

**SOCIO ECONOMIC FACTORS INFLUENCING COMPLETION
OF SELECTED COUNTY FUNDED CONSTRUCTION
PROJECTS IN KITALE TOWN, TRANS NZOIA
COUNTY, KENYA**

MUCHIRI TABITHA MUKAMI

**A Research Project submitted in partial fulfillment of the requirements for the award of
the Degree of Master of Arts in Project Planning and Management, University of Nairobi.**

2019

DECLARATION

This research Project is my own original work and has not been presented to any other university.

Signature

Date

Muchiri Tabitha Mukami

L50/9993/2018

This research Project has been submitted for examination with our approval as the University supervisors

Signature

Date

Mrs. Grace Were

Lecturer

Department of open Learning

University of Nairobi

Signature

Date

Dr. Patrick Simiyu

Lecturer

Department of open Learning

University of Nairobi

ACKNOWLEDGEMENT

This research Project is as the result of support from several people whom I wish to acknowledge them all. Firstly, I wish to acknowledge and appreciate my research Supervisors Dr. Patrick Simiyu and Mrs. Grace Were for the valuable advice, guidance, patience and encouragement while writing the Project. I also acknowledge the County Administrators and Project Management team for valuable information while developing this research Project. Also I wish to acknowledge University of Nairobi for the opportunity given to carry out this research not forgetting my classmates whom we consulted and supported during the research period. Last but not least, my success in completing this Project was due to the Almighty God who gave me the courage to face the challenges in getting the information needed for the study.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS AND ACRONYMS	x
ABSTRACT.....	xi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study	1
Table 1.1 Schedule of construction projects in the county	2
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study	3
1.4 Research Objectives.....	3
1.5 Research questions.....	4
1.6 Significance of the study.....	4
1.7 Limitations of the study	5
1.8 Delimitations of the study.....	5
1.9 Assumptions of the study.....	5
1.10 Definition of significant terms of the Study	6
1.11 Organization of the study.....	6
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction.....	8

2.2 Concept of socio economic factors and completion of construction projects	8
2.3.1 Procurement capacity and completion of construction projects	9
2.3.2 Human resource capacity and completion of construction projects	13
2.3.3 Funding activities and completion of construction projects	14
2.3.4 Controlling activities on completion and construction projects	17
2.3.5 Adequacy of construction materials and completion of projects.....	19
2.4 Theoretical Framework.....	21
2.5 Summary of reviewed literature.....	24
2.6 Research Gap	24
CHAPTER THREE	26
RESEARCH METHODOLOGY	26
3.1 Introduction.....	26
3.2 Research Design.....	26
3.3 Target Population.....	26
3.4 Sampling Procedure and Sample Size	27
3.5 Research Instruments	27
3.6 Instruments Validity.....	29
3.7 Instruments Reliability	29
3.8 Data Collection Procedure	30
3.9 Data Analysis techniques	30
3.10 Ethical Considerations	31
3.11 Operationalization of Variables Table	32

CHAPTER FOUR.....	33
DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS	33
4.1 Introduction.....	33
4.2 Questionnaire Return Rate	33
4.3 Demographic Characteristics of the respondents.....	33
4.4 Findings of the study based on descriptive statistics	35
4.4.1 Procurement capacity and completion of construction projects	35
4.4.2 Human resource capacity and completion of construction projects	37
4.4.3 Funding activities and completion of construction projects	39
4.4.4 Controlling activities and completion of construction projects	40
4.4.5 Construction materials and completion of construction projects.....	42
4.5 findings of the study based on the inferential Statistics.....	44
4.6.1 Multiple Regression Analysis	44
4.5.2 Assessing the Fit of Multiple Regression Model.....	45
4.6.3 Regression Analysis Coefficients	45
CHAPTER FIVE	48
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	48
5.1 Introduction.....	48
5.2 Summary of the Findings.....	48
5.3 Conclusion on completion of construction projects.....	51
5.4 Recommendations on completion of construction projects	52
5.5 Contribution to the Body of Knowledge.....	53
5.6 Suggested areas for further Research.....	53

REFERENCE.....	54
APPENDICES.....	60
APPENDIX I: INTRODUCTORY LETTER FOR RESPONDENTS	60
APPENDIX II: QUESTIONNAIRE FOR BENEFICIARIES	61
APPENDIX III: INTERVIEW SCHEDULE FOR PROJECT MANAGERS AND COUNTY ADMINISTRATORS.....	66
APPENDIX IV: OBSERVATION SCHEDULE FOR CONSTRUCTION CONTRACTORS OF THE PROJECT.....	67
APPENDIX V: CHECKLIST FOR CONSTRUCTION PROJECT	68
APPENDIX VI: RESEARCH PERMIT.....	69
APPENDIX VII: NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION	70

LIST OF TABLES

Table 1.1 Schedule of construction projects in the county	2
Table 3.1 Target Population.....	26
Table 3.2 Sample Size.....	27
Table 4.1 Questionnaire Response rate.....	33
Table 4.2 Demographic Characteristics of the respondents.....	34
Table 4.3 Procurement capacity influence and completion of construction projects	36
Table 4.4 Human resource capacity and completion of construction projects	38
Table 4.5 Funding activities and completion of construction projects	39
Table 4.6 Controlling activities and completion of construction projects	41
Table 4.7 Construction materials and completion of construction projects.....	42
Table 4.9 Model Summary	44
Table 4.10 ANOVA for Testing Multiple Regression Model	45
Table 4.11 Regression Analysis Coefficients	46

LIST OF FIGURES

Figure 2.1 Conceptual Framework	23
---------------------------------------	----

LIST OF ABBREVIATIONS AND ACRONYMS

CM	Construction Management
DRC	Democratic Republic of Congo
GNP	Gross National Product
KIWASCO	Kisumu Water and Sewerage Company
KRRA	Kingston Road Runners Association
NGOs	Non-Governmental Organizations
OAG	Office of the Auditor General
SA	South Africa
SPSS	Statistical Package for Social Science
UK	United Kingdom
USA	United States of America

ABSTRACT

Completion of county funded construction projects in Kitale town, Trans Nzoia County records dissatisfying views on the schedule performance of most of the projects. The study investigated socio-economic factors influence on completion of construction projects in Kitale Town, Trans Nzoia County. The study were guided by the following objectives; to establish how procurement capacity influence completion of county funded construction projects in Kitale town, Trans Nzoia County, to determine influence of human resource capacity on completion of county funded construction projects in Kitale town, Trans Nzoia County, to establish how funding activities influence completion of county funded construction projects in Kitale town, Trans Nzoia County, to determine the extent to which controlling activities influence completion of county funded construction projects in Kitale town, Trans Nzoia County and to assess the extent to which adequacy of construction materials on completion of county funded construction projects in Kitale town, Trans Nzoia County, Kenya. This study is grounded on Goal-setting theory and Game theory. The study adopted a descriptive survey research. The target population for this study comprised of 508; County Administrators and Project managers who are responsible for Bus Park, stadium and hospital construction and Beneficiaries of the projects and the sample size were 223 respondents. The study used a semi structured self-administered questionnaire to collect data from the managers in the housing and urban development. The study also used an interview guide to obtain responses from representatives in the Ministry of Land and Planning. The collected data were analyzed using both quantitative and qualitative data analysis methods. Quantitative method involved descriptive and inferential analysis. Descriptive analysis such as frequencies, percentages were used to present quantitative data in form of tables. Data from questionnaire were coded and logged in the computer using Statistical Package for Social Science (SPSS V 20.0). Frequency tables were used to present the data for easy comparison. Content analysis were used for the qualitative data and then presented in prose. Quantitative data was analyzed using a Pearson's correlation analysis to establish the relationship between the variables. The study findings based on funding activities objective showed that 87.36% (mean=4.37, Std. Dev=0.899) of the respondents accepted funding for the construction projects are delayed because most of the county budgetary allocated money are delayed from the national government, poor management of resources by the managers in charge, prioritizing salaries paid to workers and failing to give similar weight to the construction of projects and also, some contractors may lack enough money to facilitate the completion of the projects. Inferentially, funding activities attributed to ($\beta=.227$ $p<0.036$) on completion of county projects thus a unit increase in funding activities improved completion of the county funded construction projects by 22.7%. The study recommends to the members of the county assembly to pass proposed bills that are viable and fruitful to the development of the county. Project completion time should be checked to ensure efficiency.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Globally, completion of construction Projects is considered as a source of concern to both public and private sector clients. Project success requires creating a well-planned project schedule as well as understanding of the key success factors also (Hwang, Zhu & Tan, (2017). It helps the project manager and the stakeholders to take the right decisions and act towards the project success. Most popular determinants of project successes accepted by research community are- project mission, top management support, project schedule plan client consultation personnel technology to support the project client acceptance monitoring and feedback channels of communication troubleshooting (Elmahroug, 2016).

Socio-economic factors aim to improve completion of the projects by ensuring the projects are finished on time, within budget and achieving other project objectives. Project completion is a complex task undertaken by project managers in practice, which involves constantly measuring progress; evaluating plans and taking corrective actions when required. The goal of all the parties involved in construction projects, owners, contractors, engineers and consultants in either public or private sector is to successfully complete the project on schedule within planned budget, with the highest quality and the safest manner. When projects are completed in time, their duration is not extended beyond the scheduled and thus operates within budget (Hwang et al., 2017).

In the United States construction is a very diverse industry that is heavily interconnected with the economy as a whole. In fact, many of the key US economic indicators are derived solely from the construction industry (Myers, D2016). Even while this document maintains a United States focus, the construction industry is impacted by global events and trends. The construction industry is inextricably linked to the course taken by the economy and society at large. Nearly all people in modern mainstream society maintain a very close relationship with the built environment. In fact, “Americans spend on average 90% of their time indoors (Kibert, 2016).

In Sub Sahara Africa completion of construction projects, failure of any construction project is mostly related to the performance problems and there are many reasons and factors which are attributed to such problems. Completion of construction projects can be measured and evaluated

using a large number of performance indicators that could be related to various dimensions (groups) such as time, cost, quality, client satisfaction, client changes, business performance, health and safety (Osei–Kyei & Chan, 2016).

In Kenya Completion of construction projects consider practices such as time, cost, and project owner satisfaction. A study done on completion of construction projects people were analyzed in order to know the main practical problems of projects performance in the coastal region of Kenya and then to formulate recommendations to improve performance of construction projects in the coastal region of Kenya. It was concluded that projects were delayed and the actual cost of projects was more than the estimated cost because of coastal region of Kenya political conditions and delayed payments which results to unavailability of materials (Kagiri & Wainaina, 2017).

The County Government of Trans Nzoia made a milestone move in the year 2013 through the provision of the constitution in preparation of flag-shiping a number of projects that brings great achievements to the locals. In the financial year 2015/2016, the county government purchased road construction and maintenance machinery worth Ksh.500 million. These have been decentralized to the sub-counties such that each sub-county is able to maintain its own roads. The machineries include tippers, rollers graders, earth-movers, water boozers and excavators among others. With the aim of achieving a number of projects the following projects was flag-shipped in the financial year 2015/2016.

Table 1.1 Schedule of construction projects in the county

Name of the project	Period initiated	Due date/expected completion	Current status
Kitale Bus Park and Business Center	2015	2017	Incomplete
Street Lights	2015	2017	Incomplete
ECD centers	2015	2017	Incomplete
Modern Teaching and Referral Hospital	2015	2017	Incomplete

1.2 Statement of the Problem

Completion of selected county funded construction projects in Kitale town, Trans Nzoia County records dissatisfying views on the schedule performance of most of the projects. Some stake holders especially the intended users argue that they are delayed while the implementers believe that they are on course. Flagship projects in 2013 have not been completed while public employees resumed office in 2017 after election. For example, Kitale bus park project is incomplete, Referral hospital is to be commissioned, and Kitale stadium is yet to be completed and roads are poorly constructed as well some are yet to be commissioned. Despite initiatives to complete construction of projects, internal and external environmental factors may be responsible for incomplete projects hence the need to this investigation.

According to Kenya Economic Report (2014) infrastructure forms the bedrock of national growth and development and plays a critical role in determining the nation's competitiveness. Vision 2030 observes that infrastructure is important in improving the livelihoods of people and security of the country (County, 2013). One of the goals for (Vision 2030, 2017) was to improve efficiency and effectiveness of the infrastructure development process at all levels of planning, contracting and construction. In pursuit of this goal the study seeks to establish the influence of infrastructure construction on completion of construction projects in Trans Nzoia County, Kenya.

1.3 Purpose of the Study

This research investigated socio economic factors influencing completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya.

1.4 Research Objectives

1. To establish how procurement capacity influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya
2. To determine influence of human resource capacity on completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya

3. To establish how funding activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya
4. To determine the extent to which controlling activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya
5. To assess the extent to which adequacy of construction materials on completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya

1.5 Research questions

1. How does procurement capacity influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya?
2. How does human resource capacity influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya?
3. How does funding activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya?
4. To what extent do controlling activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya?
5. To what extent does adequacy of construction materials influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya?

1.6 Significance of the study

The study findings generated information that may be disseminated to relevant authorities to aid decision making concerning project construction. Authorities who are entitled to project management and monitoring will borrow the idea of successful completion of project. The findings of this study would therefore be of great help in improving the efficiency and management procedures of selected county funded construction projects in Kitale town, Trans Nzoia County.

The study may be used by scholars as reference on completion of construction of county funded construction projects. The study adds knowledge in the field of project completion and is useful for the purpose of improving performance. Additionally, the findings were informative to policy

makers at the national and county levels and hence encourage policy review which is useful when initiating and successfully completing the projects.

Last but not least, the study may identify challenges and risks that influence completion of construction projects. The findings helps device mitigation measures to be put in place and thus enhance completion of construction projects as scheduled.

1.7 Limitations of the study

One of the limitation that the researcher encounter was the fear by respondents to provide information on certain aspects of the project especially on the status of the project. The limitation was mitigated by the researcher through creation of good rapport with the respondents and assured them that all the information given are purely academic and confidential.

1.8 Delimitations of the study

This study focuses on socio-economic factors that influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. The study were delimited to the influence of procurement capacity, human resource capacity, funding activities, controlling activities and construction materials on completion of construction projects. The study targets construction companies in Kitale town, Trans Nzoia County. Data were obtained from county administrators, project manager, project team and stakeholders for the identified construction projects. No other individuals will participate in this study.

1.9 Assumptions of the study

The following assumptions were made from the study; that there was effective participation by the respondents who cooperated and provided valid and reliable information. Respondent know socio economic factors that influence completion of selected county funded construction projects.

1.10 Definition of significant terms of the Study

Construction: This term refers to the activity of putting together different elements using a detailed design and plan in order to create a structure.

Construction materials: Refers to items, equipment's, machines, objects that are necessary to ensure completion of the project.

Controlling activities: Refers to data gathering, management and analysis in order to predict, understand and constructively influence the time and cost outcomes of project construction.

Funding: Refers to the source of money or resources that a contractor requires for work and essential equipment for the project construction work to run as scheduled.

Human resource capacity: Refers to all the staff who are required for the construction of project; they include the employees of the contractors and the staff of the consulting company.

Procurement activities: These are the transaction procedures to acquire goods or services. The activities should be favorable in terms of goods/services appropriateness and procuring at the best possible cost to meet the needs of the purchaser in terms of quality and quantity, time, and location (Weele, 2010)

Project completion: Refers to a situation in which construction of county funded project has reached the state of being accessible and used by the public.

Socio-economic factors: Refers to the social and economic attributes which may influence the implementation of the county funded construction projects.

1.11 Organization of the study

The study was organized into five chapters. Chapter one contains the introduction to the study. It presented background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, and significance of the Study, scope of the study, basic assumptions of the study, delimitations of the study, limitations of the Study and the definition of significant terms. Chapter two reviewed the literature based on the objectives of the study,

theoretical framework; it further look at the conceptual framework and finally the summary of the literature review. Chapter three covered the research methodology of the study. The chapter described the research design, target population, sampling procedure, tools and techniques of data collection, pre-testing, data analysis, ethical considerations and finally the operational definition of variables. Chapter four presented analysis and findings of the study as set out in the research methodology. The study closed with chapter five which shall present the discussion, conclusion and recommendations for policy, practice and suggestions for further study. Additionally, there was a list of references and appendices section.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on socio economic factors influencing completion of selected county funded projects in Kitale town, Trans Nzoia County. The study discussed each literature review based on the following sub variables: procurement capacity influence completion of county funded construction projects, influence of human resource capacity on completion of county funded construction projects, influence of funding activities on completion of county funded construction projects, extent to which controlling activities influence completion of county funded construction projects and the extent to which adequacy of construction materials on completion of county funded construction projects

2.2 Concept of socio economic factors and completion of construction projects

Economic factors considerations refer to the level of general economic activity and resources available to carry out construction work. Binford (2019) identify twenty-five economic factors that could impact on completion on construction project. These applications include the availability of materials; the availability of equipment; the availability of trades / operatives, the availability of supervision / management staff, as well as the indirect impact of interest rates / inflation and insolvency, and bankruptcy. Economic influence has two levels: first, the internal economics principle relating to the viability of a project holds that unless there is a net gain there is no point in even considering embarking on a project. The external or macro-economic relate to high interest rates and prices, tariff barriers, embargoes and shipping restrictions, among other influences, of which the project manager have no control over.

Many previous researchers had studied the completion of construction projects. A typical construction project undergoes three stages; pre-construction, construction and post construction stages. Along these stages, there are numerous activities performed to achieve the output and objectives specified by the owner. Therefore, it is crucial for the construction project team, at

some extent, to measure its performance on the activities or sub-processes performed throughout the construction project (Saieg, Sotelino, Nascimento & Caiado, 2018).

Completion of construction projects can be considered as a result of the process as well as the presence of the process. The principle reasons for the construction industry's poor performance have been attributed to the inappropriateness of the chosen procurement system. The main performance criteria of construction projects as financial stability, progress of work, standard of quality, health and safety, resources, relationship with clients, relationship with consultants, claim and contractual disputes, relationship with subcontractors, reputation and amount of subcontracting.

2.3.1 Procurement capacity and completion of construction projects

Procurement capacity describes the process in which a firm decides what to procure, when and from what source. The procurement method is assigned and also the expectations for fulfillment of procurement requirements determined during the procurement planning process. Procurement capacity can also be described as the process employed by firms both in the public and private sector to plan purchasing activity for a given period of time. Procurement planning is further described as the purchasing function which is employed by firms to obtain (procure) products and/or services from suppliers according to Economic Commission of Africa (Patil, 2017).

According to Polat (2016), mentioned that selecting a capable contractor is one of the most important tasks performed by procurement committees when procuring for project. During bid evaluation, each offer must be carefully considered, on an equal basis, against the published evaluation criteria. The process must follow the approach and methodology set out in the procurement documents. The evaluation panel must determine the best supplier based on the information provided by suppliers in their offer. The evaluation should take into account capability, capacity and value for money over the whole-of-life of the procurement. Due diligence should be used to verify that the preferred supplier has the capacity and capability to successfully deliver against the specified requirements. Clear, concise and comprehensive notes are to be taken of all evaluation panel discussions and findings. The procurement function should keep a full record of how each offer was assessed against the criteria and demonstrate that each

received due and fair consideration. Where an offer is rejected the reasons for the rejection must relate to the evaluation criteria, be justifiable, clearly explained and recorded in writing.

Contract negotiation in projects is a formal discussion between the parties involved in the project so as to reach an agreement. It is about reaching agreement on the essential terms of the contract and the deliverables under the contract. It includes an exchange of offers, concessions and bargaining. For collaborative relationships the focus is on gaining a win-win solution, while for tactical relationships the approach is competitive. It is essential to record the exact terms of the negotiated agreement and reflects these in the contract. It is good practice to have an independent officer check and sign the contract. There should be a separation between the person signing the contract and the person who had day-to-day responsibility for contract management. Where a contract adopts a milestone approach; payment to the supplier can be tied to the successful completion of each milestone. This allows for implementation to be tracked and monitored against budget. Sometimes a copy of the intended contract is attached to the bid invitation documents at the time of advertising. It may be a condition of the tender that suppliers state whether or not, if successful, they would be prepared to be bound by the terms and conditions of the contract (Amusan, Afolabi, Ojelabi, Omuh, & Okagbue, 2018).

According to Shahid (2016), procurement systems are vital in ensuring the successful implementation of a construction project, precisely executed for all phases of any particular project. Therefore, this research project aimed to investigate, the influence of procurement procedure on construction completion of construction projects. The problem of procurement method adopted in Kenyan construction industry have raises serious concern to the project stakeholders and the construction industry as a whole. The aim of the study is to explore the influence of procurement procedures on construction project in Mombasa and its environs. Design/methodology/approach – The study adopted a questionnaire survey approach to achieve its purpose. The survey was conducted using purposive sampling techniques. Four categories of variables namely: project design choice, bid invitation and evaluation, Compensation forms and project outcome evaluation were used. Data we recollected with the aid of structured questionnaires and analyzed to establish the influence of project design choice, bid invitation and evaluation, compensation form on construction completion of construction projects, and then

evaluate the project outcome using percentage, mean and t-test. Empirical data were collected through a survey of 45 respondents where 30 were engineers and 15 procurement department personnel. Findings/conclusions/recommendation – The results reveals that a number of procurement approaches were used at the same time. It was found that the project was structured to have multiple bids for sections of the project as opposed to the norm where the bid is done for the whole project.

Procurement particularly in the public sector has been facing many challenges since times immemorial. Institutional and governmental purchasing departments are observed not to have been successful in enlisting the aid of the operating departments and personnel on planning and scheduling procurements. The foregoing has resulted in addressing urgent procurement needs through ad hoc procedures as opposed to standard procurement procedures. Ultimately, there is disruption to the operations of firms concerned (Atmo, Duffield, Zhang & Ko, 2017).

Construction industry plays a major role in development and achievement of the goals of society. Construction is one of the largest industries and contributes to about 10% of the gross national product (GNP) in industrialized countries. Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders and regulators. The performance of the construction industry is affected by national economies (Adediran & Windapo, 2017).

Construction is one of the largest industries and contributes to about 10% of the gross national product (GNP) in industrialized countries. Construction industry has complexity in its nature because it contains large number of parties as clients, contractors, consultants, stakeholders, shareholders and regulators. Richard (2016) evaluated the influence of procurement process on completion of construction of road projects in Bungoma South sub-County. This research focused on road construction Companies within Bungoma South Sub County and the procurement department within Bungoma County Assembly as the procuring entity. The objectives that guided this study were: To determine the extent to which tendering process, client selection criteria used, control regulations in procurement and quality assurance influence on completion of road projects in Bungoma south sub county. Literature review was done based on the themes of the study. The study was grounded on Goal-setting theory by Edwin Locke in the

late 1960s. This theory is the most impactful in the construction industry, as it is widely accepted and applied to worker' productivity. In the late 1960s, Edwin Locke proposed that people are motivated to work when they have a goal. Goals tell an employee what needs to be done and how much effort had to be expended. The study adopted a descriptive survey design. Descriptive survey research design based on questionnaire and interviews was used because the study objectives were descriptive in nature and required taking care of multiple realities likely to be found in the field. The instrument of data collection was the questionnaire and interview schedule. The researcher's supervisors helped to confirm the validity and the study employed both purposive and systematic random sampling to obtain respondents for the study. Purposive sampling ensured that all the construction managers, all the county assembly committee members and all ministries of works officials provided information concerning the subject of study. Systematic random sampling was used to select 86 construction workers from the 25 construction companies whereby every 3rd worker was systematically selected from a list comprising all employees in all the companies Cronbach's alpha was used to establish reliability. Data from the responses was organized; coded and analyzed. The analysis was done using descriptive statistics, tables, frequencies simple mean scores and percentages. It was recommended that all stake holders to ensure that there is quality assurance in the tendering process to ensure validity of the completed road projects.

According to Farah (2015) investigated the influence of procurement planning on performance of Kisumu Water and Sewerage Company. The study further assessed the influence of transparency in procurement, and procurement requirements on performance of KIWASCO. The study was guided by game theory and resource-based theory. Survey research design was adopted. The study population comprised of the 128 procurement officers, middle level managers, supervisors and departmental heads working with KIWASCO. A sample of 57 respondents was derived from the aforesaid population using stratified random sampling technique. A structured questionnaire was used to facilitate in data collection. A pilot study was conducted before the main study to determine potential weaknesses in the data collection tool through validity and reliability tests. The SPSS software was employed in data analysis. Descriptive and inferential statistics were used. The study found that all facets of procurement planning, that is, transparency in procurement and procurement requirements were positively correlated to organizational

performance. However, the study found that transparency in procurement was the only one that had a significant influence on the performance of KIWASCO. It was deduced that transparency in procurement was very important towards advancing the performance of the firm. The study concluded that procurement requirements were of significant importance to the performance of project construction.

2.3.2 Human resource capacity and completion of construction projects

Adequate human resource capacity can contribute to mitigation and elimination of rework/non-conformances; enhance client satisfaction; performance, and provide the catalyst for the synergy relative to the project parameters such as client satisfaction, cost, quality, and time. Establishing the project requirement for quality begins at project inception, (Obeidat & Aldulaimi, 2016). Another study by Demirkesen and Das (2015) suggested that careful balance between the owners requirement of the project costs and schedule, desired operating characteristics, materials of construction and the design professionals' needs for adequate time and budget to meet those requirements during the design process is essential.

Therefore, Bhatia and Awasthi (2018) support the thought that trained personnel can help improve the performance and quality of a business enterprise. According to the author, quality has three dimensions. It can be looked at in terms of process quality, product quality and organizational quality. All these dimensions are of interest to any researcher who wants to improve the performance of a firm. The success of the quality control tools in improving the three dimensions relies partly on the project management aspect of implementation of the processes. Quality of a performing project will therefore spread over to determine satisfaction of the stakeholders.

One of the ways of reducing the rejects, non-conformance to quality, reworks and machine breakdowns and machine stoppages during implementation of a project is by adoption of quality control tools through training of personnel. Singh, (2015) demonstrates this by plotting a graph of the level of Six Sigma quality against the non-conformities per million opportunities. The project management tools and principles have been touted as some of the methods that can be useful in the improvement of the efficiency of putting ideas into practice in the business

community. Ko (2018) states that all project managers have concerns about the quality performance of their deliverables. It is essential to evaluate individual projects in order to understand the success rates of the use of project management tools. The success of the project management phases in quality management can be evaluated by analyzing the performance of quality control tools.

Many studies were carried out to assess the causes of delays in construction projects. A report published by the World Bank in 1984 has supported the fact. It stated that most of the projects executed in many developing countries have faced difficulties due to three reasons, namely: 1) Unclear policy of the government 2) Lack of appropriate project design and, 3) Lack of institutional capabilities. The delay in public construction works has immensely affected the cost of the project. It is estimated that a 14-18 month delay would generate an additional cost of \$261 million to \$344 million to state and local governments in USA (Sears, Sears, Clough, Rounds & Segner, 2015).

2.3.3 Funding activities and completion of construction projects

When project end is delayed then, contractor continues incurring cost due to idle plants and equipment, idle labour and office overheads. This consequently results into cost escalations. Failure to recognize chances by top managers, for example when a project is delayed due to unsteady flow of funds, and a company has some unused funds in the bank, and managers are undecided on whether to use the funds or not. Natural disasters like earthquakes and floods normally adversely affect road construction by destroying already constructed bridges and washing away constructed roads. Changes in government regulation like changes in taxation affect a road construction by increasing cost of construction. The study categorized risk that affects construction project completion as quality risks, personnel risks, cost risks, set dates and deadline risk, risk of strategic decisions and external risk (Harrison & Lock, 2017).

When flow of funds to a project stops, then contractor slow down works or may even opt to terminate his contract. That means project may be delayed or be unsuccessfully completed; when flow of funds to a project is not steady then there were on and off activities on site, resulting into contract delay. Delayed payments attract interest and this result into cost escalation. Idle plant

and labour during stoppage attract claims from contractors and this leads to escalated contract cost. A project that is little funded may be done partly and later on becomes a white elephant (Myers, 2016).

As a result, Burtonshaw-Gunn (2017) discussed that to ensure that project financing does not affect successful completion of road construction project enough finances should be set aside for the project before it commences. At the estimation stage experienced Engineers should be employed to prepare estimates, so that estimates and the project cost do not vary. Stakeholders, financier should also support the project construction, so that financing is not stopped as the project proceeds. Changes in technology can be addressed by reserving a contingency fund in bills of quantity for training employs on how to use the new technology. Stakeholders and client should also ensure that they support the ruling party or government, or that they in good terms with the financier so that politic does not affect successful completion of a road construction projects.

Inadequate fund means extra financial commitments occasionally beyond the capacity of the owner. Clients are sometimes not prepared for this and so fund in terms of loans are sought to offset this additional costs. Corruption and its effects on the development of the construction industry in Nigeria put up to 78% of the roads in rural Nigeria and its northern part under dust for 15 or more years because of factors that can be controlled like: corruption from the local chiefs (Ogas), governors, national government, NGOs and many more. The study tends towards the argument that up to 60% of the roads have failed to meet deadlines due to corruption that leads to poor contractual awards, misappropriation of little funds, poor expertise selection, poor technology employment and many more (Clough, Sears, Sears, Segner & Rounds, 2015).

Besides, Santoso and Soeng (2016) discussed political interferences and inadequate allocations of funds hinder completion of KRRA activities even though the authority fully implements procurement policies. According to government of Kenya (2012) the poor performance of the road contracts is due to poor management of funds and poor delivery of services to the road user. In addition, performance measurement systems are not effective or efficient to overcome this problem. Road contractor's performance problem appears in many aspects, ranging from fail in time performance, cost performance and others fail in other performance indicators.

According to Onana (2018) defines project financing as raising of funds to finance an economically separable capital investment project which the providers of funds look primarily to the cash flow from the project as the source of funds to service their loans and provide the returns of equity invested in the project. Further project financing is financing a particular economic unit in which a lender is satisfied to look initially to the cash flow and earnings of that economic unit as the source of funds from which a loan were repaid and to the assets of the economic unit as the collateral for the loan. Financing of construction projects like roads, railway, port harbors and many more is therefore expected to be an economic investment. In an economy of a country, construction industry helps in creating wealth and employment opportunities. It helps build and or expand infrastructure that facilitates the service industry. This way it can spur economic growth across the board. Further in a development of any country, the construction industry plays vital roles in transforming the aspirations and the needs of its people into reality by implementing various physical structures.

Actual cost is the total amount of labor costs, materials and any directly associated overhead cost that can be associated to a specific project. Actual cost and standard cost are different. However, the two are both used in evaluation of project profitability. The goal of actual costs is often to break down the specifics of the costs involved with the project. This helps the management team to determine if the production process associated with the project is working at an optimum efficiency. The differences between actual cost and standard cost are salient. When working with the standard cost, it assumes a standard value and uses that figure to track the usage of resources. The tracking is usually in the form of either hours or the number of units consumed. This technique can identify variance between the production and the consumption. On the other hand, the actual cost is concerned only with the costs incurred during the course of the project, and not the units produced. From the explanations, it is evident that actual cost and standard cost are different even though they are all used to determine profitability. A performing project in therefore that which is has a balance between the standard cost and the actual cost (Boardman, Greenberg, Vining, & Weimer, 2017).

2.3.4 Controlling activities on completion and construction projects

According to Nicholas and Steyn (2017) examined influence of controlling activities on completion of construction projects, the findings showed that monitoring and control activities are two management functions that play a very important role in project success. Planning defines the strategies, tactics and methods for achieving project objectives, while monitoring and control provide the required checks and balances for ensuring that the plans and overall project objectives are achieved. Plans cannot bring about the required end by themselves; they must be complemented with monitoring and control to achieve their goals. Mauricio and Carlos (2002) confirmed that the performance of companies in project delivery depends largely on their control structures as well as their production planning. Kharbanda and Pinto (1996) maintained that most, if not all, major project failures could be traced to inadequate and inaccurate planning or blind adherence to the originally formulated plans regardless of how the environment changed in the interim.

Additionally, Batselier and Vanhoucke (2015) emphasize the importance of control and monitoring projects at frequent intervals and on a timely basis. Monitoring and control are often regarded as a single activity because they are both project management functions, sequential and closely related. Rumane (2016) acknowledges their relationship but regards them as separate activities because monitoring leads to control. Control is, as a process, distinguishable from monitoring by a number of activities through which schedule slippage in project performance is corrected.

Consequently, Yap and Skitmore (2018) discussed that many studies have been carried out to assess the causes of delays in construction projects. They are found to be almost similar, except some prevailed local condition. Most of the common construction delay factors are attributed to design faults, incompetent contractor, lack of team accountability etc. The root causes of delays found out in this paper are not so much different than previous studies. To minimize or eliminate the delay we have to follow the recognized fundamental principles of management such as: cost-time relationship, time priority, accountability, rewards, knowledge, efficiency, innovative thinking etc. If the implementing agencies properly followed the above stated management

principles and some other related corrections as recommended in the paper, much construction delays can be avoided.

Moreover, Mwangi and Iravo (2015) identified three of these activities as rescheduling activities, reallocating resources and altering project objectives. Also the study reflects that monitoring and control ensure that all of the changes are incorporated into the original plan. Programme updating; plan review, objective review and scope review were selected as the activities to represent project control. Programme updating describes the activities concerned with incorporation changes into the original plans. Project plan review describes the adjustment of project plans, potentially translating into new plans. Project objective review refers to the adjustment of project objectives to align with the project status, while project scope review refers to the adjustment of the scope of work in the project. The level of project control can also be considered from the perspective of the regularity of these activities.

Construction Delay is generally acknowledged as the most common, costly, complex and risky problem encountered in construction projects. Because of the overriding importance of time for both the owner and the contractor, it is the source of frequent disputes and claims leading to law suits. Delays do not always result from a single catastrophic event. They frequently develop slowly during the course of work. To determine the critical delay, we have to compare as-planned and as-built schedules. Delays can cause substantial damages to an owner. This has motivated the owners to devise contract provisions and project processes to anticipate, manage and compensate for such delays, so that they could be in safe position than the contractor. The successful execution of construction projects and keeping them within estimated cost and prescribed schedules depend on a methodology that requires sound engineering judgment (Oshungade, 2016).

Construction project management is attached with a process which is under a changing environment. These changes are due to the construction project's dynamic nature and various environmental dynamics. Dynamics is a kind of power or forces that can produce change, action or effects on a system for progressing forward. The dynamics acting on a project management system basically come from two kinds of sources: planned activities and uncertainties. Those planned activities are such as the established operation programme, the arrangements of staff's

daily duties, the planned operation on materials and plant, etc. All these activities will bring changes - the progress of construction works. The project management dynamics from planned activities can be called attended dynamics. On the other hand, those uncertainties or unexpected events will also affect the operation of the system. They can bring the project progress forward or backward due to different natures. This kind of dynamics from unexpected events can be called unattended dynamics. Both two kinds of dynamics bring a construction project to a dynamic status through the whole construction process.

2.3.5 Adequacy of construction materials and completion of projects

Kerzner (2019) evaluated the influence of material adequacy on project completion and the findings indicated that availability of materials plays an important role in deciding the successful project implementation. The contractors in Nyeri South Sub-County have been greatly affected by the availability of materials. It is so hard for contractors to get aggregate and sub base materials from a nearby place in Nyeri South Sub-County. They normally get these kinds of materials from Nyaribo Quarry and Chaka Quarry. Besides the expensive lease payment, the contractors have to pay cess as well. Thus, by evoking a sense of ownership among community members the basic infrastructure was developed in an efficient manner.

According to Banihashemi, Hosseini, Golizadeh and Sankaran (2017) concluded that the most important factors causing time overruns in building construction projects in Kenya as perceived by contractors were: delayed payment, lack of materials in the markets, shortage of construction materials at site, delays of material deliveries to site, cash shortages during construction, poor site management, poor economic conditions (currency, inflation rate, etc), shortage of equipment and tools on site, and owner delay in freeing the contractors payments for completed work.

Consequently, Kneese, Ayres and d'Arge (2015) studied economics and the environment: a materials balance approach and discussed that conventional construction materials have eventually become great contributors to pollute the environment. Availability of materials will fall considerably short of their demands despite improved productivity and it is necessary to develop alternatives for them. Thus, it shows the necessity of the adoption of sustainable materials in construction industry. Sustainable construction is the way that construction industry

should move towards in achieving sustainable development which takes into account environmental, economic and social issues. Moreover, sustainable construction helps to reduce strain on environment by the adoption of sustainable materials which is sustainable to nature.

As a result, Kibert (2016) mentioned that sustainable development of construction industry has to concentrate not only on sustainable building technologies and construction materials but also on respectful and considerate labour management strategies. Workforce has to be treated as the most valuable un-reproducible resource with vulnerable and hardly predictable behaviour. Construction is a labour intensive as well as craft-based activity and the behaviour of people has an enormous influence upon the organization and performance of construction firms.

In Palestine, results indicate that the average delay because of closures leading to materials shortage was the most important performance factor that impedes project completion. Others being escalation of material prices, availability of resources as planned through project duration, average delay because of closures leading to materials shortage, availability of personnel with a high experience and qualifications, quality of equipment and raw materials in project, and leadership skills for project managers. On the part of the consultants the assessment of the following will determine the speed of construction and ensure quality of the product: timely inspection procedure; adequate quality management inspection resources; quality management information processing requirements; materials or work rejection rate, and clean /dry working environment requirements. On the part of the contractor, the effectiveness of construction management will affect the speed of construction. The factors to be considered here are forecasted planning data such as analysis of construction methods; analysis of resource movement to and within site; analysis of work sequencing to achieve and maintain workflow; monitoring and updating of plans to appropriately reflect work status; responding to, and recovering from problems or taking advantage of opportunities present; effective coordination of resources, and finally, the development of appropriate organizational structure to maintain workflow (Myers, 2016).

According to Lewis, Gertsakis, Grant, Morelli and Sweatman (2017) there are many road contractors who have failed in performance. In the past, many road projects were finished with poor performance because of many contractors' reasons such as: obstacles by client, non-

availability of materials, roads closure, amendment of the design and drawing, additional works, waiting the decision, handing over, variation order, amendments in Bill of Quantity and delay of 8 receiving drawings. If the owner/government does not pay the services of the contractor in time, then the project implementation may greatly be affected by contractors' poor cash flow. This will affect the contractors' ability to ensure sustained supply of the construction materials. Clearly therefore, owners financial position will greatly affect project finance flows and which will influence construction project completion.

Therefore, Lock (2016) deduced that delivery of materials on site will quite affect the project progress. If that supply does not ensure that quality materials are delivered on site then it will cause delay of project completion. This is because material not meeting the quality of design will most likely be rejected and the process of getting the right material was taking more project implementation time. When materials are lacking on site it means that the employees will not have work to do. This is quite demoralizing and will affect the project delivery negatively. This is largely a product of poor planning in the construction project. Indeed material availability is the most frequent problem that leads to delay in majority of the countries as identified. While doing a comparative study of delays in roads construction in Nigeria, SA and DRC, he continues to argue that these governments have had poor planning of the roads construction just like in any other government construction projects. The study continues to say that this has left the projects delayed by 32% to 56% that the planned periods just because the implementers lacked basic things like required operational materials.

2.4 Theoretical Framework

This study is guided by two theories; Goal setting theory and Game theory.

This study is grounded on Goal-setting theory by Edwin Locke in the late 1960s. Goal-setting theory emphasizes the important relationship between project goals and performance. A goal is defined simply as what the individual is consciously trying to do. That is, one's values create a desire to do things consistent with them. Goals also affect performance of project completion through other mechanisms. Goal-setting theory supports predictions that the most effective performance seems to result when goals are specific and challenging, when they are used to

evaluate performance and linked to feedback on results, and create commitment and acceptance. The motivational impact of goals may be affected by moderators such as ability and self-efficacy. Deadlines improve the effectiveness of goals. A learning goal orientation leads to higher performance than a performance goal orientation, and group goal-setting is as important as individual goal-setting

Goal-setting theory is useful to the study because the set social economic factors moderate goals that are set which are the most impactful in the performance of construction industry, as it is widely accepted and applied to worker productivity. Goals tell an employee what needs to be done and how much effort had to be expended. This theory is widely utilized in the construction industry because productivity per day is based on a certain output of work. Gordon (2002) further observes that goal-setting focuses behavior and motivation of employees. This is most likely to occur when goals are made public, the phenomenon most often experienced in the construction industry. It is note-worthy that resistance is greater when goals are difficult.

According to game theory proposed by Neumann in 1953, interacting choices of economic agents produce outcomes with respect to the preferences of those agents in which case such outcomes might have not been intended by any of the agents. Game theory is also stated to be the formal study of decision making where various players are obliged to make choices that potentially affect the interests of other players. The theory puts into perspective conflict and cooperation. The concepts of the game theory are applicable when the actions of various agents such as individuals, groups, firms or any combination of the foregoing agents, are interdependent with each other.

Game theory is relevant to the study because it supports objectives meant for completion of construction projects. The objective of game theory is to organize our knowledge and increase our understanding of the outside world on performance. A scientific theory tries to abstract the most essential aspects of a given situation, analyze them using certain assumptions and procedures, and at the end derive some general principles and predictions that can be applied to individual instances. The game theory can be employed in procurement situations where an experienced bidder is expected to add to his own bid not just a markup for profits, but also for the potential underestimation of the cost that emanates from the competitive selection process. In

regard to the rules of the game theory, it is advisable for government agencies to ensure that rules are to their advantage when negotiating contracts as part of the procurement process.

2.9 Conceptual Framework of the Study

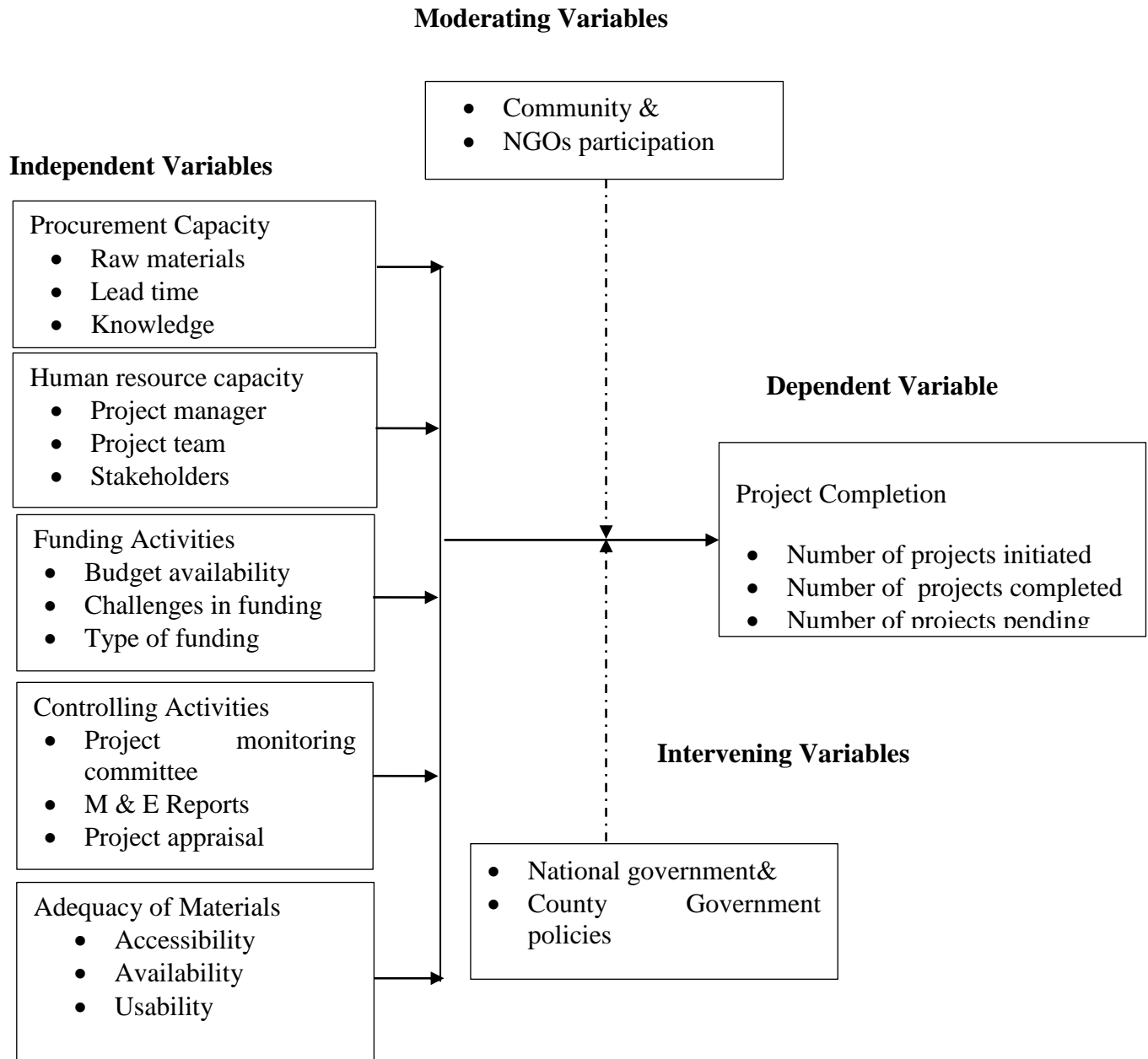


Figure 2.1 Conceptual Framework

2.5 Summary of reviewed literature

This chapter reviewed the relevant literature in relation to the research questions presented in the study. The chapter demonstrated that a construction project is completed as a result of a combination of many events and interactions, planned or unplanned, over the life of a facility, with changing participants and processes in a constantly changing environment. Construction projects impact on a nation's economy. Successful performance on completion of construction projects leads to wealth creation; socio-economic growth and improved standards of living. Nations are evaluated as developed, "developing" and "underdeveloped" based on the quantity and quality of completed construction projects in their domain.

The key role of construction sector in aggregate economy has been widely highlighted in the literature. It is stated that there is a direct relationship between construction output and national output. It is also pointed out that the construction output grows more rapidly than national output when economy grows and vice versa. This implies that the construction sector is highly integrated with other sectors of the economy through both backward and forward linkages and strongly linked with many economic activities. These linkages are stems for the sector through which it generate higher multiplier effect in the economy. So that any change in the construction sector must affect other sectors of the economy and finally impact goes to national income.

2.6 Research Gap

From the study review, it is evident that many studies have been done in construction sector but none have evaluated influence of socio-economic factors on completion of construction projects. For example Jolly, Isa, Othman and Ahmdon (2016) studied Influence of construction cost on completion of construction projects and the study concluded that traditionally, it has been seen as one of the most important areas if the economy of the project is off, the project can seldom be seen as a success.

Bititci, Cocca and Ates (2016) evaluated the Influence of techniques discussed that traditionally; the construction sector has been seen as a low technical industry, with little innovation compared to other industries. Polat (2016) mentioned that selecting a capable contractor is one of the most

important tasks performed by procurement committees when procuring for project. Besides Farah (2015) investigated the influence of procurement planning on performance of Kisumu Water and Sewerage Company. The study thus seeks to add and shade more knowledge on the study area by establishing socio economic factors influencing completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered research design, target population, sampling procedure and sample size, data collection instruments, data collection procedures, data analysis techniques, ethical consideration and operationalization of variables table.

3.2 Research Design

The study adopted a descriptive survey research. This design refers to a set of methods and procedures used to describe variables. It involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data. Descriptive studies portray the variables by answering who, what, and how questions. The method is chosen since it is more precise and accurate since it involves description of events in a carefully planned way. This research design also portrays the characteristics of a population fully (Chandran, 2014).

3.3 Target Population

Target population is the entire set of units for which the survey data is to be used to make inferences. It can also be defined as the eligible population that is included in research work, Kothari (2006). The target population for this study comprised of 508; County Administrators and Project managers who are responsible for Bus Park, stadium and hospital construction and Beneficiaries of the projects. The target population is distributed in table 3.1

Table 3.1 Target Population

Target	Population
County Administrators	30
Beneficiaries	423
Project management team	55
Total	508

Source Trans Nzoia County (2019)

3.4 Sampling Procedure and Sample Size

Sample size refers to the number of observations or replicates to include in a statistical sample Orodho (2015). The sample size is an important feature of any empirical study in which the goal is to make inferences about a population from a sample. Sampling technique refers to a procedure of selecting a part of population on which research can be conducted, which ensures that conclusions from the study can be generalized to the entire population. The sample size of this study was drawn using Yamane (1967) formula for determining the sample size is given by:

$$n = N / (1 + Ne^2)$$

Where

n= corrected sample size, N = population size, and e = Margin of error (MoE), e = 0.05 based on the research condition.

$$n=508/(1+508*0.05^2)$$

$$n=223$$

Therefore sample size of the study were 223 respondents

Table 3.2 Sample Size

Target category	Sampling formula	Sample size
County Administrators	30/508*223	13
Beneficiaries	423/508*223	186
Project management team	55/508*223	24
Total	508/508*223	223

Source Trans Nzoia County (2019)

3.5 Research Instruments

The study used a semi structured self-administered questionnaire to collect data from the construction project beneficiaries. The study also used an interview guide to obtain responses from project managers and county administrators. The study also used observation schedule to

collect data from construction contractors of the project and finally the study used checklist to collect data from construction projects

The researcher used questionnaire as the main data collection instrument. The questionnaire contained both open and close-ended questions. Open-ended questionnaires are those questions that give the respondent a complete freedom of response the way he/she feels about what is being asked. These questions give the respondent to express his/her opinion freely by filing in the questions asked. Close-ended questionnaires are questions that are accompanied by a list of possible alternatives given by the researcher by putting a tick appropriately.

A 5-point Likert scale questionnaire was the main instrument of data collection for the study. The questionnaire had two sections. Section A solicited information on demographic data; gender, age bracket, education and number of years of service in the organization. The information intended to collect data describing the sample characteristics in order to include them in the analysis because these characteristics have an effect on respondents' perception.

Section B sought the information on socio economic factors influencing completion of construction projects in Trans Nzoia County, Kenya. Responses were rated on a 5- point Likert scale for which 5-Strongly disagree, 4-Agree, 3-Neutral, 2-Disagree and 1-Strongly strongly. In this section, respondents were given 5 areas on: procurement capacity, human resource capacity, funding activities, controlling activities and construction materials on completion of construction projects.

An unstructured interview was used in this study; this is because they are means for collecting data for a statistical survey. According to Ogula (2005), an interview is a conversation which allows the interviewer to probe and get the feelings of the respondents. Though it is a slow instrument, it is used to curb subjectivity posed by the questionnaires. The interview questions contain one section, which has specific information which contains the specific objectives of the study. The interview sought opinions from the construction projects beneficiaries.

Observation schedules are essential analytical devices that researchers use to turn multifaceted and complex visual observations into usable research data (Saldana, 2015). An observation

schedule is an analytical form, or coding sheet, filled out by researchers during structured observation. It carefully specifies beforehand the categories of behaviors or events under scrutiny and under what circumstances they should be assigned to those categories. Observations are then fragmented, or coded, into these more manageable pieces of information, which are later aggregated into usable, quantifiable data.

Document Analysis is the critical examination of public or private recorded information related to the issue under investigation (Chow and Liu, 2008). This technique has been preferred because it enables the researcher to access data at his/ her convenient time and obtains data that are thoughtful in that the informants have given attention to compiling them. In the study the researcher utilized documents on complete project construction from the ministry of planning housing and urban development. However, some information may be incomplete and inaccurately collected hence the researcher must combine with other methods of data collection.

3.6 Instruments Validity

Validity were ensured by having objective questions included in the questionnaire and by pre-testing the instrument used to identify and change any ambiguous, awkward, or offensive questions and technique as emphasized by Cooper and Schindler (2013). Expert opinion was sought on the representativeness and suitability of questions. They also gave suggestions of corrections to be made to the structure of the research tools. The supervisor ascertains the validity of instruments. Additionally the instruments were piloted on a 1-5% of the target population.

3.7 Instruments Reliability

The research performance instrument was subjected to overall reliability analysis using the split half technique. This was done by collecting data from a given number of respondents into two halves (often odd-even). The two halves are correlated using Pearson's correlation. A coefficient of 0.7 or more implies that there is a high degree of data reliability. The purpose was to refine the research tools so that respondents in the major study had no problem in answering the questions and examining whether the same response were obtained.

3.8 Data Collection Procedure

Data collection is a very crucial and time involving activity. In this connection, due to the busy schedule of the researcher, the questionnaires were delivered to the respondents and were collected by research assistant. A method of hand delivery and collection on the same day were tried but where it was not be possible, the method of hand delivery and collection on the following day were used. Face to face interviewing was adopted to obtain answers from representatives in the Ministry of Planning, Housing and Urban Development and projects managers or contractors.

3.9 Data Analysis techniques

The collected data were analyzed using both quantitative and qualitative data analysis methods. Quantitative method was involved descriptive and inferential analysis. Descriptive analysis such as frequencies, percentages were used to present quantitative data in form of tables. Data from questionnaire were coded and logged in the computer using Statistical Package for Social Science (SPSS V 20.0). This involved coding both open and closed ended items in order to run simple descriptive analyses to get reports on data status. Descriptive statistics involved the use of absolute and relative (percentages) frequencies, measures of central tendency and dispersion (mean and standard deviation respectively). Frequency tables were used to present the data for easy comparison. Content analysis were used for the qualitative data and then presented in prose. Quantitative data was also be analyzed using a Pearson's correlation analysis to establish the relationship between the variables. Inferential statistics was used to show the relationship between independent and dependent variables of the research topic. The inferential statistics involved the use of multiple regression analysis technique. Multiple regression analysis involves combining several predictor variables in a single regression equation. With multiple regression analysis, we can assess the effects of multiple predictor variables (rather than a single predictor variable) on the dependent measure (Hair et al., 2010). The multiple regression model was used to identify the relationship between the independent variable and the dependent variable in that:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \dots \dots \dots \text{Equation 1}$$

Where;

Y represents completion of the county funded construction projects

α represents Constant while,

$\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 represents Coefficients of the independent variable where;

X_1 represents procurement capacity

X_2 represents human resource capacity

X_3 represents funding activities

X_4 represents controlling activities

X_5 represents adequacy of construction materials

ε represents the error term

3.10 Ethical Considerations

In this study, confidentiality was of concern as the information relevant to the study was of strategic importance. In this regard, the names of the respondents will not disclose. In addition, where a response was attributed to specific individuals the said information was maintained in strict confidence. Voluntary participation: all that participated was not coerced into participating in the research as the researcher wrote notifications in advance for any of the participant's thus promoting informed consent for all involved. The researcher ensured that guarantees to the participants concerning confidentiality are given and strictly observed. Information was not made available to anyone who was not directly involved in the study.

3.11 Operationalization of Variables Table

Variables	Sub-variables	Statistical tool	Level of Measureme	Analysis
Procurement capacity	Raw materials	SPSS	Ordinal	Descriptive
	Lead time	Version	Nominal	Inferential
	Knowledge	20.0	Interval Ratio	
Human Resource Capacity	Project manager	SPSS	Ordinal	Descriptive
	Project team	Version	Nominal	Inferential
	Stakeholders	20.0	Interval Ratio	
Funding Activities	Budget availability	SPSS	Ordinal	Descriptive
	Challenges in funding	Version	Nominal	Inferential
	20.0		Interval Ratio	
	Type of funding			
Adequacy of construction materials	Accessibility	SPSS	Ordinal	Descriptive
	Availability	Version	Nominal	Inferential
	Usability	20.0	Interval Ratio	
Controlling activities	Project monitoring committee	SPSS	Ordinal	Descriptive
	M & E Reports	Version	Nominal	Inferential
	20.0		Interval Ratio	
	Project appraisal			
Complete Construction of projects	Lifespan of the project	SPSS	Ordinal	Descriptive
	Achievement of project goals	Version	Nominal	Inferential
	20.0		Interval Ratio	
	Completion time			
	Project ranking			

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter presents data analysis, interpretation and discussion of the findings. The study investigated influence of procurement capacity, human resource capacity, funding activities, controlling activities and construction materials on completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. This chapter discussed; the response rate, the demographic information of the respondents and the study objectives precisely.

4.2 Questionnaire Return Rate

The study response was 86.6% of the total distributed questionnaires. Out of the total 210 questionnaires distributed; 182 were returned for data analysis which was completely filled. The response rate of the data collected meet threshold for data analysis according to Mugenda and Mugenda (1999) who noted that a response rate of 70% and above is acceptable and satisfactory for data analysis. Table 4.1 shows the response rate.

Table 4.1 Questionnaire Response rate

Category	Frequency	Percent
Administered	210	100.0
Returned	182	86

4.3 Demographic Characteristics of the respondents

The study sought to determine demographic information of the respondents. These included their gender, age, education and work period. Respondents were first asked to indicate their gender. This is shown in Table 4.2.

Table 4.2 Demographic Characteristics of the respondents

Gender	Frequency	Percent
Gender		
Male	100	54.9
Female	82	45.1
Total	182	100.0
Age		
20-30 years	45	24.7
31-40 years	61	33.5
41-50 years	54	29.7
Over 50 years	22	12.1
Total	182	100.0
Level of education		
pHD	2	1.1
Masters	6	3.3
Degree	47	25.8
Diploma	98	53.8
Certificate	29	15.9
Total	182	100.0
Work period		
0-5 years	31	17.0
6-10 years	111	61.0
11-15 years	20	11.0
above 15 years	20	11.0
Total	182	100.0

In table 4.2, the study determined demographic characteristics of the respondents. The study indicated that 54.9 percent of the respondents were male and 45.1 percent of the responses were female. This implies that the study was not gender biased. Data was collected from all the participants that meet the study consideration.

The study indicated that 24.7 percent of the respondents were 20-30 years, 33.5 percent of the respondents were 31-40 years, 29.7 percent of the respondents were 41-50 years and 12.1 percent of the respondents were over 50 years. This can be interpreted to mean the respondents had knowledge on the intention of the study and hence gave a true and fair view of the study questions.

The findings indicated that 15.9 percent were certificate holders, 53.8 percent were diploma holders, 25.8 percent were degree holders, 3.3 percent had masters and 1.1 percent of the

population had pHD. This showed that the study findings provided accurate data based on the education background of the responses. Respondents could easily read and understand research questions hence provided answers that were correct.

Finally, the study results revealed that 17.1 percent of the respondents had worked for 0-5 years, 61.0 percent had worked for 6-10 years, 11.0 percent had worked for 11-15 years and the remaining 11.0 percent had work for above 15 years. This implies that the respondents had good experience of the work thus understood the content of the study which aid them to provide accurate answers based on the research instruments.

4.4 Findings of the study based on descriptive statistics

The study sought to investigate socio economic factors influencing completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Descriptive statistics included frequency and percentages that were discussed in this section. The study therefore determined the respondents' level of agreement on a five point Likert scale. The Likert scale used ranged from strongly disagree (1) to strongly agree (5).

4.4.1 Procurement capacity and completion of construction projects

The study sought to determine the how procurement capacity influence completions of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Results are shown in table 4.3

Table 4.3 Procurement capacity influence and completion of construction projects

Statements		SD	D	N	A	SA	Total	Mean	Std. Dev
1. Procurement team is competent to ensure all the construction logistics are procured	F %	10 5.5	7 3.8	22 12.1	89 48.9	54 29.7	182 100	3.93 78.68	1.033
2. Procurement officers ensure lead time of material delivery is short to facilitate smooth running of construction	F %	7 3.8	4 2.2	6 3.3	94 51.6	71 39.0	182 100	4.20 83.96	.907
3. Procurement team lack good knowledge for procurement of raw materials used in construction of projects.	F %	9 4.9	8 4.4	8 4.4	95 52.2	62 34.1	182 100	4.06 81.21	1.004
4. Procurement team is slow to respond to the needs of construction process.	F %	7 3.8	7 3.8	12 6.6	92 50.5	64 35.2	182 100	4.09 81.87	.956
5. Procurement officers have good knowledge desired for completion of projects.	F %	11 6.0	9 4.9	16 8.8	87 47.8	59 32.4	182 100	3.96 79.12	1.076

The study findings showed that 78.68%(mean=3.93, Std.Dev=1.033) of the respondents accepted that procurement team is competent to ensure all the construction logistics are procured appropriately, 83.96%(mean=4.20, Std.Dev=0.907) of the respondents accepted that procurement officers ensure lead time of material delivery is short to facilitate smooth running of construction projects, 81.21%(mean=4.06, Std.Dev=1.004) of the respondents accepted that procurement team lack good knowledge for procurement of raw materials used in construction of projects, 81.87%(mean=4.09, Std.Dev=0.956) of the respondents accepted that procurement team is slow to respond to the needs of construction process and 79.12%(mean=3.96, Std.Dev=1.076) of the respondents accepted that procurement officers have good knowledge desired for completion of projects.

Procurement activities influence completion of selected county funded construction projects in the following ways; ensures that orders and contracts are given to the candidates who have the potential to successfully achieve under the terms and conditions of the contract, procurement are based on the basis of tenders that are publicly the most vital and affordable to the county government, ensure that according to regulation 11 in Kenyan Procurement Act public procurement entities are under obligation to give all potential candidates equal opportunities

participate to tender and finally all the procurement activities determines time of project completion based on the provisions required and fulfillment stated.

The study findings concurred with Polat (2016) who averred that selecting a capable contractor is one of the most important tasks performed by procurement committees when procuring for project. During bid evaluation, each offer must be carefully considered, on an equal basis, against the published evaluation criteria. The process must follow the approach and methodology set out in the procurement documents. The evaluation panel must determine the best supplier based on the information provided by suppliers in their offer. The evaluation should take into account capability, capacity and value for money over the whole-of-life of the procurement. Due diligence should be used to verify that the preferred supplier has the capacity and capability to successfully deliver against the specified requirements. Clear, concise and comprehensive notes are to be taken of all evaluation panel discussions and findings. The procurement function should keep a full record of how each offer was assessed against the criteria and demonstrate that each received due and fair consideration.

4.4.2 Human resource capacity and completion of construction projects

The study sought to determine the influence of human resource capacity on completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Results are shown in table 4.4.

Table 4.4 Human resource capacity and completion of construction projects

Statements		SD	D	N	A	SA	Total	Mean	Std. Dev
1. Project managers have the capacity to ensure that there is smooth running of all the construction activities.	F	6.0	6.0	22.0	60.0	88.0	182	4.20	1.000
	%	3.3	3.3	12.1	33.0	48.4	100	83.96	
2. Project team work is dedicated to cooperate and work together for the purpose of completion of projects.	F	7.0	14.0	9.0	56.0	96.0	182	4.21	1.093
	%	3.8	7.7	4.9	30.8	52.7	100	84.18	
3. Contractors lack enough personnel to carry out all the duties needed for complete construction of projects.	F	9.0	7.0	12.0	47.0	107	182	4.21	1.093
	%	4.9	3.8	6.6	25.8	58.8	100	85.93	
4. Stakeholders' views are influential on the completion of projects and when they support projects it is completed in time.	F	10.0	7.0	15.0	62.0	88.0	182	4.16	1.093
	%	5.5	3.8	8.2	34.1	48.4	100	83.19	
5. Project managers are not competent to ensure completion of projects is done in time.	F	4.0	13.0	13.0	52.0	100.	182	4.27	1.019
	%	2.2	7.1	7.1	28.6	54.9	100	85.38	

The study findings showed that 83.96%(mean=4.20, Std.Dev=1.000) of the respondents accepted that project managers have the capacity to ensure that there is smooth running of all the construction activities, 84.18%(mean=4.21, Std.Dev=1.093) of the respondents accepted that project team work is dedicated to cooperate and work together for the purpose of completion of projects, 85.93%(mean=4.21, Std.Dev=1.093) of the respondents accepted that contractors lack enough personnel to carry out all the duties needed for complete construction of projects, 83.19%(mean=4.16, Std.Dev=1.093) of the respondents accepted that stakeholders' views are influential on the completion of projects and when they support projects it is completed in time and 85.38%(mean=4.27, Std.Dev=1.019) of the respondents accepted that project managers are not competent to ensure completion of projects is done in time.

Human resource influence completion of county funded construction projects in the following ways; it helps in supervision of an organizations employees or personnel. It is in charge of the hiring, training, assessment and motivation of employees, it is also responsible for monitoring the leadership culture and controlling its human resource into compliance of organizational rules and regulations. Adequate personnel help the companies awarded tenders and contracts of project construction to complete them in time. Presence of professional and qualified human resource facilitates construction of quality projects that are durable and appealing in design.

Bhatia and Awasthi (2018) support the thought that trained personnel can help improve the performance and quality of a business enterprise. According to the author, quality has three dimensions. It can be looked at in terms of process quality, product quality and organizational quality. All these dimensions are of interest to any researcher who wants to improve the performance of a firm. The success of the quality control tools in improving the three dimensions relies partly on the project management aspect of implementation of the processes. Quality of a performing project will therefore spread over to determine satisfaction of the stakeholders.

4.4.3 Funding activities and completion of construction projects

The study sought to establish how funding activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Results are shown in table 4.5.

Table 4.5 Funding activities and completion of construction projects

Statements		SD	D	N	A	SA	Total	Mean	Std. Dev
1. Most projects have budgets that are not funded thus delay completion process.	F	6.0	1.0	21.	92.0	62.0	182	4.12	.875
	%	3.3	0.5	11.	50.5	34.1	100	82.31	
2. There are many challenges in funding projects since the county does not have enough money to facilitate all its activities.	F	6.0	14.0	6.0	63.0	93.0	182	4.23	1.051
	%	3.3	7.7	3.3	34.6	51.1	100	84.51	
3. The county government does not fully remit funds for the completion of the construction projects.	F	6.0	6.0	14.	75.0	81.0	182	4.20	.956
	%	3.3	3.3	7.7	41.2	44.5	100	84.07	
4. Funding is prioritized to most agent challenges other than budgeting well for each project.	F	6.0	2.0	10.	65.0	99.0	182	4.37	.899
	%	3.3	1.1	5.5	35.7	54.4	100	87.36	
5. Contractors have encountered mismanagement of funds that are allocated to completion of projects.	F	6.0	3.0	11.	93.0	69.0	182	4.19	.878
	%	3.3	1.6	6.0	51.1	37.9	100	83.74	

The study findings show that 82.31%(mean=4.12, Std.Dev=0.875) of the respondents accepted that most projects have budgets that are not funded thus delay completion process, 84.51%(mean=4.23, Std.Dev=1.051) of the respondents accepted that there are many challenges in funding projects since the county does not have enough money to facilitate all its activities, 84.07%(mean=4.20, Std.Dev=0.956) of the respondents accepted that the county government do not fully remit funds for the completion of the construction projects, 87.36%(mean=4.37,

Std.Dev=0.899) of the respondents accepted that funding is prioritized to most agent challenges other than budgeting well for each project and 83.74%(mean=4.19, Std.Dev=0.878) of the respondents accepted that contractors have encountered mismanagement of funds that are allocated to completion of projects.

Funding activities influence completion of county funded construction projects in the following capacities; budgetary constraints affect completion of project process, construction delays that may lead to cost overruns increase in operating and maintenance expenses, changes in the price of inputs that may force the project's budget to be altered affecting its financial ability and other general risks that emanate from within the project. The untimely release of funds, particularly during the first phase of the project, is a significant barrier to effective project delivery especially where new project staff must be recruited, and pre-requisite field supplies purchased to project kick-off activities.

The study is in line with Clough et al., (2015) findings who showed that inadequate fund means extra financial commitments occasionally beyond the capacity of the owner. Clients are sometimes not prepared for this and so fund in terms of loans are sought to offset this additional costs. Corruption and its effects on the development of the construction industry in Nigeria put up to 78% of the roads in rural Nigeria and its northern part under dust for 15 or more years because of factors that can be controlled like: corruption from the local chiefs (Ogas), governors, national government, NGOs and many more. The study tends towards the argument that up to 60% of the roads have failed to meet deadlines due to corruption that leads to poor contractual awards, misappropriation of little funds, poor expertise selection, poor technology employment and many more.

4.4.4 Controlling activities and completion of construction projects

The study sought to determine the extent to which controlling activities influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Results are shown in table 4.6.

Table 4.6 Controlling activities and completion of construction projects

Statements		SD	D	N	A	SA	Total	Mean	Std. Dev
Project monitoring committee facilitates supervision on completion of projects.	F %	13.0 7.1	11.0 6.0	15.0 8.2	39.0 21.4	104 57.1	182 100	4.15 83.08	1.234
Monitoring and evaluation reports are generated annually to facilitate review on progress of completion.	F %	13.0 7.1	5.0 2.7	7.0 3.8	72.0 39.6	85.0 46.7	182 100	4.16 83.19	1.113
Construction of projects receives little influence from control activities thus has led to poor performance.	F %	13.0 7.1	11.0 6.0	3.0 1.6	93.0 51.1	62.0 34.1	182 100	3.99 79.78	1.117
Project appraisal is done by the national government to motivate best projects.	F %	13.0 7.1	20.0 11.0	3.0 1.6	44.0 24.2	102 56.0	182 100	4.11 82.20	1.287
There is little evaluation done on the projects by the committee that is why performance on completion of projects is still low.	F %	13.0 7.1	7.0 3.8	92.0 50.5	49.0 26.9	21.0 11.5	182 100	3.32 66.37	.979

The study findings showed that 83.08%(mean=4.15, Std.Dev=1.234) of the respondents accepted that project monitoring committee facilitates supervision on completion of projects, 83.19%(mean=4.16, Std.Dev=1.113) of the respondents accepted that monitoring and evaluation reports are generated annually to facilitate review on progress of completion, 79.78%(mean=3.99, Std.Dev=1.117) of the respondents accepted that construction of projects receives little influence from control activities thus has led to poor performance, 82.20%(mean=4.11, Std.Dev=1.287) of the respondents accepted that project appraisal is done by the national government to motivate best projects and 66.37%(mean=3.32, Std.Dev=0.979) of the respondents accepted that there is little evaluation done on the projects by the committee that is why performance on completion of projects is still low.

Controlling activities influence completion of county funded construction projects in the following ways; Unavailability of local skilled workers (masons, carpenters, bar benders), seasonal unavailability of unskilled workers (during cropping and harvesting.), unavailability of construction material/local materials (stone, soil etc.) and other construction materials (instantly) in Mountain and hilly area, Unavailability of good quality materials (Brick, aggregates etc.), Hard rock encountered in foundation excavation, extra time needed to cut hard rock, New design and construction method (different than traditionally carrying out work), Quantity of most of the

items increased excessively than BOQ, need much time to finish than planned, Incomplete supply of drawings and frequent changes in design. The scope and master plan of the project changed, so extra work carried out.

In support of the findings, Batselier and Vanhoucke (2015) emphasize the importance of control and monitoring projects at frequent intervals and on a timely basis. Monitoring and control are often regarded as a single activity because they are both project management functions, sequential and closely related. Rumane (2016) acknowledges their relationship but regards them as separate activities because monitoring leads to control. Control is, as a process, distinguishable from monitoring by a number of activities through which schedule slippage in project performance is corrected.

4.4.5 Construction materials and completion of construction projects

The study sought to assess the extent to which adequacy of construction materials on completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Results are shown in table 4.7.

Table 4.7 Construction materials and completion of construction projects

Statements		SD	D	N	A	SA	Total	Mean	Std. Dev
Materials to be used in the construction of projects are not available and thus slow the process of project completion.	F	2.0	12.0	3.0	103.0	62.0	182	4.15	.846
	%	1.1	6.6	1.6	56.6	34.1	100	83.19	
Materials needed in the construction site are not accessible and thus slows completion of projects in time.	F	2.0	5.0	3.0	74.0	98.0	182	4.43	0.761
	%	1.1	2.7	1.6	40.7	53.8	100	88.68	
Construction materials are scarce and thus strain completion of projects that are under construction.	F	3.0	5.0	9.0	73.0	92.0	182	4.35	0.833
	%	1.6	2.7	4.9	40.1	50.5	100	87.03	
Materials that are available are expensive that is why there is poor completion of projects.	F	3.0	9.0	5.0	88.0	77.0	182	4.25	0.860
	%	1.6	4.9	2.7	48.4	42.3	100	84.95	
Accessible materials are not durable and thus discourage completion of projects.	F	2.0	5.0	7.0	85.0	83.0	182	4.34	0.767
	%	1.1	2.7	3.8	46.7	45.6	100	86.59	

The study findings showed that 83.19%(mean=4.15, Std.Dev=0.846) of the respondents accepted that materials to be used in the construction of projects are not available and thus slow the

process of project completion, 88.68%(mean=4.43, Std.Dev=0.761) of the respondents accepted that materials needed in the construction site are not accessible and thus slows completion of projects in time, 87.03%(mean=4.25, Std.Dev=0.833) of the respondents accepted that construction materials are scarce and thus strain completion of projects that are under construction, 84.95%(mean=4.25, Std.Dev=0.860) of the respondents accepted that materials that are available are expensive that is why there is poor completion of projects and 86.59%(mean=4.34, Std.Dev=0.767) of the respondents accepted that accessible materials are not durable and thus discourage completion of projects.

Adequacy of construction materials influence completion of county funded construction projects. Construction materials experience continual change and improvements occurring in traditional materials and techniques. Material management is also a big challenge in the completion of projects. Materials management is not just a concern during the monitoring stage in which construction is taking place. Decisions about material procurement may also be required during the initial planning and scheduling stages. For example, activities can be inserted in the project schedule to represent purchasing of major items such as elevators for buildings. The availability of materials may greatly influence the schedule in projects with a fast track or very tight time schedule: sufficient time for obtaining the necessary materials must be allowed.

Lock (2016) deduced that delivery of materials on site will quite affect the project progress. If that supply does not ensure that quality materials are delivered on site then it will cause delay of project completion. This is because material not meeting the quality of design will most likely be rejected and the process of getting the right material was taking more project implementation time. When materials are lacking on site it means that the employees will not have work to do. This is quite demoralizing and will affect the project delivery negatively. This is largely a product of poor planning in the construction project. Indeed material availability is the most frequent problem that leads to delay in majority of the countries as identified. While doing a comparative study of delays in roads construction in Nigeria, SA and DRC, he continues to argue that these governments have had poor planning of the roads construction just like in any other government construction projects. The study continues to say that this has left the projects

delayed by 32% to 56% that the planned periods just because the implementers lacked basic things like required operational materials.

4.5 findings of the study based on the inferential Statistics

This section describes the results of the relationship between independent variables and the dependent variables and shows the influence of the independent variables on the dependent variable.

4.6.1 Multiple Regression Analysis

A regression analysis was conducted to determine how procurement capacity, human resource capacity, funding activities, controlling activities and adequacy of construction materials influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. The Statistical Package for Social Sciences (SPSS) was used to code, enter and compute the measurements of the multiple regressions for the study.

The coefficient of determination R^2 value was 0.549 and it shows how much of the total variation in the dependent variable, completion of the county funded construction projects, was explained by the independent variables; procurement capacity, human resource capacity, funding activities, controlling activities and adequacy of construction materials. Therefore, the study results revealed that 54.9% can be explained by independent variables in relation to dependent variable. The adjusted R^2 value is 0.536 which is slightly lower than R^2 value; it is an indicator of relationship between the independent and dependent variable since it is sensitive when irrelevant variables are added. However, the typical error when the model is used to predict Completion of the county funded construction projects is 0.51783. This is represented in Table 4.9.

Table 4.9 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812 ^a	0.549	0.536	0.51783

4.5.2 Assessing the Fit of Multiple Regression Model

The study conducted Analysis of Variance (ANOVA) to examine whether the multiple regression models was fit for the data. This helped to find out if the completion of the county funded construction projects can be predicted without relying on the independent variables. The results of Analysis of Variance (ANOVA) are shown in Table 4.10. The study findings provides F test which shows an overall test of significance of the fitted regression model. The F value indicates that all the variables in the equation were significant hence the overall regression model is significant.

From the findings in table below the results show that the model had an F ratio of 42.818 and the p value was $0.000 < 0.05$, implying that the F ratio was statistically significant, therefore the overall regression model for procurement capacity, human resource capacity, funding activities, controlling activities and adequacy of construction materials was statistically significant and can be used for prediction purposes at 5 % significance level, this further indicate that the variables used in this study are statistically significant.

Table 4.10 ANOVA for Testing Multiple Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	57.408	5	11.482	42.818	.000 ^b
Residual	47.194	176	.268		
Total	104.602	181			

a. Dependent Variable: completion of the county funded construction projects

b. Predictors: (Constant), procurement capacity, human resource capacity, funding activities, controlling activities and adequacy of construction materials.

4.6.3 Regression Analysis Coefficients

The study conducted t-test of statistical significance of each individual regression coefficient and results and are presented in Table 4.11.

Table 4.11 Regression Analysis Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.965	.106		28.074	.000
Procurement capacity	.927	.228	1.536	4.070	.000
Human resource capacity	1.319	.229	2.363	5.751	.000
Funding activities	.227	.107	.391	2.112	.036
Controlling activities	1.199	.215	1.890	5.588	.000
Adequacy of construction materials	1.313	.207	2.343	6.331	.000

a. Dependent Variable: Completion of the county funded construction projects

The findings indicate that all the t values were significant implying that Socio Economic Factors (independent variable) is a predictor of the completion of construction projects (dependent variable). The values are shown in the following variables; Procurement capacity (t=4.070 p< 0.000), Human resource capacity (t=5.751 p<0.000), Funding activities (t=2.112 p<0.036), Controlling activities (t=5.588 p<0.000) and Adequacy of construction materials (t=6.331 p< 0.000). However, the β coefficients were all significant to be used for multiple regression as follows; Procurement capacity (β₁=.927 p< 0.000), Human resource capacity (β₂=1.319 p< 0.000), Funding activities (β₃=.227 p<0.036), Controlling activities (β₄=1.199 p<0.000) and Adequacy of construction materials (β₅=1.313 p< 0.000). This implies that a unit increase in Procurement capacity caused a 0.927 increase in Completion of the county funded construction projects, a unit increase in Human resource capacity caused a 1.319 increases in Completion of the county funded construction projects, a unit increase in Funding activities caused a 0.227 increase in Completion of the county funded construction projects, a unit increase in Controlling activities caused a 1.199 increase in Completion of the county funded construction projects and a unit increase in Adequacy of construction materials caused a 1.313 increase in Completion of the county funded construction projects. From the Table 4.15, the regression model can be written as:

$$Y=2.965+0.927X_1+1.319X_2+0.227X_3 + 1.199X_4 + 1.313X_5 + \epsilon \dots\dots\dots\text{Equation 4.1}$$

This can be translated to;

Completion of the county funded construction projects = **2.965+0.927**(Procurement capacity)+**1.319**(Human resource capacity)+**0.227**(Funding activities) + **1.199**(Controlling activities) + **1.313**(Adequacy of construction materials).....**Equation 4.2**

Based on the above, the predictor variables procurement capacity, human resource capacity, funding activities, controlling activities and adequacy of construction materials can statistically significantly predict the dependent variable, which is the Completion of the county funded construction projects in Kenya.

From the observation schedule in appendix IV, the study noted that the level of procurement capacity is fair, the degree of funding capacity is poor, professionalism of human resource and personnel is good, the influence of control activities is poor, adequacy of construction materials is good, interconnectivity of activities is poor and finally competence of the contractor is poor. This implied that the county government lacks good control mechanism to eliminate inabilities that constrains successful construction and completion of the county funded projects. There is poor management of resources and the degree of funding resources is wanting. Contractors who bid for tenders are not done on a competitive basis as well because their output is low.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

Chapter five summarizes findings of the study, makes conclusions and recommendations and suggestions for further study. The summary of the findings is presented according to the themes of the study objectives which included Procurement capacity, Human resource capacity, Funding activities, Controlling activities and Adequacy of construction materials. This is presented as follows;

5.2 Summary of the Findings

In summary, demographic information showed that 54.9 percent of the respondents were male and 45.1 percent of the responses were female. The majority 33.5 percent of the respondents were 31-40 years. The majority 53.8 percent of respondents was diploma holders, 25.8 percent were degree holders, and this implied that respondents could easily read and understands research questions hence provided answers that were correct. Finally, 61.0 percent had worked for 6-10 years, this implies that the respondents had good experience of the work thus understood the content of the study which aid them to provide accurate answers based on the research instruments. On study objectives; Procurement capacity influence completion of construction projects ($\beta_1=0.927$ $p<0.000$) a unit increase in Procurement capacity caused a 0.927 increase in Completion of the county funded construction projects, Human resource capacity influence completion of construction projects ($\beta_2=1.319$, $p< 0.000$) a unit increase in Human resource capacity caused a 1.319 increases in Completion of the county funded construction projects, funding activities influence completion of construction projects ($\beta_3=0.227$, $p<0.036$) a unit increase in Funding activities caused a 0.227 increase in Completion of the county funded construction project, Controlling activities influence completion of construction projects ($\beta_4=1.199$, $p<0.000$) a unit increase in Controlling activities caused a 1.199 increase in Completion of the county funded construction projects and Adequacy of construction materials influence completion of construction projects ($\beta_5=1.313$, $p<0.000$) a unit increase in Adequacy of

construction materials caused a 1.313 increase in Completion of the county funded construction projects.

5.2.1 Procurement capacity and completion of construction projects

The study results revealed that 83.96% (mean=4.20, Std. Dev=0.907) of the respondents accepted that procurement officers ensure lead time of material delivery is short to facilitate smooth running of construction projects. Timely delivery of construction materials ensures better quality service in construction of projects. Procurement officers ensure timely placement of required materials to the construction site because they are the supervisors to oversee resource placements. They also ensure that the procurement process is in adherence to county requirements, companies involved and client requirements, company policies and procedures to ensure successful delivery of project requirements. Public procurement boards provide policy and regulatory oversight, they also provide training and capacity building for procurement officials, and they hear appeals and complaints, and assist local industries to become competitive and efficient suppliers to the public sector. Basically these pillars say that the board must make sure that information is given out to the civil society and business entities so as to enable a competitive environment to improve the economy.

5.2.2 Human resource capacity and completion of construction projects

The study results revealed that 85.93% (mean=4.21, Std. Dev=1.093) of the respondents accepted that contractors lack enough personnel to carry out all the duties needed for complete construction of projects. Human resource capacity has influence on performance of construction projects because well trained personnel were useful by producing quality work. Highly trained individuals are competitive, creative and resourceful to the company working for. Adequate human resource capacity can contribute to mitigation and elimination of rework/non-conformances; enhance client satisfaction; performance, and provide the catalyst for the synergy relative to the project parameters such as client satisfaction, cost, quality, and time.

5.2.3 Funding activities and completion of construction projects

The study results revealed that 87.36% (mean=4.37, Std.Dev=0.899) of the respondents accepted that funding is prioritized to most agent challenges other than budgeting well for each project. Funding for the construction projects are delayed because most of the county budgetary allocated money are delayed from the national government, poor management of resources by the managers in charge, prioritizing salaries paid to workers and failing to give similar weight to the construction of projects and also, some contractors may lack enough money to facilitate the completion of the projects. The ability of county bosses to fund and stick by the objectives for every financial year as well as both long term and short term action plan is still a challenge. When flow of funds to a project stops, then contractor will slow down works or may even opt to terminate his contract. That means project may be delayed or be unsuccessfully completed; when flow of funds to a project is not steady then there were on and off activities on site, resulting into contract delay. Delayed payments attract interest and this result into cost escalation. Idle plant and labour during stoppage attract claims from contractors and this leads to escalated contract cost. A project that is little funded may be done partly and later on becomes a white elephant.

5.2.4 Controlling activities and completion of construction projects

The study results revealed that 83.19% (mean=4.16, Std. Dev=1.113) of the respondents accepted that monitoring and evaluation reports are generated annually to facilitate review on progress of completion. Monitoring of construction of projects enables screening on the progress, faults made and possible solution to the construction problems. Evaluation draws on the data and information generated by the monitoring system as a way of analyzing the trends in effects and impact of the project. In some cases, it should be noted that monitoring data might reveal significant departure from the project expectations, which may warrant the undertaking of an evaluation to examine the assumptions and premises on which the project design is based. It is therefore important to evaluate and monitor construction of the projects for better performance.

5.2.5 Construction materials and completion of construction projects

The study results revealed that 88.68% (mean=4.43, Std.Dev=0.761) of the respondents accepted that materials needed in the construction site are not accessible and thus slows completion of projects in time. Distantly located construction materials constrain construction process and performance of the projects because it needs time to source the materials and high labour force to complete the task. Most of the projects depend on materials that need to be transported from far regions or over other counties. For example construction steel rods are imported overseas and also specific instruments are need orders that might take longer time to complete. Such challenges delays completion of the projects.

5.2.6 Completion of Construction Projects

The study results revealed that completion time of the projects is too long. Delayed materials, poor funding programmes, political interference, and competency of the contractors and procurement capacity of the constructors are key challenges facing project completion. Construction Delay is generally acknowledged as the most common, costly, complex and risky problem encountered in construction projects. Because of the overriding importance of time for both the owner and the contractor, it is the source of frequent disputes and claims leading to law suits. Delays do not always result from a single catastrophic event. They frequently develop slowly during the course of work.

5.3 Conclusion on completion of construction projects

In conclusion human resource capacity has greater influence on performance of construction projects. Also availability of construction materials were not accessible to the construction site, thus slows completion of projects in time. Most of the construction materials were distantly located hence constrain construction process and performance of the projects because it needs time to source the materials and high labour force to complete the task. Further control activities influenced completion of the projects. Monitoring and evaluation reports were not consistent therefore review on progress of completion was missing. Monitoring of construction of projects on the other hand enables screening on the progress, faults made and possible solution to the

construction problems. Finally poor funding schemes delayed completion of construction projects. Project may be delayed or be unsuccessfully completed; when flow of funds to a project is not steady then there were on and off activities on site, resulting into contract delay.

5.4 Recommendations on completion of construction projects

The study recommends to the county government procurement departments to employ procurement team that are competent to ensure all the construction logistics are procured appropriately. Competent procurement officers' accounts well the spending and utilization of the county resources.

The study recommends to the county governors to support stakeholders' and encourage them to frequently visits and evaluate the county rolling programs. This is because their views are influential on the completion of projects and when they support projects it is completed in time

The study recommends to the members of the county assembly to pass bills that are viable and fruitful to the development of the county. Good policies adopted by the county assemblies will ensure that when a project is initiated it cannot be left incomplete. The reason for this is that most projects have budgets that are not funded thus delay completion process.

The study recommends to the county assemblies to from strong structures mend to strictly evaluate construction of the county funded projects. Stakeholders and the larger public should be allowed to make decisions on the type of the projects initiated because they are the actual beneficiaries. The reason for this is that construction of projects receives little influence from control activities thus has led to poor performance

Finally the study recommends to the county assembly to mobilize use of local materials that readily available and also they can be processed to be useful. The reason for this is that materials to be used in the construction of projects are not available and thus slow the process of project completion.

5.5 Contribution to the Body of Knowledge

Procurement officers are responsible to ensure lead time delivery of material which supports effective construction of projects. Also most of the construction projects are incomplete because contractors lack enough personnel to carry out all the duties needed for effective completion of construction of projects. Also, funding for the construction projects are delayed because most of the county budgetary allocated money are delayed from the national government, poor management of resources by the managers in charge, prioritizing salaries paid to workers and failing to give similar weight to the construction of projects and also, some contractors may lack enough money to facilitate the completion of the projects.

In addition most projects are incomplete because monitoring and evaluation of the projects are inconsistent thus allow laziness which is a hindrance to proper completion of the construction project. Finally, materials needed in the construction site are not accessible and thus slows completion of projects in time. Most of the construction materials are distantly located.

5.6 Suggested areas for further Research

The study suggests that further research need to be done on similar topic but at different study area for example to investigate socio economic factors influencing completion of selected county funded construction projects in Kisumu, Nandi or Marsabit County.

REFERENCE

- Adediran, A., and Windapo, A. O. (2017). The Influence of Government Targeted Procurement Strategies on the Growth Performance of Construction Small and Medium-sized Contractors (SMCs) in South Africa. *International Journal of Construction Supply Chain Management*, 7(3), 151-164.
- Akanni, P. O., Oke, A. E., and Akpomiemie, O. A. (2015). Impact of Environmental Factors on Building Project Performance in Delta State, Nigeria. *HBRC Journal*, 11(1), 91-97.
- Ali, A. S., Smith, A., Pitt, M., and Choon, C. H. (2007). Contractors' Perception of Factors Contributing To Project Delay: Case Studies of Commercial Projects In Klang Valley, Malaysia. *Journal of Design and Built Environment*, 7(1).
- Amusan, L. M., Afolabi, A., Ojelabi, R., Omuh, I., and Okagbue, H. I. (2018). Data Exploration on Factors that Influences Construction Cost and Time Performance on Construction Project Sites. *Data in brief*, 17, 1320-1325.
- Atmo, G. U., Duffield, C., Zhang, L., and Ko, D. I. (2017). Comparative Performance of PPPs and Traditional Procurement Projects in Indonesia. *International Journal of Public Sector Management*, 30(2), 118-136.
- Ayob, A. L. B., and Nor, N. B. M. (2017). Developing a Conceptual Framework for the Role of Person–Environment (PE) Fit in Promoting Job Performance of Project Managers in Malaysian Construction Industry. *ICOPS2017 e-Proceedings*, 445.
- Banihashemi, S., Hosseini, M. R., Golizadeh, H., and Sankaran, S. (2017). Critical Success Factors (CSFs) for Integration of Sustainability into Construction Project Management Practices in Developing Countries. *International Journal of Project Management*, 35(6), 1103-1119.
- Batselier, J., and Vanhoucke, M. (2015). Construction and Evaluation Framework for a Real-life Project Database. *International Journal of Project Management*, 33(3), 697-710.
- Bhatia, M. S., and Awasthi, A. (2018). Assessing relationship Between Quality Management Systems and Business Performance and Its Mediators: SEM Approach. *International Journal of Quality and Reliability Management*, 35(8), 1490-1507.
- Binford, L. R. (2019). *Constructing Frames of Reference: an Analytical Method for Archaeological Theory Building using Ethnographic and Environmental Data Sets*. University of California Press.

- Bititci, U., Cocca, P., and Ates, A. (2016). Impact of Visual Performance Management Systems on the Performance Management Practices of Organizations. *International Journal of Production Research*, 54(6), 1571-1593.
- Boardman, A. E., Greenberg, D. H., Vining, A. R., and Weimer, D. L. (2017). *Cost-benefit analysis: Concepts And Practice*. Cambridge University Press, London.
- Burtonshaw-Gunn, S. A. (2017). *Risk and Financial Management in Construction*. Routledge.
- Carvalho, M. M. D., and Rabechini Junior, R. (2015). Impact of Risk Management on Project Performance: the Importance of Soft Skills. *International Journal of Production Research*, 53(2), 321-340.
- Chen, A. H., and Warren, J. (2011). Sustainable Growth for China: When Capital Markets and Green Infrastructure Combine. *Chinese Economy*, 44(5), 86-103.
- Clough, R. H., Sears, G. A., Sears, S. K., Segner, R. O., and Rounds, J. L. (2015). *Construction Contracting: A Practical Guide To Company Management*. John Wiley and Sons. India.
- County, K. (2013). First County Integrated Development Plan 2013-2017. *Kenya Vision, 2030*.
- County, P. (2013). *Pima County Community Health Improvement Plan, 2013-2017*.
- Dahlgaard-Park, S. M., Reyes, L., and Chen, C. K. (2018). The evolution and convergence of total quality management and management theories. *Total Quality Management and Business Excellence*, 29(9-10), 1108-1128.
- Delmon, J. (2017). *Public-private Partnership Projects in Infrastructure: an Essential Guide for Policy Makers*. Cambridge University Press, London.
- Demirkesen, S., and Ozorhon, B. (2017). Impact of Integration Management On Construction Project Management Performance. *International Journal of Project Management*, 35(8), 1639-1654.
- El-hadj, M. B., Faye, I., and Geh, Z. F. (2018). The Construction Cost Conundrum in Africa. In *Housing Market Dynamics in Africa* (pp. 159-214). Palgrave Macmillan, London.
- Elmahroug, M. H., Tutesigensi, A., and Smith, N. J. (2016). A Problem Solving Approach to Identifying Civil Engineering Infrastructure Projects. In *Proceedings 32nd Annual ARCOM Conference* (pp. 853-862).

- Eriksson, P. E., Larsson, J., and Pesämaa, O. (2017). Managing Complex Projects in the Infrastructure sector—A Structural Equation Model for Flexibility-focused Project Management. *International journal of project management*, 35(8), 1512-1523.
- Farah, M. (2015). Lean Supply Chain Management Practices and Organization Performance in the Public Water Sector in Kenya. *University of Nairobi*.
- Harrison, F., and Lock, D. (2017). *Advanced Project Management: a Structured Approach*. Routledge.
- Hazır, O. (2015). A Review of Analytical Models, Approaches and Decision Support Tools in Project Monitoring and Control. *International Journal of Project Management*, 33(4), 808-815.
- Posavac, E. J. (2015). *Program evaluation: Methods and case studies*. Routledge.
- Henriquez-Dole, L., Uson, T. J., Vicuna, S., Henriquez, C., Gironas, J., and Meza, F. (2018). Integrating Strategic Land use Planning in the Construction of Future Land use Scenarios and its Performance: The Maipo River Basin, Chile. *Land use policy*, 78, 353-366.
- Hwang, B. G., Zhu, L., and Tan, J. S. H. (2017). Identifying Critical Success Factors for Green Business Parks: Case study of Singapore. *Journal of Management in Engineering*, 33(5), 04017023.
- Jatarona, N. A., Yusof, A. M., Ismail, S., and Saar, C. C. (2016). Public Construction Projects Performance in Malaysia. *Journal of Southeast Asian Research*, 20, 16.
- Jolly, B., Isa, F. M., Othman, S. N., and Ahmdon, M. A. S. (2016). The Influence of Management Capability, Marketing Capability and Competitive Advantage on Malaysian Construction Project Performance. *International Review of Management and Marketing*, 6(8S), 142-148.
- Kagiri, D., and Wainaina, G. (2017). Time and Cost Overruns in Power Projects in Kenya: A Case Study of Kenya Electricity Generating Company Limited. *Orsea Journal*, 3(2).
- Kerzner, H. (2019). *Using the Project Management Maturity Model: Strategic Planning for Project Management*. Wiley.
- Kibert, C. J. (2016). *Sustainable Construction: Green Building Design and Delivery*. John Wiley and Sons.

- Kneese, A. V., Ayres, R. U., and d'Arge, R. C. (2015). *Economics and the environment: a Materials Balance Approach*. Routledge.
- Ko, D. G., and Kirsch, L. J. (2017). The Hybrid IT Project Manager: One foot each in the IT and Business Domains. *International Journal of Project Management*, 35(3), 307-319.
- Lepkova, N., Butkiene, E., and Belej, M. (2016). Study of Customer Satisfaction with Living Conditions in New Apartment Buildings. *Real Estate Management and Valuation*, 24(3), 52-70.
- Lewis, H., Gertsakis, J., Grant, T., Morelli, N., and Sweatman, A. (2017). *Design+ Environment: a Global Guide To Designing Greener Goods*. Routledge.
- Lock, D. (2016). *Project Management in Construction*. Routledge.
- Lu, W., Chen, X., Peng, Y., and Shen, L. (2015). Benchmarking construction waste management performance using big data. *Resources, Conservation and Recycling*, 105, 49-58.
- Mahamid, I. (2017). Schedule delay in Saudi Arabia road construction projects: size, estimate, determinants and effects. *Int J Arch Eng Constr*, 6(3), 51-58.
- Mwangu, A. W., and Iravo, M. A. (2015). How Monitoring and Evaluation Affects the Outcome of Constituency Development Fund Projects in Kenya: a case study of projects in Gatanga Constituency. *International Journal of Academic Research in Business and Social Sciences*, 5(3), 2222-6990.
- Myers, D. (2016). *Construction economics: A new Approach*. Routledge.
- Nassar, M. R. (2018). Design-Construction Interface Problems in Building Construction Projects in Gaza Strip: Impacts and Minimization. *Design-Construction Interface Problems in Building Construction Projects in Gaza Strip: Impacts and Minimization*.
- Niagara, P., and Datche, E. (2015). Factors Affecting the Performance of Construction Projects: A Survey of Construction Projects in the Coastal Region of Kenya. *International Journal of Scientific and Research Publications*, 5(10), 1.
- Nicholas, J. M., and Steyn, H. (2017). *Project Management for Engineering, Business and Technology*. Routledge.
- Obeidat, M. A. Q., and Aldulaimi, S. H. (2016). The Role Of Project Management Information Systems Towards The Project Performance The Case of Construction Projects in

United Arab Emirates. *International Review of Management and Marketing*, 6(3), 559-568.

Osei-Kyei, R., and Chan, A. P. (2016). Developing Transport Infrastructure in Sub-Saharan Africa Through Public-Private Partnerships: Policy Practice and Implications. *Transport Reviews*, 36(2), 170-186.

Oshungade, O. O. (2016). *A Comparative study of Causes and Effects of Project Delays and Disruptions In Construction Projects in the South African Construction Industry: City of Johannesburg as a case study* University of Johannesburg.

Papanek, G. F. (2019). *Pakistan's Development: Social Goals and Private Incentives*. Harvard University Press.

Patil, K. (2017). Public Procurement Policy for Small and Medium Enterprises in Developing Countries: Evidence from India. *International Journal of Public Sector Management*, 30(4), 391-410.

Polat, G. (2016). Subcontractor Selection Using the Integration of the AHP and PROMETHEE methods. *Journal of Civil Engineering and Management*, 22(8), 1042-1054.

Randhawa, J. S., and Ahuja, I. S. (2017). 5S—a Quality Improvement Tool for Sustainable Performance: Literature Review and Directions. *International Journal of Quality & Reliability Management*, 34(3), 334-361.

Rumane, A. R. (2016). *Quality Management in Construction Projects*. CRC Press.

Saieg, P., Sotelino, E. D., Nascimento, D., and Caiado, R. G. G. (2018). Interactions of Building Information Modeling, Lean and Sustainability on the Architectural, Engineering And Construction Industry: A Systematic Review. *Journal of Cleaner Production*, 174, 788-806.

Saldana, J. (2015). *The Coding Manual for Qualitative Researchers*. California; Sage Publication.

Santoso, D. S., and Soeng, S. (2016). Analyzing Delays of Road Construction Projects in Cambodia: Causes and effects. *Journal of Management in Engineering*, 32(6), 05016020.

Seadon, J., and Tookey, J. E. (2019). Drivers for Construction Productivity. *Engineering, Construction and Architectural Management*.

- Sears, S. K., Sears, G. A., Clough, R. H., Rounds, J. L., and Segner, R. O. (2015). *Construction project management*. John Wiley & Sons.
- Shahid, M. (2016). *A study on capacity assessment in public procurement of urban local bodies in Bangladesh*. BRAC Universit Press, India.
- Singh, K. B. (2015). *Wrap the Scrap with DMAIC: Strategic Deployment of Six Sigma in Indian Foundry SMEs*. Anchor Academic Publishing.
- Uromi, S. M. (2014). Challenges Facing Public Procurement Information in Some African Countries Namely. *International Journal of Innovation Education and Research*, 2(7), 54-60.
- Walker, A. (2015). *Project management in construction*. John Wiley and Sons.
- Yan, H., Elzarka, H., Gao, C., Zhang, F., and Tang, W. (2018). Critical Success Criteria for Programs in China: Construction Companies' Perspectives. *Journal of Management in Engineering*, 35(1), 04018048.
- Yap, J. B. H., and Skitmore, M. (2018). Investigating Design Changes in Malaysian Building Projects. *Architectural Engineering and Design Management*, 14(3), 218-238.

APPENDICES

APPENDIX I: INTRODUCTORY LETTER FOR RESPONDENTS

MUCHIRI TABITHA MUKAMI

UNIVERSITY OF NAIROBI

P.O BOX 30197 (00100)

NAIROBI

To Respondents

Dear Respondent

Re; Participation in Research

I am a student at University of Nairobi pursuing Master’s degree Arts in Project Planning and Management. I am conducting a study on *Socio economic factors influencing completion of county funded construction projects in Kitale town, Trans Nzoia County, Kenya.*

The study is conducted purely for academic purposes. It is not meant to evaluate your opinion or demean your institution in any way whatsoever. Your response were strictly confidential to provide insight into the issues under study and thereby suggest possible solution to them. Your responses were treated with uttermost confidentiality.

In view of this therefore, I wish to kindly request you to fill the questionnaire attached. Please respond to the items in the questionnaire completely and as truthful as possible.

Thank you.

Yours faithful

.....

Muchiri Tabitha Mukami - 0721635715

**APPENDIX II: QUESTIONNAIRE FOR CONSTRUCTION PROJECT
BENEFICIARIES**

Am a student at University of Nairobi – Kitale campus studying Project Planning and Management that will lead to award of Degree of Master in Project Planning and Management. Am undertaking a field research in Kitale town on selected county funded construction projects and your participation were highly appreciated. Kindly respond to the questionnaire by filling the blank spaces with a tick () in the preferred answer. All information provided were treated with confidentiality and used for academic purpose only.

Name_____Date_____

PART A

Background information

1. Indicate your gender
 - A. Male
 - B. Female
2. Select your age bracket?
 - A. 20-30 years
 - B. 31-40years
 - C. 41-50 years
 - D. 51 years and above
3. Show your highest level of education attained.
 - A. Certificate
 - B. Diploma
 - C. Degree
 - D. Masters
 - E. PhD
4. Indicate your work experience
 - A. 0 to 5 years

- B. 6 to 10 years []
 C. 11 to 15 years []
 D. Above 15 years []

PART B

Please Tick the Response That Best Matches Your Perception;

Procurement capacity

Please rate the following to the best of your knowledge, on how do procurement activities influence completions of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya. Please tick. Using the following Key:-

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Procurement team is competent to ensure all the construction logistics are procured appropriately.					
2	Procurement officers ensure lead time of material delivery is short to facilitate smooth running of construction projects.					
3	Procurement team lack good knowledge for procurement of raw materials used in construction of projects					
4	Procurement team is slow to respond to the needs of construction process.					
5	Procurement officers have good knowledge desired for completion of projects.					

PART C: Human resource capacity

Please rate the following to the best of your knowledge, on what extent does human resource influence completion of selected county funded construction projects in Kitale town,Trans Nzoia County, Kenya; Please tick. Using the following Key:

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Project managers have the capacity to ensure that there is smooth running of all the construction activities.					
2	Project team work is dedicated to cooperate and work together for the purpose of completion of projects.					
3	Contractors lack enough personnel to carry out all the duties needed for complete construction of projects					
4	Stakeholders’ views are influential on the completion of projects and when they support projects it is completed in time.					
5	Project managers are not competent to ensure completion of projects is done in time.					

PART D: Funding activities

Please rate the following to the best of your knowledge, on how does funding activities influence completion of selected county funded construction projects in Kitale town,Trans Nzoia County, Kenya; Please tick using the following Key:-

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Most projects have budgets that are not funded thus delay completion process.					
2	There are many challenges in funding projects since the county does not have enough money to facilitate all its activities.					
3	The county government do not fully remit funds for the completion of the construction projects					
4	Funding is prioritized to most agent challenges other than budgeting well for each project.					
5	Contractors have encountered mismanagement of funds that are allocated to completion of projects					

PART E: Controlling activities

Please rate the following to the best of your knowledge on what extent does adequacy of construction materials influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County, Kenya; Please tick using the following Key:-

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Project monitoring committee facilitates supervision on completion of projects.					
2	Monitoring and evaluation reports are generated annually to facilitate review on progress of completion.					
3	Construction of projects receives little influence from control activities thus has led to poor performance.					
4	Project appraisal is done by the national government to motivate best projects.					
5	There is little evaluation done on the projects by the committee that is why performance on completion of projects is still low.					

PART F: Construction materials

Please rate the following to the best of your knowledge on how the factors influence completion of selected county funded construction projects in Kitale town, Trans Nzoia County; Please tick using the following Key:-

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Materials to be used in the construction of projects are not available and thus slow the process of project completion.					
2	Materials needed in the construction site are not accessible and thus slows completion of projects in time.					
3	Construction materials are scarce and thus strain completion of projects that are under construction.					
4	Materials that are available are expensive that is why there is poor completion of projects.					
5	Accessible materials are not durable and thus discourage completion of projects					

PART G: Completion of Construction Projects

Please rate the following to the best of your knowledge on what extent do socio economic factors influence completion of selected county funded construction projects in Kitale town,Trans Nzoia County?;Please tick.

Using the following Key:-

1=SD-Strongly Disagree, 2= D-Disagree, 3=Neutral, 4= A –Agree and 5=SA-Strongly Agree

	Statements	1	2	3	4	5
1	Lifespan of the completed projects is long.					
2	The county government have not fully realized or achieved complete construction of projects.					
3	There is need to closely monitor construction of projects for quality and completion since contractors are lazy in their duties.					
4	The completion time of projects is too long.					
5	Projects that are completed are ranked according to their design and quality.					

**APPENDIX III: INTERVIEW SCHEDULE FOR PROJECT MANAGERS AND
COUNTY ADMINISTRATORS**

1. What is your position in the organization?

2. For how long have you worked in your current position? _____

3. How do procurement activities influence completion of selected county funded construction projects in Kitale Town, Trans Nzoia County?

4. To what extent does human resource influence completion of selected county funded construction projects in Kitale Town, Trans Nzoia County?

5. How does funding activities influence completion of selected county funded construction projects in Kitale Town, Trans Nzoia County?

6. How does controlling activities influence completion of selected county funded construction projects in Kitale Town, Trans Nzoia County?

7. To what extent does adequacy of construction materials influence completion of selected county funded construction projects in Kitale Town, Trans Nzoia County?

**APPENDIX IV: OBSERVATION SCHEDULE FOR CONSTRUCTION
CONTRACTORS OF THE PROJECT**

Item	Very good	Good	Fair	Poor
Level of procurement capacity			✓	
Degree of funding capacity				✓
Professionalism of human resource and personnel			✓	
Influence of control activities				✓
Adequacy of construction materials		✓		
Interconnectivity of activities				✓
Competence of contractor				✓


APPENDIX V: CHECKLIST FOR CONSTRUCTION PROJECT

The number of projects that was flagships for completion since 2015 to 2019

Item	Completed	In progress	Abandoned	Not Commenced	Totals
Tarmac Roads					
Murram roads					
Market Stalls					
Bus park stations					
Stadiums					
Hospitals					

APPENDIX VI: RESEARCH PERMIT

THIS IS TO CERTIFY THAT: **Permit No. : NACOSTI/P/19/63341/30393**
MS. TABITHA MUKAMI MUCHIRI **Date Of Issue : 29th May, 2019**
of UNIVERSITY OF NAIROBI , 4380-30200 **Fee Received :Ksh 1000**
KITALE, has been permitted to conduct
research in Transzoia County
on the topic: SOCIO ECONOMIC
FACTORS INFLUENCING COMPLETION OF
SELECTED COUNTY FUNDED
CONSTRUCTION PROJECTS IN KITALE
TOWN, TRANS NZOIA COUNTY, KENYA




for the period ending
23rd May, 2020

Applicant's
Signature

Director General
National Commission for Science,
Technology & Innovation

THE SCIENCE, TECHNOLOGY AND
INNOVATION ACT, 2013
The Grant of Research Licenses is guided by the Science,
Technology and Innovation (Research Licensing) Regulations, 2014.



CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

REPUBLIC OF KENYA
NACOSTI
National Commission for Science,
Technology and Innovation
RESEARCH LICENSE
Serial No.A 25060
CONDITIONS: see back page

National Commission for Science, Technology and innovation
P.O. Box 30623 - 00100, Nairobi, Kenya
TEL: 020 400 7000, 0713 788787, 0735 404245
Email: dg@nacosti.go.ke, registry@nacosti.go.ke
Website: www.nacosti.go.ke

**APPENDIX VII: NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND
INNOVATION**



**NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/63341/30393**

Date: **29th May, 2019.**

Tabitha Mukami Muchiri
University of Nairobi
P.O Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***“Socio economic factors influencing completion of selected County funded construction projects in Kitale Town, Trans Nzoia County, Kenya.”*** I am pleased to inform you that you have been authorized to undertake research in **Trans Nzoia County** for the period ending **23rd May, 2020.**

You are advised to report to **the County Commissioner and the County Director of Education, Trans Nzoia County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


**BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO**

Copy to:
The County Commissioner
Trans Nzoia County.

The County Director of Education
Trans Nzoia County.