

**FACTORS INFLUENCING QUALITY OF CONSTRUCTION PROJECTS: A CASE
OF BUILDING CONSTRUCTION PROJECTS IN MERU TOWN**

BY

EVELYN KARWITHA

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN
PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI**

2017

DECLARATION

I declare that this research project is my own original work and has not been presented in this University or any other institution for the award of a Master's Degree.

Signature: **Date:**

Evelyn Karwitha

L50/84615/2016

This research project has been presented for examination with my approval as the University Supervisor.

Signature: **Date:**

Mr. AMOS K. GITONGA

ODel Campus

University of Nairobi

DEDICATION

I dedicate this research project to my family for their continued support during the period of study

ACKNOWLEDGEMENT

I would like to thank my supervisor, Mr. Amos Gitonga for his encouragement, supervision and guidance from the formulation of my research topic to the conclusion of this research project. I would not have gone far without his support and constructive criticism.

I also wish to acknowledge the efforts of all lecturers in Meru Extra Mural Centre for the support and training I have received and which has impacted knowledge in me.

I am grateful to my colleagues who offered their moral support and ensure that I dedicated my time to complete this research project. To all it is my prayer that the Almighty God will bless you abundantly.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study	4
1.4 Objectives of the Study.....	4
1.5 Research Questions	4
1.6 Significance of the Study.....	5
1.7 Delimitation of the Study.....	5
1.8 Limitations of the Study.....	5
1.9 Basic Assumptions of the Study	6
1.10 Definition of Significant Terms	6
1.11 Organization of the Study	6
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8
2.2 Stakeholder Involvement and Quality of Building Construction Project	8
2.3 Project Funding and Quality of Building Construction Project.....	9
2.4 Construction Materials Management and Quality of Building Construction Project.....	10
2.5 Project Management Competence and Quality of Building Construction Project	12

2.6 Theoretical Review	15
2.6.1 System Theory	15
2.6.2 Stakeholder Theory	15
2.7 Conceptual framework	17
2.8 Summary and Research Gap	18
2.9 Research Gap.....	19
CHAPTER THREE	20
RESEARCH METHODOLOGY	20
3.1 Introduction.....	20
3.2 Research Design.....	20
3.3 Target Population.....	20
3.4 Sample Size and Sampling Procedure.....	21
3.5 Data Collection Instruments.....	22
3.6 Validity of Instruments	22
3.7 Reliability of Instruments.....	22
3.8 Data Collection Procedure	23
3.9 Data Analysis and Presentation.....	23
3.10 Ethical Issues.....	24
3.11 Operationalization of Variables	27
CHAPTER FOUR.....	29
DATA ANALYSIS, PRESENTATION AND INTERPRETATION.....	29
4.1 Introduction.....	29
4.2 Questionnaire Response Rate.....	29
4.3 Data Reliability	29
4.4 Demographic Characteristics of the Respondents.....	30
4.4.1 Respondents Relationship with the Project.....	30

4.4.2 Respondents Highest Level of Education	31
4.4.3 Respondents Period in the Industry.....	31
4.5 Factors Influencing Quality of Construction.....	32
4.5.1 Stakeholder Involvement	32
4.5.2 Project Funding	33
4.5.3 Construction Materials	34
4.5.4 Project Management Competence	35
4.5.5 Project Characteristics and Quality of Building Construction Projects	36
4.5.6 Quality of Building Construction.....	37
4.6 Inferential Statistical Analysis	37
4.6.1 Multiple Regression	37
CHAPTER FIVE.....	40
SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS	40
5.1 Introduction	40
5.2 Summary	40
5.2.1 Stakeholder Involvement	40
5.2.2 Project Funding	40
5.2.3 Construction Materials	41
5.2.4 Project Management Competence	41
5.3 Discussion	41
5.3.1 Stakeholder Involvement	41
5.3.2 Project Funding	42
5.2.3 Construction Materials	43
5.3.4 Project Management Competence	43
5.4 Conclusion	44
5.5 Recommendations	44

5.6 Recommendations for Further Research.....	45
REFERENCE	46
APPENDICES	54
Appendix I: Letter of Introduction.....	54
APPENDIX II: RESEARCH QUESTIONNAIRE	55
APPENDIX III: WORK PLAN	Error! Bookmark not defined.
APPENDIX IV: BUDGET	Error! Bookmark not defined.
Appendix II: Budget.....	Error! Bookmark not defined.

LIST OF TABLES

Table 3. 1 Target Population.....	20
Table 3. 2 The Sampling Matrix	21
Table 3. 3: Operationalization of variables	27
Table 4. 1: Questionnaire Response Rate	29
Table 4. 2: Reliability Test of Constructs	30
Table 4. 3: Respondents Relationship with the Project.....	30
Table 4. 4: Respondents Highest Level of Education	31
Table 4. 5: Respondents Period in the Industry	31
Table 4. 6: Extent of Stakeholder Involvement Influence	32
Table 4. 7: Stakeholder Involvement Aspects.....	32
Table 4. 8: Extent of Project Funding Influence	33
Table 4. 9: Project Funding Aspects	34
Table 4. 10: Extent of Construction Materials Influence	34
Table 4. 11: Construction Materials Aspects	35
Table 4. 12: Extent of Project Management Competence Influence	35
Table 4. 13: Project Management Competence Aspects.....	36
Table 4. 14: Project Characteristics and Quality of Building Construction Projects	36
Table 4. 15: Project Characteristics and Quality of Building Construction Projects.....	37
Table 4. 16: Model Summary.....	38
Table 4.17: Summary of One-Way ANOVA results	38
Table 4. 18: Regression Coefficients	38

LIST OF FIGURES

Figure 1: Conceptual framework	18
--------------------------------------	----

ABBREVIATIONS AND ACRONYMS

CSIs	Centre for Strategic and International Studies
CSR	Corporate social responsibility
GDP	Gross Domestic Product
NEPAD	New Partnership for Africa's Development
SPSS	Statistical Packages for Social Sciences
UNCTAD	United Nations Commission for Trade and Development

ABSTRACT

Over the last few decades, the construction industry has experienced increase in size, technology complexity, interdependencies, and variations in demands from clients. In any construction project, the quality and delivery of the final product to the community can play a crucial role in improving future development and long-term survival of such organizations. The completion of projects in a timely manner is often a critical factor and measure of project success. Effective service delivery refers to producing work that is of high quality and recognized as efficient. The objective of this study was to evaluate factors influencing quality of building construction projects in Meru Town. The study was guided by the following specific objectives; to determine the influence of stakeholder involvement, construction materials, project funding and project management on quality of building construction projects in Meru Town. The study adopted a descriptive survey research design targeting all the 225-top management of construction companies, contractors, county inspectorate, national government officials and project owners in Meru town. A sample population of 172 respondents was arrived at with a 95% confidence level and an error of 0.05. Primary data was collected using questionnaires from the respondents while secondary data was obtained from organizations brochures, their websites, journals, periodicals, and other relevant sources that were available using a checklist. The study used both face and content validity to ascertain the validity of the questionnaires. In order to effectively analyse the primary quantitative data, descriptive statistics including percentages, frequencies, means and standard deviation was used while content analysis was used to analyse qualitative data and presented in prose form, involving explanations. Regression analysis was conducted to show how stakeholder involvement, construction materials, project funding and project management competence influence quality of building construction projects in Meru town. Presentation of quantitative data was done using frequency in tables. The study determined the influence of stakeholder involvement on quality of building construction projects in Meru Town and found that greatly influence quality of building construction project. The study further evaluating the extent to which project funding influence quality of building construction projects in Meru Town and revealed that it greatly influence quality of building construction project. The study also assessed the influence of construction materials on quality of building construction projects in Meru Town and found that greatly influence quality of building construction project. The study determined the influence of stakeholder involvement and concluded that it positively and significantly influences quality of building construction projects in Meru Town. The study further concluded that project funding greatly and positively influences quality of building construction projects in Meru Town. The study also assessed the influence of construction materials and concluded that it has a positive and significant influence on quality of building construction projects in Meru Town. The study recommends that the technical personnel in the construction industry must work together with all the stakeholders in the building industries in order to ensure safe sustainable storey buildings. This will ensure that all the stakeholders are involved in the implementation of the whole building project hence improving its quality. The study also recommends that inculcation of a culture of collaborative participation, characterized by the use of the relevant contract forms to ensure all stakeholders are conversant with their mandate and importance to the project as well as working with and seeking advice from risk management experts on practices such as risk pooling to protect stakeholders.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The construction industry, over the last few decades, has increased in size, technology complexity, interdependencies, and variations in demands from clients (Yong, 2013). The contribution of the industry to the GDP across global economies provides a sign of the significance of the sector. The consummation of tasks in an auspicious way is frequently a basic component and measure of venture achievement (Ondari, 2013). Weiss and Potts (2012) indicates that accomplishment of any venture is exceptionally reliant on its finishing time from beginning to conveyance of results. This has an immediate bearing on administration choices, for example, spending plans, targets and principles (Seddon, 2008).

In any construction organizations, the quality and delivery of the last item to the group can assume an essential part in enhancing future improvement and long haul survival of such associations. Compelling service delivery alludes to creating work that is of high caliber and perceived as productive (Cole, 2010). The long-haul goal of any association is to create superb ventures measured against the customary measures of time, cost and degree (Basu, 2014). Apparatuses and strategies assume a vital part in venture administration. In any case, the variables that specifically influence the convenient finish of undertakings are once in a while talked about as expenses and deliverables regularly take a lead (Shehu and Akintoye, 2009).

In the United Kingdom, Li, Akintoye, Edwards and Hardcastle (2013) argues that powerful obtainment, extended usage capacity, government overtures, and great financial conditions are basic achievement components (CSFs) for open private organization ventures. In Bulgaria, Alexandrova and Ivanova (2012) considers fitness of venture director, capability of venture group, nature of subcontractor administrations, and top administration bolster as CSFs of venture administration. In Lithuania, Gudiene, Ramelyte and Banaitis (2013) states that venture administration's experience, venture director's experience, experience of temporary worker, extend measure, ability of venture colleagues, clear and reasonable objectives, basic leadership adequacy of venture administration, and specialized capacity of venture

administration are the most vital achievement elements for development ventures. In Africa, the test of convenient venture conveyance can take numerous measurements relying upon the project's environment.

A study by United Nations Commission for Trade and Development (UNCTAD), (2011) on African development industry's turmoil's and their suggestions for New Partnership for Africa's Development (NEPAD) recognized expensive venture delays as a noteworthy issue and distinguishes poor project time, quality and cost analysis as a noteworthy issue. In 2009, the general population segment interest in development in South Africa was 7.49%. During the 1960s and 1970s, there was a sharp rise in construction expenditure and investment. It was around four times the rate of the GDP. Stern and Teljeur (2010) says that substantial parts of the country's infrastructure were developed during the 1960s and 1970s. In spite of a few temporary booms in the 1980s, construction activity has been on a steady decline. There was a severe downturn in the early 1990s, when output fell to 10% per annum for the years 1991 and 1993. During the second half of the 1990s, construction activity stabilized and marked the long-term decline in the industry.

Sweis's (2013) study of factors influencing time overrun out in the open development in Jordan discovered poor capability of advisors, designers and staff allocated to venture to be the top weighted elements. Besides, poor outline brief, poor comprehension of proprietor and partner prerequisites, insufficient site examinations, and issues with the utilization of right plan parameters are a portion of the contributory components to various modifications and revise. Planners need a far-reaching rundown of these elements that could impact extend comes about, and in this way, organize their endeavors in outline administration.

In Ghana, Frimpong et al (2012) recognized five elements as the significant reasons for delays to projects. These incorporate regularly scheduled installment challenges to contractual workers, poor contract administration, material procurement problems, poor specialized execution and material value accelerations. Poor expert administration, variance of costs, increasing expense of materials and poor site administration have likewise been recognized as variables bringing about a postponement in venture finishing time. With a specific end goal to hinder the test of opportune venture conveyance, Samuel (2008) prescribes that venture time

administration be a key need for the contractual workers and that the arrangement of an enrolled extend supervisor for every agreement ought to be a compulsory state of delicate. In Kenya, the development business contributes up to 5% of the National GDP as reported in the Economic Survey and contributes 10% to work broadly (Republic of Kenya, 2010a). Its commitment is esteemed at half regarding request which is a critical extent from a solitary Client (Nguyo, 2008). The arrangement of foundation devours around 10% of the National Budget as showed in the Printed Estimates (Republic of Kenya, 2011) In Kenya, deferrals of undertakings are wild particularly because of endemic defilement and poor reporting structures among people in general area (DFID, 2013). It is recognized in the Kenya Vision 2030 that a present day and result centered open administration is an essential for the nation's financial change (Republic of Kenya, 2007). Promote, the Constitution of Kenya in the Bills of rights gives each native the privilege to appreciate proficient and quality administrations (Republic of Kenya, 2010).

1.2 Statement of the Problem

The construction industry plays a fundamental role in the economy. Urban areas hold more than half of the human populace and consequently fabricating proprietors are in rush to complete development projects (Walley, 2011). Along these lines, the requirement for accomplishing quality projects in the building development is essential. Quality is a fundamental component for manageability and consumer loyalty. Stop and Papadopoulou (2012) indicate that around the world, development ventures encounter timetable, cost, and quality deviations from their unique arrangement. The frequencies of building failure and fall, and in addition the disturbing death toll that outcomes, have ended up significant issues in Kenya. There have been a few reports of poor administration of undertakings, superfluous surge in project usage, lacking organization and budgetary arrangements and exorbitant project management (Usman, Kamau and Mireri, 2014).

Kenya has a huge housing shortfall, which is developing each year and is progressively pervasive in urban zones including Meru town. As per the Ministry of Housing, the present yearly lodging shortfall is assessed to be more than 156,000 units on a yearly premise in view of the populace development and urban relocation. The pace of construction is still limited with slightly above 50,000 units constructed annually and the deficit filled by growth in slum

dwelling and poor quality traditional housing (Walley, 2011). The rate of construction of buildings in Meru town is high to accommodate the rising number of people looking for settlements.

Njogu (2011) studied factors influencing performance of informal labourers in the construction industry in Karatina Municipality, Central Province, Kenya. Munyoki (2014) analysed factors influencing completion of construction projects Nairobi County, Kenya. Wanjau (2015) studied factors influencing completion of building projects in Kenya, ministry of land, housing and urban development, Nairobi County. However, from the literature reviewed none of the scholars has evaluated on the factors influencing quality of building construction projects in Meru town. This study will fill this gap by answering the question; what are the factors that influence the quality of building construction projects in Meru town?

1.3 Purpose of the Study

The purpose of this study was to evaluate the factors influencing quality of building construction projects in Meru Town.

1.4 Objectives of the Study

- i. To determine the influence of stakeholder involvement on quality of building construction projects in Meru Town,
- ii. To evaluate the extent to which construction materials influence quality of building construction projects in Meru Town,
- iii. To assess the influence of project funding on quality of building construction projects in Meru Town,
- iv. To explore the influence of Project management on quality of building construction projects in Meru Town,

1.5 Research Questions

- i. What is the influence of stakeholder involvement on quality of building construction projects in Meru Town?
- ii. To what extent do construction materials influence quality of building construction projects in Meru Town?

- iii. In what ways does project funding influence quality of building construction projects in Meru Town?
- iv. How does project management influence the quality of building construction projects in Meru Town?

1.6 Significance of the Study

The findings of this study will help inform policy makers on factors that have implications on quality of building construction projects. Policy makers will further be in a better position to formulate, design and implement policies that would ensure quality of buildings in the County.

The study will also help provide critical feedback to building owners. It will inform decision-making process to the various stakeholders involved in the management of infrastructure projects. The adoption of better decisions will improve on the implementation of other projects to help save on time and money.

1.7 Delimitation of the Study

The study would evaluate the influence of stakeholder's involvement, construction materials, project funding and project management competence on the quality of building construction projects in Meru Town for a period of five years from 2011 to 2015. The survey of building construction projects in would be done in Meru Town.

1.8 Limitations of the Study

This main objective of the study was to evaluate the factors influencing quality of building construction projects in Meru Town. Data would be collected from top management of construction companies, contractors, county inspectorate, national government officials and project owners who are generally busy due to the nature of their work. This would affect the response rate. To counter this, challenge the questionnaires would be dropped and picked later. Prior arrangements to deliver and pick questionnaire would be made to ensure the respondents are met at their convenience.

The study would be conducted in Meru town and therefore its findings are applicable in Meru County only and other counties in Kenya that have similar characteristics. Therefore, the

findings may suffer from generalization since the County may not be a significant representation of all the Counties in Kenya.

The accuracy of the results would be limited to the extent that the respondents would be accurate and honest with their responses. The reliability of the findings would therefore depend on the information provided by the respondents.

1.9 Basic Assumptions of the Study

This study assumed that the respondents would be honest, cooperative and objective in the response to the research instruments and would be available to respond to the research instruments in time. Finally, the study assumed that the authorities in the firms will grant the required permission to collect data from employees.

1.10 Definition of Significant Terms

Stakeholder Engagement: Is the process by which an organisation involves people who may be affected by the decisions it makes or can influence the implementation of its decisions.

Project Funding: Funding of long-term infrastructure projects

Construction Materials: These are materials used in the construction project including cement building blocks, sand etc.

Project Management Competence: This is a strategic advantage gained by organisations that master it

Quality of Building Construction: Quality means the absence of defects, performance, durability, fitness for purpose; standard relative to things of a similar kind.

1.11 Organization of the Study

The study was organized into five chapters. Chapter one contains the background of the study, statement of the problem, purpose of the study, objectives, research questions, significance of the study, limitations, delimitations, basic assumptions of the study and the organization of the study. Chapter two is the literature review and the chapter will also present a theoretical and conceptual framework showing the variables and the various indicators. Chapter three outlines the research methodology which will be used in the study and includes research design, target population, sample size and sampling techniques, sample size, sampling techniques, research instruments, questionnaires, validity of the instruments, reliability of the

instruments, and finally piloting of the research instruments. The study will also present the Operationalization of variables table. Chapter four shall present analysis, presentation and interpretation of data while chapter five will entail summary of findings, discussions of findings, conclusions, recommendations and suggestions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section consists of the theoretical framework for the study, review of the literature on variables, the conceptual framework, and empirical review, critique of the existing section provides the theories that support the variables under investigation.

2.2 Stakeholder Involvement and Quality of Building Construction Project

Stakeholder Management is about connections between an organization and their groups intrigued or partners. These connections influence the people and their associations that could be certain, or impact any fruitful venture. Along these lines, the Stakeholders from any venture ought to be required by the associations with the standpoint to minimize the negative effects and ensure that there are no hindrances in the method for a fruitful venture. Stakeholder administration concentrates on comprehension stakeholder' needs and desires, tending to issues as they happen, overseeing clashing interests and encouraging suitable stakeholder engagement in venture choices and exercises (Seddon, 2008).

As demonstrated by Aliverdi, Naeni and Salehipour (2013), materials speak to a noteworthy segment of things and project costs. The cost characterized as materials incorporate between 20-half of the total wander cost and every so often more. A couple thinks about assumed that materials speak to around 50-60% of the wander cost. Better material organization practices could consequently extend capability in operations and reduce general cost (Hwang and Ng 2013). Beat organization and wander proprietors should give watchful thought to material organization because of material insufficiencies, high advance charges, increasing expenses of materials, and competition. There is a creating care in the advancement business that material organization ought to be tended to as an expansive composed organization activity.

Given the developing number of stakeholders and their numerous variable desires, the contrasting desires of partners can't be accomplished in the meantime. It is consequently critical to deal with the continually moving harmony between the interests of stakeholders. The Stakeholder management ought to incorporate the administration of their connection with

the venture and the association keeping in mind the end goal to bolster their destinations. In this sense, they ought to make a positive situation in which to build up a firm trust in each other (Chinyio and Olomolaiye, 2010).

Besides, the way that stakeholders are rapid and their impacts on the venture change after some time contingent upon the issues being considered, can prompt to instabilities in any venture if the stakeholders and their needs and potential impact are not deliberately indentified and oversaw (Chinyio, 2010). The inability to recognize the worries of restricting outside stakeholders will bring about a drawn out and deferred arranging and plan due to the consolidated powerbase of contradicting stakeholders conflicting with the advance of the venture as an aftereffect of saw non-contribution and thought of their interests (Olander, 2007). It is important that the dynamism of partners' advantage has brought about deferrals in the arranging and usage of some significant development projects.

2.3 Project Funding and Quality of Building Construction Project

Project funding was defined by Finnety (2009) as rising of funds to finance an economically separable capital investment project, which the providers of funds look essentially to the income from the project as the wellspring of assets to benefit their advances and give the profits of value put resources into the project. Advance, Matesehe (2013) characterize extend funding as funding a specific monetary unit in which a bank is fulfilled to look at first to the income and profit of that monetary unit as the wellspring of assets from which an advance will be reimbursed and to the benefits of the financial unit as the security for the advance.

Funding of development projects is subsequently anticipated that would be a monetary speculation. In an economy of a nation, development industry helps in making riches and business openings Olatunji (2010). It assembles and additionally grow foundation that encourages the administration business. Along these lines it can goad monetary development no matter how you look at it. Encourage, in an improvement of any nation, the development business assumes fundamental parts in changing the goals and the requirements of its kin into reality by actualizing different physical structures Ahmed (2010). In that capacity, government offices organize interests in development projects.

As a development project is a speculation that ought to at last bode well, there is thusly the requirement for the development experts to offer unmistakable arrangements as far as defeating development delays. Projects are key exercises started to make monetary esteem and upper hand Shenhar et al. (2010). Key to funding tasks is supportability. The conventional types of funding tasks have been value and obligation. However in the later past imaginative methods for funding projects have come up and these incorporate uncommon projects vehicle, investment and so on development tasks are additionally subsidized by multilateral bodies and outside guide.

The cost characterized as materials incorporate between 20-half of the total wander cost and every so often more. A couple thinks about assumed that materials speak to around 50-60% of the wander cost. Better material organization practices could consequently extend capability in operations and reduce general cost (Hwang and Ng 2013). Beat organization and wander proprietors should give watchful thought to material organization because of material insufficiencies, high advance charges, increasing expenses of materials, and competition. There is a creating care in the advancement business that material organization ought to be tended to as an expansive composed organization activity. Olatunji (2010) states that groups in the development part work in a globalized advertise, with vast project groups and jointed tasks with universal organizations in which they show social contrasts, proficient morals and diverse thoughts regarding how to direct business.

2.4 Construction Materials Management and Quality of Building Construction Project

The prerequisites for a fruitful administration framework structure is obligatory in any improvement amplify. A number of organizations have expanded the productivity of their activities with a particular true objective to remain engaged and secure future work. Huge change and cost save assets would give off an impression of being possible through enhanced materials organization. Perfect openness of materials and structures are vital to productive advancement (Enshassi, Mohamed and Abushaban, 2009). Materials organization limits are consistently performed on a partitioned commence with immaterial correspondence and no unmistakably settled obligations doled out to the proprietor, master or legally binding labourer.

As demonstrated by Aliverdi, Naeni and Salehipour (2013), materials speak to a noteworthy segment of things and project costs. The cost characterized as materials incorporate between 20-half of the total wander cost and every so often more. A couple thinks about assumed that materials speak to around 50-60% of the wander cost. Better material organization practices could consequently extend capability in operations and reduce general cost (Hwang and Ng 2013). Beat organization and wander proprietors should give watchful thought to material organization because of material insufficiencies, high advance charges, increasing expenses of materials, and competition. There is a creating care in the advancement business that material organization ought to be tended to as an expansive composed organization activity.

While clearly materials should be procured at the most insignificant cost possible to give hold assets to the association, the nature of the materials used will in like manner inside and out effect the way of the improvement expand (Fisk and Reynolds 2011). Material testing is principal in all endeavours, particularly the building parts. This is in light of the fact that a wrong examination of a material would finally be dangerous to people and the earth since it will lead to construction of poor quality structures that may collapse causing danger to both people and earth. Improvement associations have since a long time back experienced an extension in costs and a lessening in effectiveness. Proprietors of these associations frequently envision that these additions in cost are a direct result of swelling and money related issues. Regardless, investigate shows that material organization has been an issue of stress in the advancement business. 40% of the time lost adjacent can be credited to repulsive organization, nonattendance of materials when required, poor unmistakable confirmation of materials and lacking stockpiling (Fewings, 2013).

Materials are essential in the operations in every industry since unavailability of materials can stop era. Besides, of materials when required can impact effectiveness, cause deferrals and possible suspension of activities until the required material is available. Detachment of materials is by all record by all account not the only point of view that can achieve issues. Over the top measures of materials could moreover make real issues to chiefs. Limit of materials can construct the costs of era and the total cost of any wander (Fisk and Reynolds 2011). Exactly when there are obliged domains open for limit, the directors need to find diverse different choices to store the materials until they are required. Some of these decisions

may require re-treatment of materials, which will construct the costs associated with them. Plans should be gotten a handle on to handle and store the materials enough when they are gotten. Remarkable thought should be given to the surge of materials once they are secured from suppliers (Aliverdi, Naeni and Salehipour, 2013). Enshassi, Mohamed and Abushaban (2009) concentrating on components influencing the execution of development undertakings in the Gaza strip found that the most imperative elements concurred by the proprietors, advisors, and contractual workers as influencing the execution of development activities were material costs and quality and accessibility of assets.

2.5 Project Management Competence and Quality of Building Construction Project

The capability of the project manager in project usage will likewise influence the consummation of a project. For instance viable observing and criticism by the project head, extend administrators specialized capacity, initiative nature of the project supervisor, compelling checking and input by the project partners. Power to take everyday choices by the project chiefs' group at site. Besides, the achievement of project relies on the viability of the project group in dealing with the procedure (Olatunji, 2010). This shows satisfactory limit of the project supervisor and the project group to guarantee appropriate assessment and examination of work done nearby.

As indicated by Daft (2010), extend administration is the fulfillment of hierarchical objectives in a powerful and effective way through arranging, sorting out, driving and controlling authoritative assets. Usman, Kamau and Mireri (2014) included that the developing many-sided quality of the building business calls for expanded adequacy in the arranging and control of activities. Be that as it may, development strategies utilize a scope of conventional to present day systems to address customer's issues in view of worldwide monetary advancement. As a consequence of populace blast and proceeded with interest for new sorts of structures, there is the requirement for expert specialists who are versed in project development frameworks.

Wambugu, (2013) deduced in a study that lacking supervision and review of work in development extend prompted to improve in cases of poor workmanship and this prompted to postpone in project convenient finishing. This additionally prompts to project cost overwhelm

and may result to project failure. Lacking site review is one of the variables recognized as creating project delays in opportune culminations as per Jagboro and Aibinu, (2010). Mojahed in study completed in 2013 states that events of adjust are basically ascribed to inept specialists on account of inadequate working abilities and information of drawings or to awkward directors in light of absence of experience prompting to insufficient supervision.

Extend administration as noted by Fapohunda and Stephenson (2010) is the indispensable of the whole development extend capacities which incorporate coordination of subcontractors, booking, cost control, work connection, charging, acquiring, exhausting, and different capacities identified with the project. In Construction Company, extend chief is responsible for these capacities. The utilization of project development systems is imperative in the development business, on the grounds that the coordination and utilization of the numerous sorts of work, abilities, materials, and types of gear which are utilized as a part of development require day by day use of legitimate project development procedures (Phua and Rowlinson, 2010).

The administrative framework is basically worried with basic leadership for arranging and controlling authoritative attempt. The administrative subsystem can be viewed as spreading over the whole association by relating the association to the earth, setting the objectives, creating complete vital, and operational arrangements, planning the structure and building up control forms (Kast and Rosenzweig, 2011). A necessary component of the administrative undertaking is authoritative basic leadership – picking a general system, setting particular goals, outlining structures and procedures, selecting individuals, assigning duty, assessing comes about and starting changes.

Sidwell (2012) pushed that the level of project administration activities can be reflected in the range and kind of control instruments set up for the specific issue. Toward one side of the range will be a low control circumstance, where neither one of the professionals outline group, drawings, determinations, documentation nor standard type of agreement exist. Minor works may fall into this class. Then again a high control circumstance may exist if point by point documentation is directed through an arrangement of standard meeting, observing and reviews. Sidwell (2012) presumed that administrative control (classed as project

administration activities) is a key component in making project progress, being altogether identified with all measures of accomplishment. Ireland (2013) discovered comparable results for administrative activity. Rowlinson (2008) inferred that abnormal state of authoritative capacity in the venture group prompts to decreased time overwhelms, which thus prompts to expanded fulfillment.

Expanded many-sided quality, instability, and time weight in development projects have expanded the requirement for participation among various project on-screen characters (Anvuur and Kumaraswamy, 2007). Generally, connections are, be that as it may, extremely focused and ill-disposed in the development business, which to an expansive degree is because of the standard acquisition methodology conceivably bringing on numerous issues in all phases of the purchasing procedure. Along these lines, keeping in mind the end goal to exploit cooperation, obtainment systems are one key change zone and can contribute generously to venture achievement (Eriksson, 2007). Escalated correspondence is a focal calculate driving and coordinating individuals and taking choices to make a fruitful venture (Laufer et al., 2009). In this manner, there is a need to build up a powerful data framework for development extends so that each privilege and concerned individual can get to and share thoughts. All the more extensively, —shared extend vision is inconceivable when there is poor correspondence among venture partners. As individuals turn out to be better educated and more mindful of what is going on in their project, they will turn out to be more included and resolved to venture's advance, and as a result, turn out to be better roused (Clarke, 2009). Notwithstanding research extension and setting, participation is reliably credited to be an imperative determinant of development venture achievement (Phua and Rowlinson, 2010). Visit advance gatherings are, along these lines, inescapable. —What is going on is imparted to the gatherings. At that point, remedial and preventive activities are auspicious connected to guarantee great project execution. Legitimate project observing and control framework is unthinkable without powerful advance gatherings. A project has an opportunity to be finished effectively when the project plans are overhauled frequently. Additionally, keeping in mind the end goal to guarantee extend achievement, the arrangements should be kept straightforward, with the right level of detail that can urge a project to be evaluated promptly (Clarke, 2009).

Group inclusion is another consider the correspondence segment. It has been observed to be a critical figure past studies (Awakul and Ogunlana, 2010). Huge scale development activities are typically laden with discussion. Along these lines, a strong and comprehension group is essential for smooth usage. This can't be accomplished unless the project data is shared satisfactorily. Yeo (2012) noticed that a huge framework extend needs support and comprehension from the group influenced by the project, particularly amid the development time frame. He included that overseeing open responses and conclusions and comprehension open states of mind are a basic part of the project development obligation. It is then key that the venture members ought to honestly share the project data and get distinctive open points of view with respect to their project.

2.6 Theoretical Review

2.6.1 System Theory

As demonstrated by Aliverdi, Naeni and Salehipour (2013), materials speak to a noteworthy segment of things and project costs. The cost characterized as materials incorporate between 20-half of the total wander cost and every so often more. A couple thinks about assumed that materials speak to around 50-60% of the wander cost. Better material organization practices could consequently extend capability in operations and reduce general cost (Hwang and Ng 2013). Beat organization and wander proprietors should give watchful thought to material organization because of material insufficiencies, high advance charges, increasing expenses of materials, and competition. There is a creating care in the advancement business that material organization ought to be tended to as an expansive composed organization activity.

2.6.2 Stakeholder Theory

Stakeholder theory is basically a management instrument. The attributes elements, direness and authenticity of cases characterize an association's stakeholders. Power and desperation must be gone to if chiefs are to serve the lawful and good interests of honest to goodness stakeholders (Mitchell et al, 1997).

From the displayed theory, it can be contended that open division can be described as being intricate settings with numerous stakeholders that regularly have various, ambiguous and separating objectives. In any case, no critical proof have been found that completely keeps the

exchange of working thoughts, strategies and theory from the private area to general society segment. Still, the probability of effective results of such exchanges is thought to be identified with the level of acclimation to fit the attributes of the objective setting.

The adjusted scorecard shows up in two flavors: one created to fit the necessities of the private segment and one to coordinate the particular needs of the general population segment. Albeit to some degree diverse in structure and substance, the justification for utilizing either form is the longing to create and understand a procedure in view of more than simply monetary measures. Not just does the BSC target budgetary components, it gives a premise to deciding other essential elements that impact how an association can function towards its vision. Stakeholder theory contains an assortment of administration apparatuses and methods, especially created to help directors working in complex settings.

Key fundamentals of the theory incorporate recognizing that any association or project is encompassed by an assortment of stakeholders and that these stakeholders can influence the association or project. It is subsequently critical to comprehend the interests of key stakeholders keeping in mind the end goal to move an association or a project with at least clash. Stakeholder examination is especially helpful in mapping key stakeholders of a project and recognizing their particular advantages in the project. The stakeholder investigation along these lines appears like a suitable hopeful solution for the multifaceted nature related difficulties of the adjusted scorecard as a vital administration apparatus. Mohamed (2013) ascribed the development of CSR to Stakeholder theory, which recommends that an association's survival and achievement is perceived by the accomplishment of its monetary (e.g. benefit expansion) and non-financial (e.g. corporate social execution) goals in light of a legitimate concern for their stakeholders.

The management of any firm considers every stakeholder aggregate in any of the three diverse ways, to be specific; regularizing, instrumental, and unmistakable. The standardizing perspective recommends that the firm considers the interests of the whole stakeholder gather similarly and not just of the clients or stockholders. According to this perspective, a firm should lay the structure of a complete CSR activity in a way that offers consistently to the whole stakeholder group. The instrumental perspective supports an association's concentrate

on enhancing monetary execution contending that the financial achievement is the key goal for organizations. To accomplish this it is proposed that firm should lay accentuation on just those CSR characteristics that specifically enhance the financial management.

The distinct perspective recommends that an association's conduct can be anticipated by the association's shareholders, their qualities and relative impact, and Stakeholder theory determines the degree to which a partnership treats its stakeholders properly, and in this manner is connected to corporate social obligation (Öberseder, Schlegelmilch, and Murphy, 2013). Interestingly, Lee (2008) contended that inside the stakeholders theory there is no distinction between the social and the financial objectives of a firm (Lee M.- D. P., 2008). In reference to investigations of Hillman and Keim (2011) and Mitchell et al. (1997), it is very obvious that the stakeholders point of view is the center applied approach inside business and society (Porter, 2010).

2.7 Conceptual framework

Independent variables

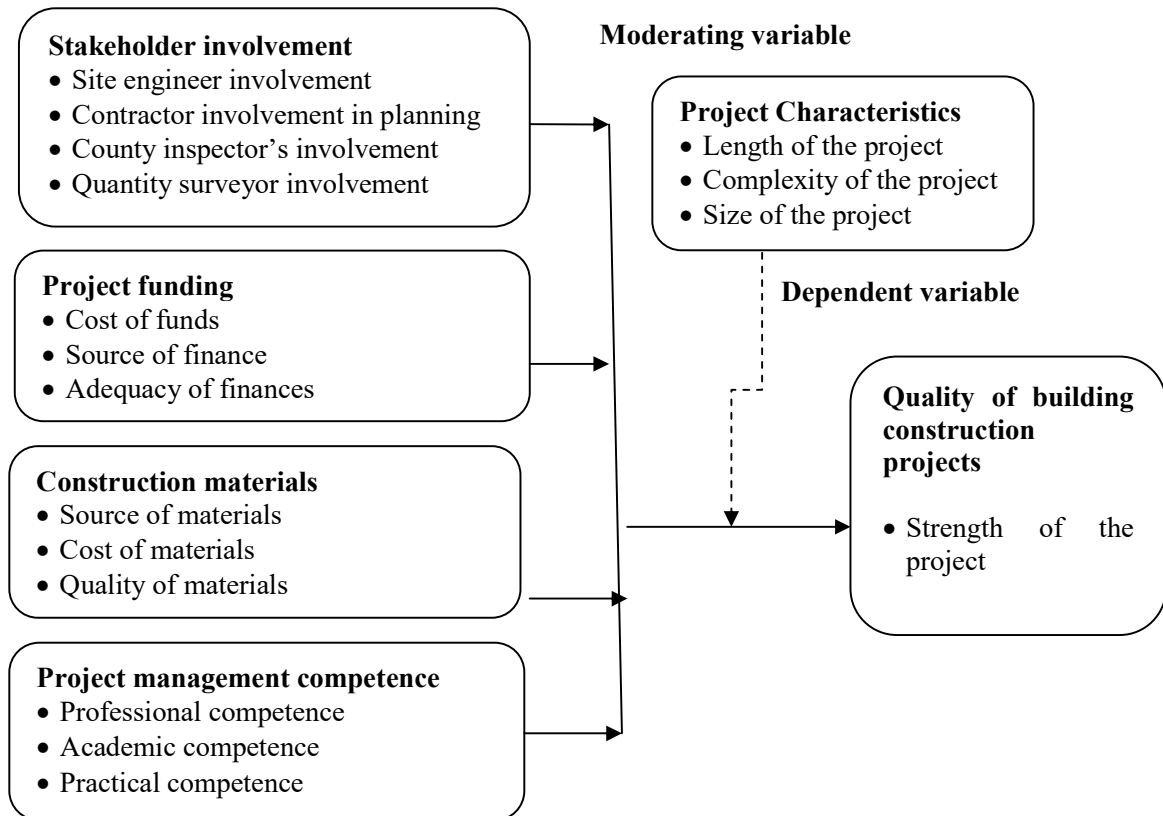


Figure 1: Conceptual framework

2.8 Summary and Research Gap

This chapter reviews the relevant literature in relation to the research questions presented in the study. The chapter demonstrated that the relationship between stakeholder involvement, project funding, construction materials and project management competence and quality of a construction project. The study established that because of the developing number of stakeholders and their various variable desires, the varying desires of stakeholders can't be accomplished in the meantime and it is consequently critical to deal with the always moving harmony between the interests of stakeholders. At the point when each financial specialist wanders in a development extend, hence they contribute cash inside a predetermined time and anticipate that the speculation will reimburse itself. In that capacity opportune fulfilment and nature of the venture guarantees the cost acquired to be the fundamental stakeholders cost. The requirement for a successful materials administration framework is compulsory in any development extend. Extensive change and cost funds would appear to be conceivable

through upgraded materials administration. At long last, the capability of the stakeholders administrator amid stakeholders planning will likewise influence the opportune culmination of a stakeholders. Inspirational state of mind of stakeholders director and stakeholders members has developed to be the most critical achievement trait for quality compliances at stakeholders sites.

2.9 Research Gap

Previous scholars have dwelled on the broad topic of the determinants of quality of construction projects. Abdulsalam (2013) studied on factors affecting design quality in construction industry in Syria, briefs his research on factors affecting design quality in construction. Poor design is the main factor that reduces the overall performance of the construction project. The main factors are insufficient overall design time, method of selecting the designer, lowest price offer, lack of documentation and changes in client requirements. Ahzahar, Karim, Hassan and Eman (2011) conducted a study to find the factors to building failures & defects in construction industry. The study found that failures & defects are common in construction which rises cost, duration and resources. The identified factors are climatic conditions, location of building, construction materials, maintenance, faulty design and lack of supervision.

Rifat and Mohammad (2014) did an identification of the factors affecting quality in building construction projects in Gaza Strip. The study was undertaken to determine the underlying factors affecting quality of building construction projects in Gaza Strip. Gatugu (2014) established the factors affecting construction projects a case of Anglican Church of Kenya, St Andrew's Cathedral Archdeaconry, Thika, Kiambu County. However none of these studies has focused on factors influencing quality of building construction projects a case of building construction projects in Meru town, Meru County, Kenya. This creates a research gap that this study seeks to bridge.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter explains the methodology that was used to find answers to the research questions. In this chapter, the research methodology is presented in the following order, research design, target population, sampling procedure, data collection methods, instruments of data collection and the pilot study. The section also explains how data was analyzed to produce the required information necessary for the study. Finally, the chapter provides the ethical issues and operationalization of the variables.

3.2 Research Design

The study adopted a descriptive survey research design. This design was adopted because it describes the state of affairs, as it exists at present in the study (Kothari, 2012). The study intends to apply this design is to evaluate the relationship between design factors and quality of building construction projects in Meru Town. This design is very useful in studying the inter-relations between the variables already mentioned in the conceptual framework Mugenda and Mugenda, (2012). A survey approach is appropriate because the population of the study is scattered in different geographical regions within Meru town, Kenya.

3.3 Target Population

Target population is a well-defined and specified set of people, group of things, households, firms, services that are being investigated (Ngechu, 2006). This study was based in Meru town. The target population was all the 225 top management of construction companies, contractors, county inspectorate, national government officials and project owners in the town as shown in Table 3.1

Table 3. 1 Target Population

CATEGORIES	TOTAL NO.	Percentage
Contractors	56	24.89
County inspectorate	25	11.11
National government officials	46	20.44
Project owners	58	25.78

Total	225	100.00
--------------	------------	---------------

3.4 Sample Size and Sampling Procedure

The sampling plan describes the sampling unit, sampling frame, sampling procedures and the sample size for the study. The sampling outline depicts the list of all populace units from which the specimen was chosen (Cooper and Schindler, 2012). As indicated by Orodho (2012), sampling includes selecting a given number of subjects from a characterized population in order to represent to the whole population.

The physical verification of the projects and respondents was made to assist to locate the business for sampling process. Stratified and simple random sampling technique was used in this study. Stratified sampling was used to group the target population into categories or strata based on the geographical location of the business. From each category, representative samples were drawn through simple random methods. This method ensures that all the individuals in the target population have an equal chance of being included in the sample. This help to eliminate the biasness.

A sample population of 172 respondents was arrived at by calculating the target population of 225 with a 95% confidence level and an error of 0.05 using the below formula taken from Kothari (2010).

$$n = \frac{z^2 \cdot N \cdot \hat{p}^2}{(N - 1)e^2 + z^2 \hat{p}^2}$$

Where; n = Size of the sample,

N = Size of the population and given as 225,

e = Acceptable error and given as 0.05,

\hat{p} = The standard deviation of the population and given as 0.5 where not known,

Z = Standard variate at a confidence level given as 1.96 at 95% confidence level.

Table 3. 2 The Sampling Matrix

CATEGORIES	TOTAL NO.	Sampling ratio	Sample Size
Contractors	56	0.76	43
County inspectorate	25	0.76	19
National government officials	46	0.76	35
Project owners	58	0.76	44
Total	225		172

3.5 Data Collection Instruments

Primary data was gathered utilizing questionnaires from the respondents. A questionnaire is a pre-figured composed group questions to which respondents record their answers, more often than not inside rather firmly characterized options, which is extremely important technique for gathering an extensive variety of data from respondents (Sekaran, 2006). Kothari (2007) terms the questionnaire as the most proper instrument because of its capacity to gather a lot of data in a sensibly fast traverse of time. It ensures privacy of the source of data through obscurity while guaranteeing institutionalization (Chandran, 2010). It is for the above reasons that the source is picked as a suitable instrument for this study.

The questionnaire was structured to provide respondents with easy fill-in the data. The questionnaire had two sections. Secondary data was obtained from organization's brochures, their websites, journals, periodicals, and other relevant sources that were available using a checklist.

3.6 Validity of Instruments

Gillham (2013) stated that the knowledge and skills covered by the test items should be representative to the larger domain of knowledge and skills. Expert opinion was requested to comment on the representativeness and suitability of questions and give suggestions of corrections to be made to the structure of the research tools. This helped to improve the content validity of the data that was collected. Content validity was obtained by asking for the opinion of the supervisor, lecturers and other professionals on whether the questionnaire was adequate.

3.7 Reliability of Instruments

Instrument dependability then again is the degree to which an research instrument produces comparative results on various events under comparable conditions. It's the level of consistency with which it quantifies whatever it is intended to quantify (Bell, 2010). Dependability is worried with the topic of whether the consequences of a study are repeatable. A develop composite unwavering quality co-productive (Cronbach alpha) of 0.6 or above, for every one of the builds, is thought to be satisfactory for this study (Rousson, Gasser and

Seifer, 2012). Unwavering quality coefficient of the examination instrument was evaluated utilizing the Cronbach's alpha (α) which is computed as follows:

$$\alpha = k/k-1 \times [1 - \sum (S^2) / \sum S^2_{\text{sum}}]$$

Where:

α = Cronbach's alpha

k = Number of responses

$\sum (S^2)$ = Variance of individual items summed up

$\sum S^2_{\text{sum}}$ = Variance of summed up scores

3.8 Data Collection Procedure

An introduction letter was obtained from the university which was presented to each manager so as to be allowed to collect the necessary data from the respondents. The drop and pick method is preferred for questionnaire administration so as to give respondents enough time to give well thought out responses. Research assistants were trained on interviewing skills including developing rapport, convincing respondents to provide relevant data and seeking clarifications whenever necessary. Research assistants booked appointment with respondent organizations at least two days before visiting to administer questionnaires.

3.9 Data Analysis and Presentation

Data obtained from the field in raw form was cleaned, coded into a computer and analyzed. It is the result of such analysis that sense of the data is seen (Mugenda & Mugenda, 2012). In order to effectively analyze the primary quantitative data, descriptive statistics including percentages, frequencies, means and standard deviation were used. Presentation of quantitative data was done using frequency in tables. Presentation of qualitative data was done in prose form, involving explanations. Regression analysis was conducted to show how stakeholder involvement, construction materials, project funding and project management competence influence quality of building construction projects in Meru town.

The regression model was:

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

Where: Y = Quality of Building Construction Projects

β_0 = Constant Term;

$\beta_1, \beta_2, \beta_3$ and β_4 = Beta coefficients;

X_1 = Stakeholder involvement;

X_2 = Construction materials;

X_3 = Project funding;

X_4 = Project management competence

ε = Error term

3.10 Ethical Issues

Sensitive information was corrected and therefore there is moral commitment to treat the data with most fundamental care. The respondents were guaranteed secrecy of the data given to guarantee that the respondents are not hesitant to give the data as needed by the study. This was done by using the transmittal letter as well as research authorization from The National Commission for Science, Technology and Innovation (NACOSTI) indicating that the data collected was only for academic purposes.

3.11 Operationalization of Variables

The operationalization of variables is shown in Table 3.3.

Table 3. 3: Operationalization of variables

Objective	Variable	Indicators	Measurement scale	Tools of analysis	Type of data analysis
To determine the influence of stakeholder involvement on quality of building construction projects in Meru Town	Independent: stakeholder involvement	Site engineer involvement Contractor involvement in planning County inspectors involvement Quantity surveyor involvement	Ordinal Ordinal Interval Ordinal	Mean Percentage	Descriptive Regression
To evaluate the extent to which construction materials influence quality of building construction projects in Meru Town	construction materials	Source of materials Cost of materials Quality of materials	Ordinal Ratio Ordinal Ordinal	Mean Percentage	Descriptive Regression
To assess the influence of project funding on quality of building construction projects in Meru Town	project funding	Cost of funds Source of finance Adequacy of finances	Nominal Nominal Ordinal	Mean Percentage	Descriptive Regression
To explore the influence of Project management	Project management	Professional competence Academic competence	Ordinal	Mean	Descriptive

management competence on quality of building construction projects in Meru Town	competence	Practical competence	Ratio Interval Ordinal	Percentage	Regression
	Dependent: Quality of building construction projects in Meru Town,	Structural strength of the building Customer satisfaction Economic life of the building	Ordinal Ordinal Interval	Mean Percentage	Descriptive Regression

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents analysis of data and presents data in tables, undertakes data presentation and interpretation and discusses study findings according to study themes. The chapter provides the major findings and results of the study as obtained from the questionnaire.

4.2 Questionnaire Response Rate

Questionnaire response rate indicates the rate in percentages at which the questionnaires given to respondents were filled and returned. The returned questionnaires were the ones analysed.

Table 4.1 below shows the response rate from the sample size.

Table 4. 1: Questionnaire Response Rate

Project Sector	Sample Size	Questionnaires Returned
Contractors	50	41
County inspectorate	27	19
National government officials	43	31
Project owners	52	38
Total	172	129

The study targeted a sample size of 172 respondents out of which 129 filled in and returned the questionnaires, making a total response rate of 75% as shown on Table 4.1. In this case, the response rate obtained from this study can be classified as excellent and was sufficiently representative of the target population. This response rate was highly capable of producing useful results and make meaningful inferences. The study therefore proceeded.

4.3 Data Reliability

The reliability is expressed as a coefficient between 0 and 1.00; where the higher the coefficient, the more reliable the test is.

Table 4. 2: Reliability Test of Constructs

Variable	Cronbach's Alpha	No. of Items	Rank of Reliability	Comments
Stakeholder involvement;	0.743	4	4	accepted
Construction materials;	0.787	6	2	Accepted
Project funding;	0.828	4	1	Accepted
Project management competence	0.763	5	3	accepted

The findings indicated that project funding was more reliable with coefficient of 0.828 (4 items), followed by construction materials with a coefficient of 0.787(6 items), then project management competence with a coefficient of 0.763 (5 items) while stakeholder involvement was the least reliable with a coefficient of 0.743 (4 items). All constructs depicted that the value of Cronbach's alpha are above the suggested value of 0.7.

4.4 Demographic Characteristics of the Respondents

As part of their demographic information, the study sought to establish the background information of respondents. This included their relationship with the project, their highest level of education and how long the respondent has been in the industry. These are further discussed in the following subsequent themes.

4.4.1 Respondents Relationship with the Project

The study sought to establish the relationship between the respondent and the project; therefore the respondents were asked to state their relationship with the project. the results are presented in table 4.3.

Table 4. 3: Respondents Relationship with the Project

Relationship	Frequency	Percentage
Contractors	41	31.8
County inspectorate	19	14.7
National government officials	31	24.0
Project owners	38	29.5
Total	129	100

As shown in table 4.3, 19(14.7%) of the respondents reported that they are county inspectorate, 31(24%) of the respondents reported that they are national government officials, 38(29.5%) of the respondents reported that they are project owners while 41(31.85) reported that they are contractors. This implies that most of the respondents in this study had the

requisite information projects and capable of giving correct information based on their experience.

4.4.2 Respondents Highest Level of Education

The study sought to establish the respondents' highest level of education to determine how suitable the respondents were for data collection concerning the factors influencing quality of construction projects. These findings are presented in table 4.4.

Table 4. 4: Respondents Highest Level of Education

Highest Level of Education	Frequency	Percentage
Post Graduate	9	7.0
Undergraduate	58	45.0
Diploma	34	26.4
Certificate	28	21.7
Total	129	100

According to the findings, most of the respondents (45%) indicated that they had undergraduate as the highest level of education. 26.4% reported their highest level of education as diploma, 21.7% said that certificate is their highest level of education while 7% said that postgraduate is their highest level of education. Majority of the respondents therefore were academically qualified to participate in this study.

4.4.3 Respondents Period in the Industry

The study further was interested in identifying how long had the respondent been in the industry; therefore the respondents were requested to tell the period in which they have been in the industry and their responses summarised in table 4.5.

Table 4. 5: Respondents Period in the Industry

Period in the Industry	Frequency	Percentage
1 to 5 years	23	17.8
6 to 10years	56	43.4
11 to 15 years	26	20.2
16 to 20 years	18	14.0
21 years and above	6	4.7
Total	129	100

Results in table 4.5 show that 6(4.7%) of the respondents had been in the industry for 21 years and above, that 18(14.0%) of the respondents had been in the industry for 16 to 20 years, that 23(17.8%) of the respondents had been in the industry for 1 to 5 years and that 26(20.2%) of

the respondents had been in the industry for 11 to 15 years while 56(43.4%) of the respondents had been in the industry for 6 to 10 years. This implies that most of the respondents had been in the industries for long enough to be relied upon for data collection.

4.5 Factors Influencing Quality of building Construction

This contains subsections on stakeholder involvement, construction materials, project funding and project management competence as well as quality of construction.

4.5.1 Stakeholder Involvement

The respondents were asked to indicate the extent to which stakeholder involvement influence quality of building construction project and their responses were used to come up with the findings in table 4.6.

Table 4. 6: influence of Stakeholder Involvement on quality of building construction

	Frequency	Percent
Little extent	12	9.3
Moderate extent	34	26.4
Great extent	62	48.1
Very great extent	21	16.3
Total	129	100

From the findings, the study revealed that stakeholder involvement influenced quality of building construction projects in a great extent as shown by 48.1%, in a moderate extent as expressed by 26.4%, in a very great extent as shown by 16.3% and in a little extent as shown by 9.3%. This implies that stakeholder involvement greatly influence quality of building construction project.

In an effort to determine the effect of stakeholder involvement on quality of building construction, respondents in this study were asked to indicate the extent of influence of specific statements in the questionnaire that related to stakeholder involvement influence on quality of building construction. The findings are as shown in Table 4.7.

Table 4. 7: Stakeholder Involvement Aspects

	Mean	Std Dev.	C V
Site engineer involvement	4.125	.852	20.65%
Contractor involvement in planning	4.487	.685	15.27%
County inspector's involvement	3.359	.754	22.45%
Quantity surveyor involvement	4.610	.792	17.18%

According to the findings, quantity surveyor involvement as expressed by a mean score of 4.610 and contractor involvement in planning as expressed by a mean of 4.487 were revealed to greatly influence quality of building construction projects. Again, it was revealed that site engineer involvement as expressed by a mean of 4.125 greatly influence quality of building construction project. Finally, county inspector's involvement as expressed by a mean score of 3.359 moderately influence quality of building construction project and as shown by the coefficient of variation county inspector's involvement greatly influence quality of building construction project.

4.5.2 Project Funding

The study further sought to explore the extent to which project funding influence quality of building construction project in Meru Town, Meru County and the respondent's opinions are presented in table 4.8.

Table 4. 8: Extent of Project Funding Influence quality of building construction projects.

	Frequency	Percent
Little extent	19	14.7
Moderate extent	21	16.3
Great extent	67	51.9
Very great extent	22	17.1
Total	129	100

From the findings, the study revealed that project funding influence quality of building construction project in a great extent as shown by 51.9%, in a very great extent as shown by 17.1%, in a moderate extent as expressed by 16.3% and in a little extent as shown by 14.7%. This shows that project funding greatly influence quality of building construction project.

Further, in an effort to establish the extent to which various project funding aspects influence quality of building construction project in Meru County, respondents in this study were asked to indicate their opinions on the same and the responses of the respondents are as shown in table 4.9.

Table 4.9: Project Funding Aspects

	Mean	Std Dev.	C V
Cost of funds	4.525	.852	18.83%
Source of finance	3.465	.582	16.80%
Adequacy of finances	4.325	.795	18.38%

From the collected information, cost of funds was found to greatly influence quality of construction as represented by an average of 4.525. Further it was revealed that adequacy of finances greatly influence quality of construction as represented by an average of 4.325. The study finally found that source of finance lightly influence quality of construction as expressed by an average of 3.365 and that cost of funds was revealed to greatly influence the quality of the construction as expressed by coefficient of variation.

4.5.3 Construction Materials

The study was also interested in knowing the extent to which construction materials influence quality of building construction project and the respondents gave their opinions which are presented in table 4.10.

Table 4. 10: Extent to which Construction Materials Influence quality of building construction projects.

	Frequency	Percent
Little extent	8	6.2
Moderate extent	18	14.0
Great extent	75	58.1
Very great extent	28	21.7
Total	129	100

The results show that construction materials greatly influence quality of building construction project as shown by 58.1%, very greatly influence quality of building construction project as shown by 21.7%, moderately influence quality of building construction project as expressed by 14% and lightly influence quality of building construction project as illustrated by 6.2%. This reveals that construction materials greatly influence quality of building construction project.

Again, in an effort to determine the extent at which construction materials influence quality of building construction project in Meru County, respondents in this study were asked to give their opinions on the same and the findings were presented in table 4.11.

Table 4. 11: Construction Materials Aspects

	Mean	Std Dev.	C V
Source of materials	2.415	0.496	20.54%
Cost of materials	4.037	1.036	25.66%
Quality of materials	4.220	0.930	22.04%

The study findings indicate that that quality of materials greatly influence quality of a building construction as expressed by a mean score of 4.220 and that cost of materials greatly influence the quality of a building construction as expressed by a mean score of 4.037. The results also showed that source of materials lightly influence the quality of construction projects as expressed by a mean score of 2.415. As expressed by coefficient of variation, source of materials lightly influence the quality of construction projects.

4.5.4 Project Management Competence

The respondents further gave their opinions on the extent to which project management competence influences quality of building construction project in Meru County and their responses are as shown in table 4.12.

Table 4. 12: Extent of Project Management Competence Influence

	Frequency	Percent
Little extent	13	10.1
Moderate extent	21	16.3
Great extent	81	62.8
Very great extent	14	10.9
Total	129	100

The analysis of the extent of project management competence influence quality of building construction projects shows that project management competence in a great extent influences the quality of buildings as shown by 62.8%, in a moderate extent as shown by 16.3%, in a very great extent as expressed by 10.9% and in a little extent as illustrated by 10.1% influence quality of building construction project. This implies that project management competence greatly influence quality of building construction project.

In an effort to determine the extent to which various project management competence aspects influence on quality of building construction project in Meru County, respondents in this study were asked to give their opinions. The results are as presented in Table 4.13.

Table 4. 13: Project Management Competence Aspects

	Mean	Std Dev.	C V
Conflict management	3.777	0.890	23.56%
Leadership	4.521	0.954	21.10%
Team management	2.342	0.477	20.37%
Solutions development	3.976	0.875	22.01%

The results showed that leadership very greatly influence the quality of building construction project shown by a mean of 4.521 and that solutions development greatly influence quality of building construction project shown by a mean of 3.976. The study also revealed that conflict management influence quality of building construction project shown by a mean of 3.777 and that team management lightly influence quality of building construction project as shown by a mean of 2.342. Coefficient of variation shows that team management lightly influence quality of building construction project.

4.5.5 Project Characteristics and Quality of Building Construction Projects

Finally, the researcher made an effort of determining the influence of project characteristics by asking the respondents in this study to give their opinions on the same. The findings are as shown in Table 4.14.

Table 4. 14: Project Characteristics and Quality of Building Construction Projects

	Mean	Std Dev.	C V
Length of the project	4.200	0.615	14.64%
Complexity of the project	2.418	0.587	24.28%
Size of the project	4.560	0.739	16.21%

Respondents indicated that size of the project in a very great extent influence the quality of building construction project as expressed by a mean of 4.560 and that length of the project in a great extent influence the quality of building construction project as expressed by a mean score of 4.200. They however indicated that complexity of the project lightly influence the quality of building construction project as expressed by a mean score of 2.418. Further the coefficient of variation reveals that complexity of the project lightly influences the quality of building construction project.

4.5.6 Quality of Building Construction

The study further rated the extent of the quality of building construction project in the various aspects and the findings are presented in table 4.15.

Table 4. 15: Project Characteristics and Quality of Building Construction Projects

	Mean	Std Dev.	C V
Length of the project	4.125	.775	18.79%
Complexity of the project	3.652	.654	17.91%
Size of the project	3.365	.528	15.69%

The respondents rated that length of the project has improved as shown by a mean of 4.125 and that complexity of the project has also improved as shown by a mean score of 3.652. However the rated size of the project to have been constant as expressed by an average of 3.365.

4.6 Inferential Statistical Analysis

Data analysis entailed multiple regression analysis so as to test relationship among the study variables. SPSS version 20 was used for this analysis. The test of hypotheses to determine the level of significance of an independent variable against the dependent variable was tested through multiple regressions. The significance level will be set at probability < .05 for every statistical set.

4.6.1 Multiple Regression

Multiple regression analysis was conducted as to determine the relationship between stakeholder involvement, construction materials, and project funding and project management competence against the dependent variable quality of building construction projects. After running the selected data through SPSS, a statistical model was generated. The model generated is what is popularly called a multiple regression model.

This was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$

Where: Y = Quality of Building Construction Projects

β_0 = Constant Term;

$\beta_1, \beta_2, \beta_3$ and β_4 = Beta coefficients;

X_1 = Stakeholder involvement;

X_2 = Construction materials;

X₃= Project funding;

X₄= Project management competence

ε = Error term

Table 4. 16: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.837	0.700	0.690	0.312

Model summary shows that 69.0% of the variations in the quality of building construction projects are attributed to stakeholder involvement, construction materials, and project funding and project management competence. The remaining 31% can be attributed to other unexplained factors in this study.

Table 4.17: Summary of One-Way ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	28.776	4	7.194	72.325	1.70E-31
	Residual	12.334	124	0.099		
Total		41.11	128			

The summary of analysis of variance shows that regression relationship was highly significant since the p-value=0.000<0.05 and F calculated=73.325< F critical =2.134. This shows that the regression relationship could be used to predict how the quality of building construction projects vary with stakeholder involvement, construction materials, and project funding and project management competence.

Table 4. 18: Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	1.564	0.245		6.384	3.14E-09
Stakeholder involvement	0.783	0.213	0.702	3.676	3.51E-04
Construction materials	0.719	0.244	0.687	2.947	3.84E-03
Project funding	0.525	0.229	0.432	2.293	2.36E-02

Project management competence	0.613	0.268	0.571	2.287	2.39E-02
-------------------------------	-------	-------	-------	-------	----------

As per the SPSS generated table above, the equation ($Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \epsilon$) becomes:

$$Y = 1.564 + 0.783X_1 + 0.719X_2 + 0.525X_3 + 0.613X_4$$

This multiple regression model implies that a unit change in 1.000 stakeholder involvement led to 0.783 unit increase in quality of building construction projects. A 1.00 unit increase in construction materials leads to 0.719 increase in quality of building construction projects. A 1.00 unit increase in project funding leads to 0.525 increases in quality of building construction projects. Finally 1.00 increases in project management competence lead to 0.613 increases in quality of building construction projects.

The table also indicates that there was a highly significant relationship (with t statistic p value $(0.0003) < 0.05$) between stakeholder involvement and quality of building construction projects. Again, from the same table, there exists a highly significant relationship (with t statistic p value $<0.0038 < 0.05$) between construction materials and quality of building construction projects. There exists also a significant relationship between project funding and quality of building construction projects with $(p = 0.0236 > 0.05)$. Finally, there appears to be a significant relationship between project management competence and quality of building construction projects (with t statistic p value $<0.0239 >0.05$).

This implies that from the regression analysis stakeholder involvement, construction materials, project funding and project management competence have a positive significance on quality of building construction projects.

CHAPTER FIVE

SUMMARY, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the study findings, conclusions and recommendations. The findings are summarized in line with the objectives of the study which include determining the influence of stakeholder involvement on quality of building construction projects in Meru Town, evaluating the extent to which construction materials influence quality of building construction projects in Meru Town, assessing the influence of project funding on quality of building construction projects in Meru Town and exploring the influence of project management on quality on quality of building construction projects in Meru Town. These independent variables were studied against the dependent variable which is quality of construction projects.

5.2 Summary

5.2.1 Stakeholder Involvement

The study determined the influence of stakeholder involvement on quality of building construction projects in Meru Town and found that it greatly influence quality of building construction project. The study also found that quantity surveyor involvement and contractor involvement in planning greatly influence quality of building construction project. Again, it was revealed that site engineer involvement in planning greatly influence quality of building construction project. Finally, county inspector's involvement moderately influences quality of building construction project.

5.2.2 Project Funding

The study further evaluating the extent to which project funding influence quality of building construction projects in Meru Town and revealed that it greatly influences quality of building construction project. The study further found that cost of funds was greatly influence quality of construction. Further it was revealed that adequacy of finances greatly influence quality of

construction. The study finally found that source of finance lightly influence quality of construction.

5.2.3 Construction Materials

The study also assessed the influence of construction materials on quality of building construction projects in Meru Town and found that greatly influence quality of building construction project. The study further found that quality of materials greatly influences quality of a building construction and that cost of materials greatly influences the quality of a building construction. The results also showed that source of materials lightly influence the quality of construction projects.

5.2.4 Project Management Competence

Finally the study explored the influence of project management competence on quality of building construction projects in Meru Town and found that it greatly influence quality of building construction project. The results showed that leadership very greatly influence the quality of building construction project and that solutions development greatly influence quality of building construction project. The study also revealed that conflict management influence quality of building construction project and that team management lightly influence quality of building construction project.

5.3 Discussion

5.3.1 Stakeholder Involvement

The study determined the influence of stakeholder involvement on quality of building construction projects in Meru Town and found that greatly influence quality of building construction project. This conforms to Seddon (2008) who claimed that stakeholder administration concentrates on comprehension stakeholder' needs and desires, tending to issues as they happen, overseeing clashing interests and encouraging suitable stakeholder engagement in venture choices and exercises.

The study also found that quantity surveyor involvement and contractor involvement in planning greatly influence quality of building construction project. This was similar to Basu (2014) who argued that the connections between various process operators in the building

development division can be directed or restricted by contracts, for instance between the customer and the manufacturer.

Again it was revealed that site engineer involvement greatly influence quality of building construction project. This concurs with Chinyio (2010) who argue that besides, the way that stakeholders are rapid and their impacts on the venture change after some time contingent upon the issues being considered can prompt to instabilities in any venture if the stakeholders and their needs and potential impact are not deliberately identified and oversaw.

Finally county inspector's involvement moderately influences quality of building construction project. This conforms to Olander (2007) who said that the inability to recognize the worries of restricting outside stakeholders will bring about a drawn out and deferred arranging and plan due to the consolidated powerbase of contradicting stakeholders conflicting with the advance of the venture as an aftereffect of saw non-contribution and thought of their interests.

5.3.2 Project Funding

The study further evaluating the extent to which project funding influence quality of building construction projects in Meru Town and revealed that it greatly influence quality of building construction project. This correlate with Finney (2009) who claim that as rising of funds to finance an economically separable capital investment project, which the providers of funds look essentially to the income from the project as the wellspring of assets to benefit their advances and give the profits of value put resources into the project.

The study further found that cost of funds was greatly influence quality of construction. These were in line Olatunji (2010) who states that groups in the development part work in a globalized advertise, with vast project groups and jointed tasks with universal organizations in which they show social contrasts, proficient morals and diverse thoughts regarding how to direct business.

Further it was revealed that adequacy of finances greatly influence quality of construction. This concurs with Mateshe (2013) who characterized extend funding as funding a specific monetary unit in which a bank is fulfilled to look at first to the income and profit of that

monetary unit as the wellspring of assets from which an advance will be reimbursed and to the benefits of the financial unit as the security for the advance.

5.2.3 Construction Materials

The study also assessed the influence of construction materials on quality of building construction projects in Meru Town and found out that the nature of construction materials greatly influence quality of building construction project. This was similar to Aliverdi, Naeni and Salehipour (2013) who claims that materials influence project costs and the quality of construction.

The study further found that quality of materials greatly influences quality of a building construction and that cost of materials greatly influences the quality of a building construction. This conformed to Enshassi, Mohamed and Abushaban (2009) who concentrating on components influencing the execution of development undertakings in the Gaza strip found that the most imperative elements concurred by the proprietors, advisors, and contractual workers as influencing the execution of development activities were material cost, quality and accessibility of assets.

The results also showed that source of materials lightly influence the quality of construction projects. These were similar to Fisk and Reynolds (2011) who claims that limit of materials can construct the costs of era and the total cost of any wander.

5.3.4 Project Management Competence

Finally, the study explored the influence of design review on quality of building construction projects in Meru Town and found that it greatly influences quality of building construction project.

The results showed that leadership very greatly influence the quality of building construction project and that solutions development greatly influences quality of building construction project. This was similar to Usman, Kamau and Mireri (2014) who included that the developing many-sided quality of the building business calls for expanded adequacy in the arranging and control of activities.

The study also revealed that conflict management influence quality of building construction project and that team management lightly influence quality of building construction project. Armstrong, (2010) concur by expressing that investigation and workmanship gauges are very critical to accomplish quality.

5.4 Conclusion

The study determined the influence of stakeholder involvement and concluded that it positively and significantly influences quality of building construction projects in Meru Town. The study deduced that quantity surveyor involvement and contractor involvement in planning greatly influence quality of building construction project. Finally it was deduced that county inspector's involvement moderately influences quality of building construction project.

The study further concluded that project funding greatly and positively influences quality of building construction projects in Meru Town. It was deduced that cost of funds was greatly influence quality of construction, that adequacy of finances greatly influence quality of construction and that source of finance lightly influence quality of construction.

The study also assessed the influence of construction materials and concluded that it has a positive and significant influence on quality of building construction projects in Meru Town. The study deduced that quality of materials greatly influences quality of a building construction, that cost of materials greatly influences the quality of a building construction and that source of materials lightly influence the quality of construction projects.

Finally the study explored the influence of project management competence and concluded that it significantly influences the quality of building construction projects in Meru Town. The study further deduced that leadership very greatly influence the quality of building construction project and that solutions development greatly influences quality of building construction project. The study also deduced that team management lightly influence quality of building construction project.

5.5 Recommendations

The study makes the following recommendations based on the study finding;

1. The study recommends that the technical personnel in the construction industry must work together with all the stakeholders in the building industries in order to ensure safe sustainable storey buildings. This will ensure that all the stakeholders are involved in the implementation of the whole building project hence improving its quality.
2. The contractors and designers need to be compelled to follow strictly to the required standards of materials for construction of storey buildings. This will ensure that the management competence is put into consideration by encouraging those in management to embrace risk management practices such as risk identification, quantification, monitoring and mitigation to help prevent risks and improve quality (safety).
3. Providing financial incentives to encourage development of sustainable storey buildings by willing investors should be emphasized by the relevant government authorities. Those involved should ensure that the finances are adequate so as to allow the contractors and other people involved to deliver quality work and on time.
4. Formulation and updating of laws and regulations that provide legal frame work for the development of safe sustainable storey buildings in our municipalities.
5. Focusing on the cost modelling using detailed current cost resources used to produce an element say walling and then adding a mark-up to cover contractor's overheads and profits for the contractor. This can be achieved through increasing the size of the building to reduce the cost.
6. Inculcation of a culture of collaborative participation, characterized by the use of the relevant contract forms to ensure all stakeholders are conversant with their mandate and importance to the project as well as working with and seeking advice from risk management experts on practices such as risk pooling to protect stakeholders.
7. The stakeholders and the management should embrace transparency through information accessibility, clarity, accuracy and sharing of information which includes the progress of the building project as well as the financial usage.

5.6 Recommendations for Further Research

The study recommends a similar study to be done in other town in the country since this study was only limited to Meru town.

This study recommends that further research should be done to establish the effect of forces of demand and supply on the quality of the construction buildings in the urban areas. It also recommends research done to obtain alternative cheap but safe construction materials.

REFERENCE

Ahmed, S.M.(2012). *Construction delays in florida: An Empirical Study*. Florida: State of Florida Department of Community Affairs.

- Akintoye, A. (2009). The Critical success factors for effective programme management: a pragmatic approach. *The Built & Human Environment Review*2: 1-24.
- Alexandrova, M., & Ivanova, L. (2012). Critical success factors of project management: empirical evidence from projects supported by EU programmes. In *9th International ASECU Conference on "Systematic Economic Crisis: Current Issues and Perspectives"*, Skopje, Macedonia. Retrieved from http://www.asecu.gr/files/9th_conf_files/alexandrova-and-ivanova.
- Alexandrova, M., & Ivanova, L. (2012). Critical success factors of project management. *International Journal of Social Sciences and Entrepreneurship* Vol.1, Issue 12.
- Aliverdi, R., Naeni, L. M., & Salehipour, A. (2013). Monitoring project duration and cost in a construction project by applying statistical quality control charts. *International Journal of Project Management*, 31(3), 411-423.
- Awakul, N & Ogunlana, B. (2010). The Role of Managerial Actions in the Cost, Time and Quality Performance of High-Rise Commercial Building Projects", *Construction Management and Economic;s* 3, 59-87.
- Ayudhya, B. I. N. (2011). Evaluation of Common Delay Causes of Construction. *Journal of Civil Engineering and Architecture*, Vol. 5, No. 1, pp. 1027-1034.
- Bal, M., Bryde, D., Fearon, D., & Ochieng, E. (2013). Stakeholder engagement: Achieving sustainability in the construction sector. *Sustainability*, 5(2), 695-710.
- Basu, R. (2014). Managing quality in Projects: An empirical study. *International Journal of Project Management* 32 (1):178-187.
- Berardi, U. (2013). Clarifying the new interpretations of the concept of sustainable building. *Sustainable Cities and Society*, 8, 72-78.
- Blumberg, B. F., Cooper, D. R., & Schindler, P. S. (2014). *Business research methods*. McGraw-hill education.

- Bundi, K. K. (2014). *The green building option; environmentally sustainable building in residential building designs*, a case study of Makongeni area, Thika town, Kiambu County.
- Caruth, G. D. (2013). Demystifying Mixed Methods Research Design: A Review of the Literature. *Online Submission*, 3(2), 112-122.
- Chai, S.C., Yusof A.M. (2013) Reclassifying Housing delivery Delay Classification. *International Journal of Business Management*, Vol. 8, No. 22, pp. 107-117.
- Chandran, E. (2010). *Research Methods*. Nairobi: Starbright services limited.
- Chism, N., Armstrong, G. (2010). Project delivery strategy: Getting it right. *KPMG International* , pp.1-24.
- Cole, G.A (2012). *Personnel Management Theory and Practice*, DP Publications, Ashford Colours Press, London.
- Daft, R. L. (2010). *New Era of Management* (Ninth Edition). China: Translation & Printers Services, Ltd.
- Enshassi, A., Mohamed, S., & Abushaban, S. (2009). Factors affecting the performance of construction projects in the Gaza strip. *Journal of Civil engineering and Management*, 15(3), 269-280.
- Fapohunda, J.A, & Stephenson, P. (2010). Optimal construction resources utilization: Reflections of site managers attributes. *Pacific Journal of Science and Technology*. Vol. 11, NO. 2, pp. 353-365.
- Fewings, P. (2013). *Construction project management: An integrated approach*. Routledge.
- Fisk, E. R., & Reynolds, W. D. (2011). *Construction project administration*. Pearson Higher Ed.
- Francis, A., & Miresco, E. (2013). Applying the Chronographical Approach to the modelling of multi-storey building projects. In *Proceedings of the 4th International Construction*

Specialty Conference, CSCE 2013 annual meeting, Montreal, Quebec, Canada, CON-180 (1-10).

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*, Pitman, Boston.

Frimpong, Y., Oluwoye, J. & Crawford, L. (2013). Causes of delay and cost overruns in construction of groundwater projects in developing countries; Ghana as a case study. *International Journal of Project Management*: 321-326.

Gillham, P. F. (2013). Teaching and Learning Guide for: Securitizing America: Strategic Incapacitation and the Policing of Protest Since the 11 September 2011 Terrorist attacks. *Sociology Compass*, 7(12), 1065-1073.

Gregory, A. M., & Parsa, H. G. (2013). Kano's model: An integrative review of theory and applications to the field of hospitality and tourism. *Journal of Hospitality Marketing & Management*, 22(1), 25-46.

Gudienė, N., Ramelytė, L., & Banaitis, A. (2013). An Evaluation of Critical Success Factors for Construction Projects using Expert Judgment. In *Proceedings in Scientific Conference* (No. 1).

Gupta, S., & Maltz, E. (2015). Interdependency, dynamism, and variety (IDV) network modeling to explain knowledge diffusion at the fuzzy front-end of innovation. *Journal of Business Research*, 68(11), 2434-2442.

Hussin, A.A., & Omran, A. (2011). Implication of non-completion projects in Malaysia. *ACTA Technica Corviniensis-Bulletin of Engineering*, University Polytechnica Timisoara. Romania.

Hwang, B. G., & Ng, W. J. (2013). Project management knowledge and skills for green construction: Overcoming challenges. *International Journal of Project Management*, 31(2), 272-284.

Idoro, G. (2014). Construction in Developing Countries and its Contribution to Sustainable Development. The conference.

- Jha, K.N., & Iyer K.C.(2006). Critical Factors Affecting Quality Performance in Construction Projects. *Total Quality Management Vol. 17, No. 9* , pp. 1155–1170.
- Kelly, J., Male, S., & Graham, D. (2014). *Value management of construction projects*. John Wiley & Sons.
- Kinaro, E. N. (2015). *Factors influencing implementation of major road infrastructure projects in Kenya: a case of the southern bypass project, Kenya* (Doctoral dissertation, University of Nairobi).
- Kothari, C. R. (2010). *Research methodology: methods and techniques*. New Age International.
- Li, B., Akintoye, A., Edwards, P.J. & Hardcastle, C. (2013).Critical success factors for PPP/PFI projects in the UK construction industry. *Construction Management and Economics*, 23(5), 459-471.
- Li, T. H., Ng, S. T., & Skitmore, M. (2013). Evaluating stakeholder satisfaction during public participation in major infrastructure and construction projects: A fuzzy approach. *Automation in construction*, 29, 123-135.
- Marais, H. (2012). A multi-methodological framework for the design and evaluation of complex research projects and reports in business and management studies. *Electronic Journal of Business Research Methods*, 10(2), 64-76.
- Matesehe, L.K. (2013) Project Funding (Unpublished Lecture Notes). University of Nairobi, Kenya.
- Moodley, K., Smith, N., & Preece, C.N., 2008. Stakeholder matrix for ethical relationships in the construction industry. *Construction Management and Economics*, 26 (6), 625-632.
- Mugenda O.M, Mugenda, A.G. (2012). *Research Methods: Quantitative and qualitative approaches*. Nairobi, Kenya.

- Munyoki, S. K. (2014). *Factors influencing completion of construction projects; a case of construction projects in Nairobi Kenya* (Doctoral dissertation, University of Nairobi).
- Munyoki, S. K. (2014). *Factors influencing completion of construction projects; a case of construction projects in Nairobi Kenya* (Doctoral dissertation, University of Nairobi).
- Murray, M., & Dainty, A. (2013). *Corporate social responsibility in the construction industry*. Routledge.
- Mwangi, D. M. (2015). *Publishing outposts on the Kenyan literary landscape: a critique of Busara, Mũtiiri and Kwani?* (Doctoral dissertation, University of Nairobi).
- Nestor, F. O. (2015). *Factors influencing sustainability of street children rehabilitation programs managed by nongovernmental organizations: a case of rescue centers in Mathare constituency, Nairobi county, Kenya* (Doctoral dissertation, University of Nairobi).
- Ngechu, M. (2006). *Understanding the Research process and Methods*, First edition.
- Nguyo, M. (2008). *Construction Industry Information Management*, A thesis submitted for the degree of Mater of Arts (Building Management), U.O.N. Nairobi.
- Öberseder, M., Schlegelmilch, B. B., & Murphy, P. E. (2013). CSR practices and consumer perceptions. *Journal of Business Research*, 66(10), 1839-1851.
- Olander, S., (2007). Stakeholder impact analysis in construction project management. *Construction Management and Economics*, 25(3), 277-287.
- Olatunji, A. A. (2010). *Influences on construction project delivery time*.(PhD. thesis). Nelson Mandela Metropolitan University, Estern Cape, South Africa.
- Ondari, P.O. & Gekara, J. M. (2013).Factors influencing successful completion of roads projects in Kenya. *International Journal of Social Sciences and Entrepreneurship*, 1(6), 26-48.
- Orodho, A. J (2012). *Essentials of Educational and Social Science Research Method*.

- Park, Y. I., & Papadopoulou, T. C. (2012). Causes of cost overruns in transport infrastructure projects in Asia: their significance and relationship with project size. *Built Environment Project and Asset Management*, 2(2), 195-216.
- Rahman, I. A., Memon, A. H., & Karim, A. T. A. (2013). Significant factors causing cost overruns in large construction projects in Malaysia. *Journal of Applied Sciences*, 13(2), 286.
- Rowlinson, S., & Cheung, Y.K.F., (2008). Stakeholder management through empowerment: modelling project success. *Construction Management and Economics*, 26(6), 611-623.
- Seddon, J. (2008). *Systems Thinking in the Public Sector: The Failure of the Reform regime and Serpell*.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business: A skill building approach* (5thed.). London: John Wiley and Sons Ltd.
- Stern, M & Teljeur, R. (2012). The Success Dimensions of International Development Projects: the Perceptions of African Project Coordination, *International Journal of Project Management*, 22: 19-31, Elsevier Science Ltd.
- Tabishl S. Z. S. & Jha, K. N. (2011). September 16-18). *Important Factors for Success of Public Construction Projects*. A paper presented at the 2nd International Conference on Construction and Project Management. Singapore.
- Thornton, M.D. (2008). *Construction Contract Durations*.(Masters thesis). University of Florida, Florida, USA.
- Usman, N. D., Kamau, P. K., & Mireri, C. (2014). Application of Life Cycle Management for project performance in developing countries. In *Proceedings of the CIB W107 International Conference, 28th-30th January* (pp. 200-209).
- Walley, S. (2011). Developing Kenyas Mortgage Market. *The World Bank Report*, 1-3.

- Wambugu, D. M. (2013). Determinant of successful completion of rural electrification projects in Kenya: A case study of Rural Electrification Authority. *International Journal of Social Sciences and Entrepreneurship*. Vol.1, Issue 2, 2013, 1 (2), pp.549-560.
- Wanjau, B. N. (2015). *Factors influencing completion of building projects in Kenya, ministry of land, housing and urban development, Nairobi county* (Doctoral dissertation, University of Nairobi).
- Wanyona, G. (2013). *Risk management in the cost planning and control of building projects: the case of the quantity surveying profession in Kenya* (Doctoral dissertation, University of Cape Town).
- Weiss, T & Potts, V. (2012). *An Evaluation of Construction Management*, Vol. 1 no.1
- Yong, K. (2013). *Evaluation of Global Risk Factors Affecting Cost Performance in Mozambique*, COBRA 2011 Conference, Glasgow, Caledonia University.
- Zhang, X., Shen, L., & Zhang, L. (2013). Life cycle assessment of the air emissions during building construction process: a case study in Hong Kong. *Renewable and Sustainable Energy Reviews*, 17, 160-169.

APPENDICES

Appendix I: Letter of Introduction

Evelyn Karwitha

University of Nairobi

P O Box 30197 – 00100,

Nairobi.

Dear Respondent,

RE: REQUEST FOR RESEARCH DATA

I am a graduate student at University of Nairobi. In partial fulfilment for the award of a Master of Arts Degree in Project Planning and Management, I am carrying out a research study on the influence of implementing quality management system based on ISO 9001 on operational performance of technical training institutions in Meru County in Kenya.

You have been identified as one of the people that could be of assistance with the research and I thus request your participation in the research. Essentially, you would be required to complete a questionnaire. You will be treated anonymously and your responses will be treated with utmost confidentiality. The information you provide will be used only for academic purposes.

Yours Faithfully,

Evelyn Karwitha

Thank you in advance.

APPENDIX II: RESEARCH QUESTIONNAIRE

Kindly answer the following questions by writing a brief answer or ticking in the boxes provided.

PART A: BACKGROUND INFORMATION

1. What is your designation in the organization?.....
2. What is your relationship with the project?

Contractors	[]
County inspectorate	[]
National government officials	[]
Project owners	[]
3. Which is your highest level of education?

Post Graduate	[]
Undergraduate	[]
Diploma	[]
Certificate	[]
Any other (specify).....	
4. How long have you been in this industry?

1 to 5 years	[]
6 to 10years	[]
11 to 15 years	[]
16 to 20 years	[]
21 years and above	[]

PART B: I Stakeholder Involvement

To what extent do you think stakeholder involvement influence quality of building construction project?

- | | |
|-------------------|-----|
| Very great extent | [5] |
| Great extent | [4] |
| Moderate extent | [3] |
| Low extent | [2] |
| Very low extent | [1] |

5. To what extent do the following influence quality of building construction project?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Site engineer involvement					
Contractor involvement in planning					
County inspector's involvement					
Quantity surveyor involvement					

6. In your opinion, how does the stated stakeholder involvement influence quality of building construction project?

.....

PART C: Project Funding

To what extent does project funding influence quality of building construction project in Meru County in Meru County?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

7. To what extent does the following influence quality of building construction project in Meru County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Cost of funds					
Source of finance					
Adequacy of finances					

8. In your own opinion, how does project funding influence quality of building construction project in Meru County?

.....

.....

PART D: Construction Materials

9. To what extent do construction materials influence quality of building construction project?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

10. To what extent do the following affect quality of building construction project in Meru County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Source of materials					
Cost of materials					
Quality of materials					

11. In your own opinion, how do the facets of construction materials above influence quality of building construction project in Meru County?

.....

PART E: Project Management Competence

12. To what extent does project management competence influences quality of building construction project in Meru County?

Very great extent [5] Moderate extent [3] Very low extent [1]
 Great extent [4] Low extent [2]

13. To what extent do the following influence quality of building construction project in Meru County?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Conflict management					
Leadership					

Team management					
Solutions development					

14. In your own opinion, how do the facets of project management competence above influence quality of building construction project in Meru County?

.....

PART F: Project Characteristics and Quality of Building Construction Project in Meru County

15. To what extent do the following aspects of project characteristics influence the quality of building construction project?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Length of the project					
Complexity of the project					
Size of the project					

PART G: Quality of Building Construction

16. To what extent would you rate the quality of building construction project in the following aspects?

	Very great extent	Great extent	Moderate extent	Low extent	Very low extent
Length of the project					
Complexity of the project					
Size of the project					

Thank You for Your Participation