the finished goods (mean = 4.00, SD = 0.63). The scores of responses for this section agreed at 75% indicating that most respondents agreed that contract execution phase was a key driver of supply chain performance among manufacturing firms in Kenya.

The study findings are in agreement with literature review by Hannan (2014) that contract execution phase maintains an up-to-date contract form; controls and manages contract variations; pays the contractor; manages assets; drafts reports; and terminates the contract. The main purpose of contract execution is ensuring that the contract is satisfactorily performed and each of the parties to the contract undertakes its contractual obligations. Proper contract execution eliminates future potential claims and disputes. A major consideration during contract execution is communication. It is important during contract execution that all parties to the contract have clear understanding of contractual obligations for effective contract performance.

#### **4.5.3 Post Award Descriptive Results**

The third objective of the study was to determine the effect of post award phase on supply chain performance among manufacturing firms in Nairobi County, Kenya. The respondents were requested to rate statements on effects of post award phase on supply chain performance among manufacturing firms. To answer this objective, there are a number of questions that were asked. First, the respondents were asked to indicate their extent of agreement on various statements regarding the effect of post award phase on

supply chain performance among manufacturing firms in Nairobi County, Kenya. Employing a five point Likert scale, statements were opinions which required the respondent to Strongly Disagree, Disagree, be neutral about it, Agree or Strongly Agree. Descriptive statistics such as means, standard deviation and percentages were used to present the findings. Post award phase is without doubt critical in the provision of an enabling environment for effective supply chain performance among manufacturing firms in Nairobi County, Kenya. It is a precondition for both effective and quality supply chain performance among manufacturing firms. Various responses were provided as indicated in Table 7.

**Table 7: Post Award Phase on Supply Chain Performance**

<b>Statements</b>	<b>Mean</b>	<b>Std. Dev.</b>
The procurement managers are in a position to maintain the contract information and furnish it as and when required	3.90	0.91
The management communicates effectively to all the stakeholders about the details of the contract to stakeholders	3.92	0.42
The management communicates to the suppliers and customers of any alterations to the contract on time	3.66	0.36
The procurement managers are in a position to manage risks in the contract	4.10	0.30
Closing out contracts is made after all the parties have managed to undertake their supply roles as per the contract	4.19	0.46
Renewal of contracts for supply of raw materials is done on merit in our organization	3.92	0.49
<b>Average</b>	<b>3.94</b>	<b>0.49</b>

**Source:** Field Data (2023)

From the study findings in table 7, the respondents agreed the procurement managers are in a position to maintain the contract information and furnish it as and when required (mean = 3.90, SD = 0.91), the management communicates effectively to all the stakeholders about the details of the contract to stakeholders (mean = 3.92, SD = 0.42). The respondents also agreed that the management communicates to the suppliers and customers of any alterations to the contract on time (mean = 3.66, SD = 0.36). The procurement managers are in a position to manage risks in the contract (mean = 4.19, SD = 0.46), closing out contracts is made after all the parties have managed to undertake their supply roles as per the contract (mean = 3.92, SD = 0.49), renewal of contracts for supply of raw materials is done on merit in our organization as shown with a mean of 4.19. The scores of responses for this section agreed at 75% indicating that most respondents agreed that post award phase was a key driver of supply chain performance among manufacturing firms in Kenya.

The study findings are in line with the findings by Azeem (2010) that the establishment of good contract is very important since it minimizes claims and potential claim in a contract. The parties to the contract should optimize contractual agreement. Through proper contract review the parties can be in a position to review the contract specifications and contractual obligations (Abeeden, 2011). The contract should be closed when the contract reaches its final end and the work is completed when the work is no longer required or acceptable with quality reasons. When the contract is not completed the contractor may still insist for compensation for partial or fully executed contract at the close of the contract. This involves certification between the contracting parties which also evaluates the success of contract achievement on the expected results (Chong, Balamuralithara & Chong, 2011).

#### 4.5.4 Supply Chain Performance Descriptive Results

##### 4.5.4.1 Order Fulfillment

The study sought to determine order fulfillment as a measure of supply chain performance in manufacturing firms in Nairobi, Kenya. The respondents were requested to indicate their level of agreement with various statements relating to order fulfillment in manufacturing firms in Kenya. A 5-point Likert scale was used where 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized neutral, 4 symbolized agree, and 5 symbolized strongly agree. The results were as presented in Table 8.

**Table 8: Order Fulfillment**

	Mean	Std. Deviation
Order fulfillment has a significant influence on supply chain performance	4.221	0.522
Electronic order processing has been adopted in our organization	4.277	0.608
Electronic order processing influences supply chain performance	4.315	0.540
Our organization has adopted order tracking system	4.256	0.589
Am satisfied with the effectiveness of order tracking system adopted	4.121	0.615
In our organization, timely delivery is ensured	4.389	0.598
<b>Aggregate</b>	<b>4.231</b>	<b>0.527</b>

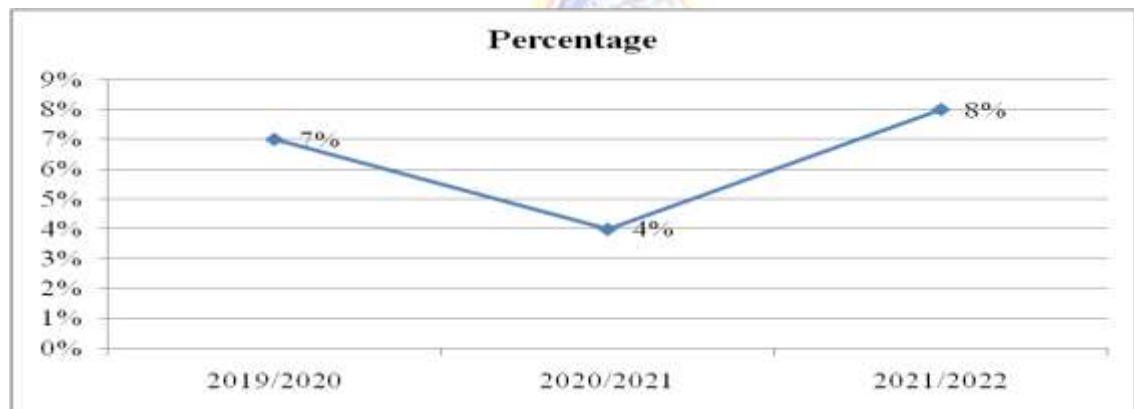
**Source:** Field Data (2023)

From the results, the respondents agreed that in their organization, timely delivery is ensured (M=4.389, SD=0.598). In addition, the respondents agreed that electronic order processing influences supply chain performance (M=4.315, SD=0.540). Further, the respondents agreed that electronic order processing has been adopted in their organization (M=4.277, SD=0.608). The respondents agreed that their organization has

adopted order tracking system ( $M=4.256$ ,  $SD=0.589$ ). The respondents also agreed that order fulfillment has a significant influence on supply chain performance ( $M=4.221$ ,  $SD=0.522$ ). In addition, the respondents agreed that they are satisfied with the effectiveness of order tracking system adopted ( $M=4.121$ ,  $SD=0.615$ ).

#### 4.5.4.2 Cost Reduction

Cost reduction is a critical component of supply chain management. By understanding supply chain costs, implementing cost reduction strategies, and measuring success, companies can improve their bottom line, increase profitability, and gain a competitive advantage. Cost reduction was computed for manufacturing firms for a period of financial 3 years. The financial years in consideration were year 2019/2020, 2020/2021 and 2021/2022. The three recent financial years were deemed fir for the purposes of the study and the results were presented in Figure 6.



**Figure 6: Supply Chain Cost Reduction**

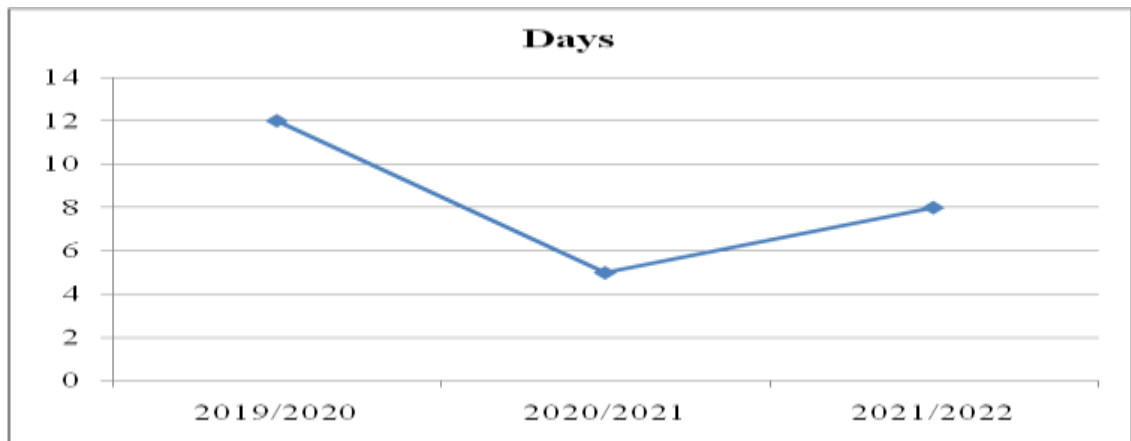
According to the findings cost reduction for 2019/2020 was 7%, for the year 2020/2021 was the lowest at 4% and for the year 2021/2022 it was recorded an average of 8%. This implies that in terms of reduction of supply chain costs was poor in the most of manufacturing firms in Kenya. This is attributed to lack of adherence to contract management phases. The study findings are in agreement with the opinions of Rao and Rao (2009) that reduction of supply chain costs is vital in supply chain performance of a

firm. To maximize the effectiveness of cost reduction initiatives, it is essential to follow best contract management phases by collaborating with suppliers, and invest in technology. By doing so, manufacturing firms can build a resilient and agile supply chain that can withstand unexpected events and deliver value to the firms and their customers.

#### **4.5.4.3 Lead Time**

Lead time in supply chain is the time that elapses between a customer order and the receipt, whether between two companies (B2B) or between a company and an end consumer (B2C). Lead time is present at all supply chain stages, from the supplier extracting the raw materials to the delivery to the end customer. Measuring lead time is essential for several reasons. Firstly, it helps to have a profitable supply chain by improving service, reducing costs, and reducing inventory. Poor lead times can lead to poor visibility, overstocking, stock-outs, and additional costs for express deliveries to compensate for problems. Secondly, it is important to measure lead times to have good visibility on your logistics, especially in times of global crises, pandemics, or increases in container prices and transport costs. This allows you to manage your transport better lead times and ensure good customer service. Finally, measuring lead times allows you to detect classic errors.

The days of supply was computed for manufacturing firms for a period of 3 years. The financial years in consideration were year 2019/2020, 2020/2021 and 2021/2022. The three recent financial years were deemed fir for the purposes of the study and the results were presented in Figure 7.



**Figure 7: Lead Time**

According to the findings in Figure 7 average lead time for the firms under study were 12 days in 2019/2020, 5 days for 2020/2021 and 8 days in 2021/2022. The findings indicate the firms were under performing in terms of lead time. Therefore, the study results imply that lead times play a crucial role in determining the performance of the supply chain. Long lead times can lead to higher inventory levels, which can result in increased costs and reduced productivity. This is because organizations need to hold more safety stock to compensate for long lead times. Safety stock is a buffer inventory that organizations keep on hand to ensure that they can meet customer demand even if there are delays in the supply chain. Because holding too much safety stock can tie up capital and increase storage costs, companies should strive to reduce their amounts.

Further, shorter lead times contribute to higher customer satisfaction. Customers expect faster delivery times, and delays in delivery can result in negative reviews and the loss of business. Therefore, organizations that have longer lead times may need to consider alternative delivery options, such as express shipping or same-day delivery, to meet customer demand. These options may come at a higher cost, but they can help organizations maintain their competitive edge in the marketplace. Lastly, longer lead times can also cause strain and damage relationships between suppliers and buyers. When organizations have to wait a long time for materials or components to arrive, it can cause

frustration and lead to disagreements between the two parties. Therefore, organizations should try to shorten their lead times and build stronger relationships with their suppliers.

#### **4.6 Correlation and Regression Analysis**

Correlation analysis was used to establish the relationship between the study variables while multiple regression analysis was used to estimate the predictive effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County.

##### **4.6.1 Correlation Results**

The researcher used correlation technique to analyze the degree of relationship between two variables with the Pearson correlation coefficient ( $r$ ), which yields a statistic that ranges from -1 to 1. Portney (2020) posit that correlation coefficient tells the magnitude of the relationship between two variables. If the correlation coefficient is positive (+), it means that there is a positive relationship between the two variables. A negative relationship (-) means that as one variable decreases, then the other variable increases and this is termed as an inverse relationship. A zero value of  $r$  indicates that there is no association between the two variables (Kothari & Garg, 2014; Saunders et al., 2017; Sekaran, 2019). The correlation among variables is illustrated by the correlation's matrix in Table 9.

**Table 9: Correlation Results**

			Pre- contract phase	Contract execution phase	Post award phase	Supply chain e
Pre- contract phase	Pearson Correlation	Sig. (2-tailed)	1			
	N		200			
Contract execution phase	Pearson Correlation	Sig. (2-tailed)	.376(**)	1		
	N		200	200		
Post award phase	Pearson Correlation	Sig. (2-tailed)	.436(**)	.714(**)	1	
	N		200	200	200	
Supply chain	Pearson Correlation	Sig. (2-tailed)	.594	.659(**)	.561(**)	1
	N		200	200	200	200

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

**Source:** Field Data (2023)

The results in Table 9 show Pearson product-moment correlation coefficient which is a measure of the strength of the linear association between two variables. The results indicate that relationship between pre-contract phase and supply chain performance was significant and positively correlated  $\{(r (BS, SD; 200) = 0.594; p < 0.05)\}$ . This means that any positive change in pre-contract phase led to increased supply chain performance in manufacturing firms in Kenya. The study results are in tandem with the literature review by Chong (2011) that pre-contract award stage is the initial phase in procurement and one of the most important. This involves issuing bids or requests for proposals(RFPs), reviewing supplier responses, conducting negotiations with shortlisted bidders and making a final decision on who to award the contract. This stage requires

careful planning, communication between all stakeholders involved in procurement and adherence to established laws governing procurement activities.

The results in Table 9 show Pearson product-moment correlation coefficient which is a measure of the strength of the linear association between two variables. The results indicate that relationship between contract execution phase and supply chain performance was significant and positively correlated  $\{(r (BS, SD; 200) = 0.659; p < 0.05)\}$ . This means that any positive change in contract execution phase led to increased supply chain performance in manufacturing firms in Kenya. The study findings are in agreement with literature review by Dekker et al. (2013) main purpose of contract execution is ensuring that the contract is satisfactorily performed and each of the parties to the contract undertakes its contractual obligations.

The results in Table 9 show Pearson product-moment correlation coefficient which is a measure of the strength of the linear association between two variables. The results indicate that relationship between post award phase and supply chain performance was significant and positively correlated  $\{(r (BS, SD; 200) = 0.561; p < 0.05)\}$ . This means that any positive change in post award phase led to increased supply chain performance in manufacturing firms in Kenya. The study findings are in line with the findings by Lesere (2018) that post award phase should optimize contractual agreement. Through proper contract review the parties can be in a position to review the contract specifications and contractual obligations. When the contract is not completed the contractor may still insist for compensation for partial or fully executed contract at the close of the contract. This involves certification between the contracting parties which also evaluates the success of contract achievement on the expected results.

#### 4.6.2 Multiple Regression Analysis

In order to analyze the joint effect of independent variables on the dependent variable (supply chain performance) multiple regression was employed. The following model was fitted;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon.$$

Where,

Y is Supply Chain Performance,

X<sub>1</sub> is Pre-contract Phase,

X<sub>2</sub> is Contract Execution Phase,

X<sub>3</sub> is Post award Phase,

Further, the regression results in Table 9 show that the joint relationship between the contract management phases' variables and supply chain performance in manufacturing firms in Kenya was significant (F (4,181) =187.957, p < 0.001). With R<sup>2</sup> = 0.806, the model implies that about 80.60% variation in supply chain performance in manufacturing firms is explained by variations in (contract management phases). However, the model did not explain 19.40% of the variation, meaning that there are other factors associated with supply chain performance in manufacturing firms which were not fitted in the model.

**Table 10: Model Summary (Joint Model)**

R	R Square	Adjusted R Square	Std. Error of the Estimate
.898	.806	.787	.32876

**Source:** Field Data (2023)

Table 10 provides the results on the analysis of the variance (ANOVA). The results indicate that the overall model was statistically significant as supported by the F-statistic of 271.563 and a p-value of 0.000 which is lesser than the critical p-value of 0.05

implying that contract management phases (pre-contract phase, contract execution phase and post award phase) are good predictors of the supply chain performance in manufacturing firms in Kenya.

**Table 11: ANOVA (Joint Model)**

		Sum of				
Model		Squares	df	Mean Square	df	Sig.
1	Regression	1208.188	3	402.729	271.563	.000
	Residual	290.805	196	1.483		
	<b>Total</b>	<b>1498.993</b>	<b>199</b>			

**Source:** Field Data (2023)

Findings in Table 11 showed that pre-contract phase ( $X_1$ ) had coefficients of estimate which was significant basing on ( $\beta_1=0.555$ ,  $t_{cal}=4.142 > t_{critical}=1.96$ ,  $p\text{-value} < 0.05$ ). Also, the influence of pre-contract phase ( $X_1$ ) is more than the effect attributed to the error, this is indicated by the t-test value = 4.142, thus we conclude that there is a significant relationship between pre-contract phase( $X_1$ ) and supply chain performance in manufacturing firms in Kenya. The study findings are in tandem with Hirvonen and Bask (2023) that pre-contract positively and significantly enhance procurement performance. The management focuses on keeping an updated contact form, planning and monitoring changes in contract; ensuring that contractor are paid on time; monitoring use of assets; coming up with reports; and use of appropriate procedures in contract termination

Findings in Table 11 showed that contract execution phase ( $X_2$ ) had coefficients of estimate which was significant basing on ( $\beta_1=0.765$ ,  $t_{cal}=6.829 > t_{critical}=1.96$ ,  $p\text{-value} < 0.05$ ). Also, the influence of contract execution phase ( $X_2$ ) is more than the effect attributed to the error, this is indicated by the t-test value = 6.829, thus we conclude that there is a significant relationship between contract execution phase( $X_2$ ) and supply chain

performance in manufacturing firms in Kenya. The study findings are in line with the findings by Rendon (2015) contract execution phase positively and significantly affect supply chain performance. As such, organizations should embrace more relationship management.

Findings in Table 11 showed that post award phase ( $X_3$ ) had coefficients of estimate which was significant basing on ( $\beta_1=0.553$ ,  $t_{cal}= 8.919 > t_{critical} =1.96$ ,  $p\text{-value} < 0.05$ ). Also, the influence of post award phase ( $X_3$ ) is more than the effect attributed to the error, this is indicated by the t-test value = 8.919, thus we conclude that there is a significant relationship between post award phase( $X_3$ ) and supply chain performance in manufacturing firms in Kenya. The study findings are in agreement with the literature review by Zhang et al.(2023) that there is significant relationship between pos award phase and performance of an organization. Effective post-award contract management can help organizations avoid disputes, reduce risk, and improve their relationship with suppliers or partners. It also helps to ensure that projects are delivered on time, on budget, and meet the required quality standards.

**Table 12: Regression Coefficient (Joint Model)**

Model	Unstandardized		Standardized	T	Sig.
	Coefficients		Coefficients		
	<b>B</b>	Std. Error	<b>B</b>		
(Constant)	9.876	1.754		5.629	.000
Pre-contract Phase	.555	.134	.594	4.142	.000
Contract Execution phase	.765	.112	.659	6.829	.000
Post award Phase	.553	.087	.561	8.919	.000

**Source:** Field Data (2023)

According to Table 12, substituting the general multiple regression model with coefficients, the fitted model was of the form.

$$Y = 9.876 + 0.555X_1 + 0.765X_2 + 0.553X_3$$

Where,

Y is Supply Chain Performance,

X<sub>1</sub> is Pre-contract Phase,

X<sub>2</sub> is Contract Phase,

X<sub>3</sub> is Post award Phase



## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

The chapter provides the summary of the findings from chapter four, and it gives the conclusions and recommendations of the study based on the objectives of the study. The objective of this study was to establish effect of contract management phases on supply chain performance among manufacturing firms in Nairobi County.

#### 5.2 Summary of the Result Findings

The study found that pre-contract phase, solicitation, contract execution phase, post award phase influenced supply chain performance as per correlation analysis. The study found that manufacturing firms conducts thorough research before entering into contract. The management reads the terms of engagement in the pre-contract phase and ensures proper coordination and planning that need to be procured.

The study also found that parties to the contract are informed and signs legally binding contracts, which facilitates procurement procedures in the manufacturing firms at contract execution phase. The study also found that procurement managers are in a position to maintain the contract and give information when it is required. The closure of the contract involves the clarity that risks have been managed, alterations to contract communicated as well as renewal of contracts for supply of raw materials. The supply chain performance of manufacturing firms in terms of raw materials turnover as per the findings was low and as compared with ideal average turnover which should be between 4 and 6 for firms performing well. average the days of supply for the firms under study were 12 days in 2019, 5 days for 2020 and 8 days in 2021. The performance of manufacturing firms in terms of raw materials turnover as per the findings was low and

as compared with ideal average turnover which should be between 4 and 6 for firms performing well. The findings indicated the firms were under performing in terms of days of supply.

#### **5.2.1 Effect of Pre-contract phase on supply chain performance among manufacturing firms in Nairobi County.**

The study sought to determine the effect of Pre-contract phase on supply chain performance among manufacturing firms in Nairobi County. The study established management conducts thorough research before entering into contract. The findings also indicated that the management reads thoroughly the terms of engagements before making decision. The study found that buyer is made aware of the content of the contract before the final draft is done. The study also found that the procurement staffs are well versed with general procurement procedures that pertain to the contract, management identify buyer specifications in the contract, proper planning and coordination for materials that need to be procured and that procurement managers take into account supply chain consultants' information and check for any discrepancies. The findings concur with study by Wilson and Kusomo (2004) who found that tedious documentation work which is obvious in the pre-contract stage of procurement is expensive and consumes a lot of time to the customer which in turn lengthens the whole process of tendering.

#### **5.2.2 Effect of contract execution phase on supply chain performance among manufacturing firms in Nairobi County.**

The study sought to determine the effect of contract execution on supply chain performance among manufacturing firms in Nairobi County. The study established that organizations execute contract award in accordance with the agreed terms and conditions, parties to the contract are given time to read the agreements, the contract is signed by the required deadline to meet the material supply needs. The study also found that the

organization uses legally binding e-signature in the procurement contracts, the signing of contract facilitates procurement procedures in the organization and the signing of contracts creates new customer relationship for the finished goods. The findings concur with Silvana (2018), who argued that contract execution optimizes the supply chain performance in an organization.

### **5.2.3 Effect of post award phase on supply chain performance among manufacturing firms in Nairobi County.**

The study sought to determine the effect of post award phase on supply chain performance among manufacturing firms in Nairobi County. The study established that procurement managers are in a position to maintain the contract information and furnish it as and when required as, the management communicates effectively to all the stakeholders about the details of the contract to stakeholders. The study further agreed that the management communicates to the suppliers and customers of any alterations to the contract on time. The procurement managers are in a position to manage risks in the contract, closing out contracts is made after all the parties have managed to undertake their supply, renewal of contracts for supply of raw materials is done on merit in our organization. The findings concur with study by McIlroy (2014), who found that contract management practices in procurement department should lead to effectiveness in supply chain performance.

### **5.3 Conclusions**

According to the findings performance of management can be assessed through how well the contract signed are executed. The effective management of pre-contract management phase is the critical to overall performance of the supply chain in manufacturing firms since it details the contents of the contract and contractual obligations of the parties to

the contract. The perfection at pre-contract stage would therefore mean there are few or no amendments that would be necessary in the other management phases in the contract management.

The study concludes that manufacturing firms depend highly on the clear contract signing and fulfillment of the contractual obligations by all parties across the phases. The study further concludes that the success of the firm will depend on efficiency in supply chain therefore; the management should ensure that there are no lapses in the procurement process.

#### **5.4 Recommendations of the Study**

The study found out that most of manufacturing firms have not effectively managed pre-contract aspects of contracts and following up with the contractors to ensure that the contract is fulfilling its mandate. To them, once a contractor is awarded then it is left as the contractor's obligation to ensure the contract is fulfilled. This practice needs urgent attention to save most contracts that are failing to mature within these manufacturing firms.

Based on the findings, the study recommends that the management on manufacturing firms should consider adopting contract management practices of pre-contract methods during procurement process. This will allow the management to create a comprehensive understanding that can be leveraged to influence stakeholders and create better decisions in ensuring effective supply chain performance in the manufacturing firms.

The study recommends that there is need for the manufacturing firms to pay attention to the post award phase. Although post-signature contract management requires an investment of time and resources, it can pay hefty dividends in enhanced profits and reduced losses. Contract management can also reduce revenue leakage by improving

invoicing and change-order practices and ensuring that manufacturing firms hold business partners accountable for their promises. This will help p them manage risks, strengthen compliance, gather insights into performance, improve business outcomes, and generate higher profits.

### **5.5 Recommendations for further Studies**

The findings of the study, as summarized in the previous section have several implications for theory, methodology and practice. Overall, the findings of the study provide substantial support for the conceptual framework. Specifically, the results demonstrate that contract management phases can act as a powerful tool that can directly lead to improved supply chain performance viewed as a solution to the manufacturing firms facing a myriad of challenges in regard to the adoption of the appropriate and relevant contract management practices. The study also found out that contract management explained 80.60% of the supply chain performance of manufacturing firms in Kenya. The study, therefore, suggests further studies on the other factors (19.40%) influencing supply chain performance of manufacturing firms in Kenya. The additional model could be explained through the insertion of other moderators like procurement policy. And process to the hypothesized relationship.

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## APPENDICES

### Appendix I: Introduction Letter

Dear Sir/Madam,

**SUB: Authority To Undertake Research**

I am a Student pursuing Master of Science in Procurement and Supplies Management of Mount Kenya University. As part of fulfillment of the course, I am required to write a research project in my field of study. I intend to conduct a research on the effect of **Contract Management Phases** on supply chain performance, a case of manufacturing firms in Nairobi County. I hereby request for your opinion on the attached questionnaire.

The information provided will be treated with utmost confidentiality and for academic use only

Yours Sincerely,

Peter Mugumu Kamau

Student

## Appendix II: Questionnaire

### General Information

The questionnaire is based on short and direct approach to the information required. This research is purely for academic purposes and hence, the information provided will be treated with utmost confidentiality. Your cooperation will be highly appreciated.

### SECTION A

#### Personal Information

1. Sex: Male  Female
2. Age: 18-25yrs  26-35yrs   
36-45yrs  46 and above years
3. Highest education level:  
High School:  Certificate:  Diploma:   
Degree:  Masters:  PH D:
4. Working Experience  
Below 1 year [ ] 1 to 5 years [ ] 6 years to 10 years [ ] 11 to 15 years [ ] Over 20 years [ ]

### SECTION B: Pre- Contract Phase

On a rating scale of 1-5, please tick the appropriate box indicating the extent, to which you agree with these statements, in regard to pre- contract phase in your organization where:

1= strongly disagree 2= Disagree 3= Undecided 4= Agree 5= Strongly Agree

S/No.	STATEMENT	1	2	3	4	5
1	Management conducts thorough research before entering into contract					
2	The management reads thoroughly the terms of engagements before making decision					
3	The buyer is made aware of the content of the contract before the final draft is done					

4	The procurement staff are well versed with general procurement procedures that pertain to the contract					
5	Management identify buyer specifications in the contract					
6	Procurement managers take into account supply chain consultants information and check for any discrepancies					
7	Proper planning and coordination for materials that need to be procures					

### SECTION C: Contract Execution Phase

On a rating scale of 1-5, please tick the appropriate box indicating the extent, to which you agree with these statements, in regard to contract execution in your organization where:

**1= strongly disagree 2= Disagree 3= Undecided 4= Agree 5= Strongly Agree**

S/No.	STATEMENT	1	2	3	4	5
1	To execute contract award in accordance with the agreed terms and conditions					
2	Parties to the contract are given time to read the agreements					
3	The contract is signed by the required deadline to meet the material supply needs					
4	The organization uses legally binding e-signature in the procurement contracts					
5	The signing of contract facilitates procurement procedures in the organization					
6	The signing of contracts creates new customer relationship for the finished goods					

#### SECTION D: Post Award Phase

On a rating scale of 1-5, please tick the appropriate box indicating the extent, to which you agree with these statements, in regard to post award phase in your organization where:

1= strongly disagree 2= Disagree 3= Undecided 4= Agree 5= Strongly Agree

S/N o.	STATEMENT	1	2	3	4	5
1	The procurement managers are in a position to maintain the contract information when required					
2	The management communicates effectively to all the stakeholders about the details of the contract to stakeholders					
3	The management communicates to the suppliers and customers of any alterations to the contract on time					
4	The procurement managers are in a position to manage risks in the contract					
5	Closing out contracts is made after all the parties have managed to undertake their supply roles as per the contract					
6	Renewal of contracts for supply of raw materials is done on merit in our organization					

#### SECTION E: Supply Chain Performance

On a rating scale of 1-5, please tick the appropriate box indicating the extent, to which you agree with these statements, in regard to post award phase in your organization where: 1= Strongly Disagree 2= Disagree 3= Undecided 4= Agree 5= Strongly Agree

S/N o.	STATEMENT	1	2	3	4	5
1	Order fulfillment has a significant influence on supply chain performance					

2	Electronic order processing has been adopted in our organization					
3	Electronic order processing influences supply chain performance					
4	Our organization has adopted order tracking system					
5	Am satisfied with the effectiveness of order tracking system adopted					
6	In our organization, timely delivery is ensured					

This section will help in rating the supply chain performance of your organization for the last three financial years 2019/2020 to 2021/2022.

<b>Cost Reduction</b>	<b>Average (%)</b>
2019/2020	
2020/2021	
2021/2022.	

This section will help in rating the supply chain performance of your organization for the last three financial years 2019/2020 to 2021/2022.

#### **Lead Time**

<b>Year</b>	<b>Average Days</b>
2019/2020	
2020/2021	
2021/2022.	

## Appendix III: ERC Letter



REF: MKU/ISERC/2438

Date: 01 November 2022

TO: PETER MUGUMU KAMAU

REG: MP5M/41882/2016

Dear Sir/Madam,

**RE: EFFECT OF CONTRACT MANAGEMENT PHASES ON SUPPLY CHAIN PERFORMANCE AMONG MANUFACTURING FIRMS IN NAIROBI COUNTY**

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **1511**. The approval period is **13/10/2022 - 12/10/2023**.

This approval is subject to compliance with the following requirements:


- i. Only approved documents including informed consents, study instruments, MFA will be used
- ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
- iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
- v. Clearance for export of biological specimens must be obtained from relevant institutions
- vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
- vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) <https://researchportal.nacost.go.ke> and also obtain other clearances needed.

Yours faithfully,  
The Chairman  
Mount Kenya University  
ERC Review Committee  
P.O. Box 5527-0100, Thika

Dr. Peter G. Kiria  
Chairman, Mount Kenya University ISERC

## Appendix IV: Introduction Letter

  
**Mount Kenya University**

**DIRECTORATE OF GRADUATE STUDIES**

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MPSM/41882/2016

2<sup>nd</sup> October, 2023

*National Commission for Science Technology & Innovation (NACOSTI)  
Off Waiyaki Way, Upper Kabete,  
P.O Box 30623- 00100  
NAIROBI, KENYA*

Dear Sir/Madam,


**RE: PETER MUGUMU KAMAU- REGISTRATION NO. MPSM/41882/2016**


The purpose of this letter is to introduce the above named student who is pursuing **Master of Science in Procurement and Supplies Management** in the **Department of Management** in the school of **Business and Economics**

The title of the research is **"Effect of Contract Management Phases on Supply Chain Performance among Manufacturing Firms in Nairobi County**. It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **October, 2023 and December, 2023**.

Any assistance accorded to the student will be highly appreciated.

Thank you.

*For*   
**Dr. Samuel M. Karenga, Ph.D.**  
**Director, Graduate Studies**  
Enc.

  
Mount Kenya University  
P.O. Box 542-01000, THIKA  
Office of the Director,  
Graduate Studies

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## Appendix V: NACOSTI Authorization

   
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NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 2023/11 Date of Issue: 2023/08/24

**RESEARCH LICENSE**



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**EFFECT OF CONTRACT  
MANAGEMENT PHASES ON  
SUPPLY CHAIN PERFORMANCE  
AMONG MANUFACTURING  
FIRMS IN NAIROBI COUNTY,  
KENYA**

*by* PETER MUGUMU

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# EFFECT OF CONTRACT MANAGEMENT PHASES ON SUPPLY CHAIN PERFORMANCE AMONG MANUFACTURING FIRMS IN NAIROBI COUNTY, KENYA

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