FACTORS INFLUENCING IMPLEMENTATION OF ROAD CONSTRUCTION PROJECTS IN KENYA: A CASE OF ISIOLO COUNTY, KENYA

BY

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DECLARATION

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

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DEDICATION

This work is dedicated to my wife Irene and our beloved children, Rodgers, Ian and Ashley for their understanding and perseverance during the periods of my struggle for this degree of the University of Nairobi and the entire community of Isiolo County whose source of inspiration gives me the impetus for struggle.

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TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

ABBREVIATIONS AND ACRONYMS

A2	Road class A
D485	Road class D
EIA	Environmental Impact Assessment
ERS	Economic Recovery Strategy
FIDIC	Federation International Des Ingeniers – Consels
GOK	Government of Kenya
KeRRA	Kenya Rural Roads Authority
KeNHA	Kenya National Highway Authority
KIPRA	Kenya Institute for Public Policy and Research Analysis
KPIs	Key Performance Indicators
KURA	Kenya Urban Roads Authority
KRB	Kenya Roads Board
MDGS	Millennium Development Goals
MOLG	Ministry of Local Government
MOR	Ministry of Roads
MR&R	Maintenance, Repair and Rehabilitation
NCTTA	Northern Corridor Transport Transit Agreement
NEMA	National Environmental Management Authority
NMIMTS	Non – Motorised and Intermediate Means of Transport
O&M	Operation and Maintenance
RE	Resident Engineer

RIM	Road Investment Plan
UNCTAD	United Nations Conference on Trade and Development
SPSS	Statistical Package for Social Sciences
VoPs	Variation of Prices

ABSTRACT

Proper planning, good site management, adequate contractor experience, adequate clients finance and payment for completed works, favourable external conditions, identification of sub contractors, proper adequate material, labour supply, maintaining of plants and equipments and proper communication channels between parties of the project are the factors which influence the successful implementation of road projects. This research project report concentrated on the factors which influence the implementation of road construction projects in Kenya with specific reference to Isiolo – Merille (A2) road, Lewa – Isiolo (A2) road and Isiolo – Muriri (D485) road projects in Isiolo County. The objectives of the study were to determine how project resource mobilization approaches, to assess how project leadership and management, to assess how contract documentation and to establish how local politics influence the implementation of a road construction project in Isiolo County. A descriptive survey design was used in the study and a stratified random sampling was applied to select respondents from the staff members of the contractor, employer, consultants and land owners. Data collection was done by use of structured and un-structured questionnaires which were administered by researcher to the respondents. Data was analyzed using Statistical Package for Social Sciences. The findings show that 79% of the respondents were not paid directly and promptly, majority of the consultants (71%) and land owners (67%) had a project management committee, a total of 69% of the consultants had some items missing from contract documents and both consultants (68%) and the land owners (79%) indicated that there were politicians who had been in the past involved in road construction projects. This study found that contract documentation contributed most to the implementation of road construction projects followed by resource mobilization approaches, and local politics while the project leadership and management had the least effect. In order to avoid confrontations, the land owners should be paid before the commencement of the project directly and promptly. The Ministry of Roads should educate the community on the benefits of the projects in order to avoid misunderstandings with the project implementers. All stakeholders in the road construction projects should ensure good contract documentation is done in order to avoid the missing items in the contract documents. Regulations should be enforced in order to block politicians from influencing or involving in the implementation of road construction projects. The findings of the study are important to project managers, Consulting Civil Engineers, Engineers, Planners and Road Contractors in both private and public sector.

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

The existence of good and well functioning road network is vital for economic growth, poverty reduction, and wealth and employment creation. Thus the Ministry of Roads plays an important role in the attainment of "Kenya vision 2030" goals, Millennium Development Goals (MDGs) and Kenya's Economic Recovery Strategy for wealth and Employment Creation Strategy (ERS) through the provision of basic infrastructure facilities to the public by developing, maintaining, rehabilitating and managing of road networks in the country.

The infrastructure has been given the highest priority to ensure that the main road projects under the 'economic pillar' are implemented, according to the Ministry of Roads' Service Charter (2008), there is a need for improvement of roads to a motorable condition because the road transport (mode of transport) carries about 80% of all cargoes and passengers in the country. Due to the importance of roads in socio-economic development of the country, the government has in the recent past steadily increased budget allocation to the road sub-sector.

As a result of these initiatives ,there is need to study various factors which affect the implementation of road projects with a view to sharing knowledge, skills and experiences which will enable an efficient implementation process.

Monthly progress reports minutes of site meetings and other documentary review on the three projects are those on focus which will be obtained from the Kenya National Highways Authority (KeNHA) and Kenya Rural Roads Authority (KeRRA) regional offices and from the site (Engineer's and Contractor's sites).

According to recommendations of the committee to analyze bill No. 1 of Roads Department (March, 2005), there are four main categories of road projects in Kenya namely:- New construction, Rehabilitation, repair and resealing and re-gravelling Isiolo – Merille Road (A2) and Isiolo Muriri road (A2) projects are under new construction whereas Lewa-Isiolo road (D485) Project is under rehabilitation category.

All the three projects are behind the schedule as per approved programme of works according to Federation Internationale Des Ingenieurs - Consels FIDIC, (1987) conditions of contract

clause ‘14’ compared to the actual work done (physical progress of works) This means that road the network in Isiolo County has partially opened up despite the award of the several road contracts.

1.2 Statement of the Problem

Although Kenya Roads Act 2007 seems to institutionalize Kenya National Highways Authority (KeNHA) and Kenya Rural Roads Authority (KeRRA), this is basically a new paradigm shift because the key structures are not in place. These projects were supervised by Chief Engineer Roads but when the two authorities were established under the Act, Isiolo – Merille road (A2) and Lewa – Isiolo road (A2) projects were taken over and be supervised by KeNHA under General Manager Construction while Isiolo – Muriri road (D485) project were taken over and be supervised by KeRRA under General Manager Construction. Despite the change of management these projects are behind schedule compared to approved programme of works under conditions of contract clause “14” (FIDIC, 1987). These contracts have exceeded the contract period and some have even halted before completion. This study sought to assess factors influencing the implementation of road construction projects in Isiolo County.

1.3 Purpose of the Study

The purpose of this study was to investigate the factors which influence implementation of road construction projects in Kenya with specific reference to Isiolo – Merille road (A2), Lewa - Isiolo Road (A2) and Isiolo – Muriri road (D485) projects in Isiolo County.

1.4 Objectives of the Study

The specific objectives of this study were:

i. To determine how project resource mobilization approaches influence the implementation of road construction projects in Isiolo County
ii. To assess how project leadership and management influence the implementation of road construction projects in Isiolo County
iii. To assess how contract documentation influence the implementation of a road construction project in Isiolo County
iv. To establish how local politics influence the implementation of a road construction project in Isiolo County

1.5 Research Questions

The research questions of the study were:-

i. How do project resource mobilization approaches employed by the organizations influence the implementation of road construction project in Isiolo County?
ii. How does project leadership and management influence implementation of road construction project in Isiolo County?
iii. How does contract documentation influence implementation of road construction project in Isiolo County?
iv. To what extent does local politics influence implementation of a road construction project in Isiolo County?

1.6 Significance of the Study

Ministry of Roads spends a lot of money on feasibility studies, planning, and road designing and tender documentation depending on the scope of works and the type of the road projects before it enters into the implementation stage of road construction. Consequently, the employer signs a contract with the contractor which in actual sense does not reflect actual works on the ground. This has led to extension of contract period and incurrence of high extra cost to complete the road project. This scenario is contrary to Federation International Des ingeniers – Consels (FIDIC) conditions of contract (FIDIC clause "14" sub clause "14.1", 1987) on programme of works which force the contractor to submit another revised programme works to the Engineer for approval (FIDIC clause "14" sub clause "14.2", 1987) due to discrepancy in between the planned and the actual works.

This study may be important in order to reduce the discrepancies between the planned and actual works which in turn the road projects would be delivered within the time bound, budget and quality. Consequently the savings would be a benefit to tax payers, Road Contractors, Road Engineers, Consultants and the Government.

1.7 Limitations of the Study

Descriptive research design employed in this study may not have the potential for drawing powerful inferences. A descriptive study, thus, does not explain why an event has occurred or why the variables interact the way they do. One cannot try to draw conclusions that show cause and effect, because that is beyond the bounds of the statistics employed. Further, the

use of questionnaire made the study more expensive because of travel and also requires skilled interviewer.

Some projects management committee members shyed off from giving information for fear that the research is going to evaluate their leadership, hence open up debate on their leadership qualities among the project members. This was overcome by making the intention of research clear on the project management committee members ahead of data collection.

The study included three road project namely: - Lewa – Isiolo road (A2) project would be completed before the data is collected from the contractor's and the Employer's staff. However, it is the same contractor (M/s Intex Construction Company) who is implementing Isiolo – Muriri Road (D485) project and a neighbouring project Nanyuki – Lewa road (A2) project. Most of the staff members were transferred to these projects. The Employer's staffs are employed on permanent and pensionable terms and they can be traced from the Ministry of Roads by compiling their data base or diary. This challenge was addressed by use of a research assistant, e-mail and telephone for interviews especially where questionnaire was the tool of data collection.

1.8 Delimitations of the Study

The study concentrates on the three projects which are within proximity of distance and cover a large scope of Isiolo Township and the population of membership can provide a good sample from Employers', contractors and Engineers sides.

The projects progress reports minutes of site meetings and other documentary reviews will be obtained from the KeNHA and KeRRA Regional Managers offices based in Isiolo town.

1.9 Assumptions of the Study

The assumptions of the study were that the sampled population would represent the general population of membership of the road construction projects in the Isiolo county. The researcher also assumed that the experiences of the leadership and the membership of the three road projects are representative of other road projects in Kenya, the methods of data collection used would be accurate and valid to enhance acquisition of the required data, the respondents will be truthful and would give correct information and that the chosen respondents are willing to give the required information freely.

1.10 Definitions of Significant Terms

Degree of Completion Based on the projects implementation plan and the implementation time frame. It is used for monitoring and evaluation of the projects.

Implementation Is the realization of an application or execution of a plan, idea, model, design, specification, standard, algorithm or policy.

Leadership The general governance and management of road construction projects. This includes management of project activities, guidance to members as well as conflict management.

Local Politics The involvement of politicians, whether currently in active politics or engaged in political opinion as per the community understanding, in the activities of the project either directly through advise, fundraising, participation or otherwise or indirectly by use of proxy.

Participation Involvement, either actively or passively in the process of project implementation.

Resource Financial, raw materials, plants, eqipments and human resource

Road Construction Project Is a project financed by Government of Kenya (Gok) and key decisions controlled by government authorities.

Road This is a way for vehicles and for other types of traffic which may or may not be lawfully usable by all traffic.

Social Capital Features of an organization such as trust, norms, networks, homogeneity among others which form an important part of its organizational culture and enhance co-working partnership.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter gives reviews of some studies on road construction projects done recently and primary information to critique the existing works. It also contains the conceptual theoretical framework illustrated dramatically which briefly explains the relationship between the independent, dependent, moderating and intervening variables identified for the study.

2.2 History of Road Transport

According to Johnson (1915) and Lay (1992), The first forms of road transport were horses, oxen or even humans carrying goods over tracks that often followed game rails. In the Stone Age humans did not need constructed trucks in open country. The first improved trails would have been at fords, mountain passes and through swamps. The first improvements would have consisted largely of clearing trees and big stones from the path. The first goods transport was on human backs and heads but the use of pack animals, including donkeys and horses, developed during the Stone Age.

Thomas Telford (1757-1834) a Scottish surveyor and engineer made substantial advances on the engineering of new roads and the construction of bridges. Under his supervision 1,500km of roads and 1,000 bridges were built in Scotland between 1802 and 1822. Adam London (1756-1836), another Scottish engineer, designed the first modern roads. He developed inexpensive paving materials of soil and stone aggregate (known as macadam), and he embarked roads a few feet higher, than the surrounding terrain to cause water to drain away from the surface. The first two layers consisted of angular hand – broken aggregate, maximum size 3inches (75mm), to a total depth of about 8inches (200mm). The third layer was about 2inches (50mm) thick with a maximum aggregate size of inch (25mm). Each layer would be compacted with a heavy roller, causing the angular stones to lock together with their neighbours. He also insisted on raising the roads to ensure good drainage and flat crowned surfaces, rather than ridges built into the road to encourage drainage.

2.3 Road Construction Projects in Kenya

According to Barwell (1996) and World Bank (2002), the adoption of competitive bidding for road and other civil works has been the norm in most countries of the world, some countries do not have a sufficient industry of independent contractors and road works are mostly done by force account or awarded to state construction agencies on negotiated basis. In many of these countries, not only are cost high and quality low, it is also common for suppliers of construction materials and services to have monopoly power, further increasing inefficiency and lowering quality. In these situations, it is a combination of transferring work from the public to private sector and the introduction of competition into operations that is often the best way to decrease inefficiency and improve quality. The introduction of competitive bidding into public works contracts is also often important first step to this goal. Secondly, the contracting out of the works function requires the introduction of competition into the operation of road agencies themselves, either by the greater use of existing private contractors, or by allowing public sector agencies to compete with the private sector.

According to Lantran, Jean – Marie (1993) and Wells (1986), where the private sector is also relied on for the construction of roads, it is the bidding and contracting documents which are the foundation of the construction process. In recent years, as the process of contracting has quickly evolved, and contractors have experimented with new ways of acquiring new business and enhancing profits, there is an awareness of the need to refine these basic documents, particularly in the areas of risks and incentives. According to united kingdom Highways Agency (2009), new approached of road construction processes have evolved ranging from management contracts to Design, Build, Finance operate and transfer of the concessioning, should be considered as valid options, together with the more traditional methods in bidding on the basis of existing designs and specifications.

2.4 Phases of Roads Development

The productivity, welfare, and security of both rural and urban people are greatly influenced by the level of infrastructure development in their communities and infrastructural links to district, provincial, and national centres of administration and commerce. Different kinds of infrastructure have in common set of activities, each with somewhat distinct institutional requirements: design of facilities and supporting activities, construction, operation, and maintenance. In infrastructural development, these are generally conceived as constituting a

fixed sequence (phases). However, in practice maintenance and operation may occur concurrently, and redesign, rehabilitation, or repair may be conducted when necessary. The following is a brief description of the phases of infrastructure development with respect to roads and bridges.

2.4.1 Design and Construction

Design is highly technical process requiring highly trained staff, especially when the technology involved is complex. The basic design is apt to be successful if presented and adapted through a process of consultation and active stakeholder participation at all stages. Indeed, there is increasing evidence that local involvement in design and construction of rural infrastructure leads to better design and better subsequent performance. This is most clearly seen with domestic water supply projects (USALD 1982; Williamson, 1983). An expanding amount of literature suggests that design decisions and choice of technology for rural roads are more appropriate when made at the lower levels. There is also more incentive for communities to take responsibility for the construction phase if they have had significant involvement in the design phases (Edmonds, 1980).

The role of different levels of institutions in construction is a function of the technology requirements of the task. Farm to market roads, which have less-exacting standards and can draw on techniques already mastered by local people, are more readily undertaken by local institutions than that of Inter- highways (Uphoff 1986). By and large, however, the local government, other local institutions and private enterprises have a critical role in infrastructural development because construction activities rely on local materials and familiars technologies.

2.4.2 Operation and Maintenance

Operation and maintenance (O and M) each has its particular activities, although they are usually grouped together in language and practice as ‘O and M’. Central Government agencies often concede O and M task to be “suited” to local institutions. However, one of the main frequent conclusions from literature is that the willingness and ability of local institutions to discharge O and M responsibilities depend in large part on their involvement in the design and construction of the facility concerned (USAID, 1982). So, simply handing over O and M responsibility to local institutions as a ‘turnkey project’ is apt to undermine the maintenance of the road infrastructure. The critical variables, therefore, are how much the

community understands and values the benefits of the infrastructure in question. This is way stakeholder participation in design and construction is important, first in ensuring that the infrastructure is needed and supported, and second in giving people a sense of ownership of and responsibility for the facility.

In sum, there are no good alternatives to local management of road infrastructure. The principle of comparative advantage proposes that all parties concentrate on doing what they can do better or avoid what they do worst. Central Government administration of roads at the local level is seldom the way to use scarce financial and management resources.

2.5 Key Challenges Facing the Road Sub – Sector

The gap between the current situation and the targets for the sector in the absence of strategy, there exist no targets or measurable outputs for the sub-sector. Policies and institutions that are still in need of reform Creation of an executive Roads Fund Boards in year 2000 to oversee the maintenance, rehabilitation and development of the road network was an important first step in strengthening the sector. More radical reforms are however now urgently needed in order to establish an effective and efficient management of the sub-sector. This is particularly true in terms of creating the right institutions and mechanisms to carry out road maintenance. A comprehensive legal review is also required to resolve the problem of 22 separate legal statutes that effect management of roads and currently prevent the full operationalisation of KRB Act, 1999. Amongst the key recommendations of the KRB Roads Policy and Strategy study report is the establishment of autonomous road implementing agencies under KRB, and assignment of network responsibilities to them. In particular, a new national highways agency or authority should be established. This should be a new organization that is lean and commercially oriented, and not just a transformation of the Roads Department, if the existing institutional culture is to be changed.

The new agencies receiving funds from KRB should be required to sign – up to annual participation agreements setting out funding conditionality determined by KRB Act, 1999. Also the management of axle load control requires reform. Too much time and money is unnecessarily being lost due to inefficient management and corruption at weighbridges, making this one of the key non-physical barriers in regional and national trade. Development partners have offered funding for a best options of study and procurement of appropriate system and equipment. Progress on the reform of the roads sub-sector is dependent on

appropriate legal frameworks, and public consultation and political will. The slow progress of reforms in the roads sub-sector has been due to resistance by existing civil service institutions to change. Policy formulation roles and implementation should be clearly defined and separated. The development of roads policy must be rooted in the recently completed national transport policy framework. Quality of targeting or pro-poor orientation of the public expenditure component more work needs to be done to re-orient objectives and activities toward rural infrastructure expenditure, particularly in high productivity areas. Rolling out of predominantly labor-intensive Roads 2000 programme to all districts is a step in the right direction.

2.6 Factors Influencing the Success or Failure of Road Construction Projects

According to Abdalla and Hussein (2001), many projects experience extensive delays and thereby exceed initial time and cost estimates. In addition to impacting economic feasibility of capital projects, extensive delays provide fertile ground for costly disputes and claims. Abdalla and Hussein (2001) present the findings of a survey aimed at identifying the most important causes of delays on road construction project with traditional type contract from the view point projects of construction contractors and consultants. The results of the survey indicate that contractors and consultants agreed that owner interference, inadequate contractor experience, financing and payment, labor productivity, slow decision making, improper planning and subcontractors are among important factors. It is hoped that these findings will guide efforts to improve the performance of the construction industry and will be useful to international engineering and construction firms seeking a share in the Jordan and the regional markets. Based on Abdulla and Hussein (2001) survey findings, there is a need to conduct a research project on factors contributing towards the delaying in completion of road construction projects in Isiolo County in order to establish the relationship between Jordan and Isiolo County.

According to Raymond (2007), the factor influencing construction projects duration and provide a unique cause of encountered delays, time extension, claims or consideration in construction management. Raymond (2007) presented five categories of factors that influence the implementation of road construction projects namely: factors pertinent to clients, factors pertinent to consultants, factor pertinent to contractors, factors pertinent to contract and factors pertinent to external conditions. The factor pertinent to clients include financial ability, previous working relationship, category (public, private), priority on construction

time and possible changes to initial design while the factors pertinent to consultants include build ability of design, provision for ease of communication, previous working relationships, completeness and times lines of projects information and priority on construction time. The factors pertinent to contractors' involves the management team, firm's current work to load, previous performance, and programming of construction works.

The factors pertinent to contract form are suitability to project time and use of standard form of contract. Lastly, the factors pertinent to project external conditions include complexity, location, weather, vegetation and statutory undertakes. Based on Raymond (2007), findings there is a cause to establish the relationship with that of road implementation projects in Isiolo County.

According to Murali and You Wen (2007), the problem of delays in the construction industry is a global phenomenon and the construction industry in Malysia is no exception. The main purpose of Murali and You Wen (2007) study was to identify the delay factors and their impact (effect) on project completion. The study identified ten most important causes of project delays namely:- contractors improper planning, contractors poor site management, inadequate contactor experience, inadequate client's finance and payments for completed works, problems with sub contractors, shortage in material, labor supply, equipment availability and failure, lack of communication between parties and mistakes during the construction stage. All the study identified six main effects of delay as time overrun, cost overrun, disputes, arbitration, litigation and total abandonment. Based on Murali and You Wen (2007), study there is a need to establish the relationship with that of the three road construction projects in Isiolo County.

According to Chabota, et al (2008), the wealth of any nation is gauged by its performance in infrastructure positions through it's constitute a major component of the construction industry. This means that most of the national budget on infrastructure development is channeled to road construction projects. Using a detailed literature review, structured interviews and questionnaire surveys, the results of the study confirmed the prevalence of cost escalation and schedule delays in road construction project in Zambia. The study established that bad or inclement weather due to heavy rains and flood, scope changes, environmental protection and mitigation cost, schedule delays, technical challenges, inflation and local governmental pressure were the major cause of cost escalation in Zambia's road construction projects. On the other hand, delayed payments, financial processes and

difficulties on the part of contractors and clients, contract modification, economic problems, material procurement, construction mistakes, changes in drawings, staffing problems, equipments unavailability, poor supervision, poor co-ordination on site, changes in specifications and labor disputes and strikes were found to be the major causes of schedule delays in road construction projects. Therefore, based on Chabota, et al (2008) findings, there is a need to carry out a research project on factors influencing the implementation of road construction projects in Isiolo County to establish the relationship between the two (Zambia and Isiolo County, Kenya).

2.7 Review of the Factors which Influence the Implementation of the Road Construction Projects

2.7.1. Resource Mobilization Approaches

According to Twort, (1984) and Clarke, (1988), the contractor's agent will probably come to site with a small nucleus of permanent employees and his main aim will be to get started on the actual work of construction as soon as possible. The contractor must immediately get to site a wide variety of equipment, machinery, materials and labour force. Some of these resources will be sent yard of the contractor's head office, but a large amount of supplementary equipment will be required from local sources. These resources should be availed to the site according to approved programme of works and as per contract document (schedule of list of plant and equipment, key personnel)

Considering the Engineer's side, the resident engineer should have spent some time before he goes to site examining the contract drawings and specifications, and therefore have an opportunity to converse with the designers. The Engineer should know how the job has been designed, so that he/she is able to make intelligent suggestions if the conditions revealed during the course of construction differ from those expected. On most civil engineering jobs soils and material testing laboratory is necessary, and this is more conveniently placed near the resident engineer's office than elsewhere. The resident engineer should issue site instructions to the contractor's agent at the appropriate time or according to the conditions of the contract to avoid unnecessary delays, disputes and claims. Also the engineer should provide all the engineering drawings, specifications and other documents within reasonable time in all the circumstances in order to avoid the contractor suffering delays and or incurring costs because the engineer shall after due consultation with the employer and contractor

determine any extensive of time to the contractor is entitled under clause 44 (FIDIC, 1987) and the amount of such costs, which shall be added to the contract price, and shall notify the contractors according, with a copy to the employer (FIDIC sub-clause 6.4). The duties and responsibilities of the Employer, Contractor and the Engineer are very critical in the implementation of road contracts because either one side can affect the entire project.

2.7.2 Project Leadership and Management

According to Twort, (1984), the key personnel employed by a contractor to take charge of the construction depend on magnitude or scope and type of works. Also the number of persons employed depends not only on the size but also on the complexity of the job and its physical extent. A good contractor always tries to keep his or her site staff to a minimum to aid in swift for economic construction in order to achieve the right type of men and women to be used, and they must be given freedom and responsibility to act on their own initiative. They must have quick communication with one another, and their areas of action must be defined clearly. Hence, the less complex the organization is, the better will it function.

According to Twort (1984), the engineer's representative (resident engineer) job is primarily one of seeing that the works are built as the engineer has designed and instructed they shall be built, and that the contractor carries out all his obligations under the contract for the construction. Even on a small job it will be necessary for the resident engineer to be assisted by an inspector and a typist or other office worker. On the large jobs he will need a team of engineers and other technical specialists to assist him or her, together with several inspectors, a secretary, accounts clerk, and other administrative workers.

There is a school of thought who believes that the whole responsibility of the resident engineer and his staff ends with the obligation to see that the works are constructed precisely in accordance with the requirements laid down by the specification and drawings. There can hardly be a project which has not been bettered or improved by suggestions or advice coming from the site staff. Thus, while all contractual matters must be expeditiously attended to, all proper records kept, all required tests and measurements made, all instructions properly channeled, sufficient time must be allowed for surveying the project as a whole, to ensure that the methods and designs being pursued are at all times best suited to the revealed site conditions and the intended function of the project.

2.7.3 Contract Documentation

According to Twort (1984), the contract for the construction of the works binds the contractor to construct the works and the employer to pay for them. For a contract to exist between the employer and contractor the letter must have made an offer (the tender) which the employer accepts without amendment. If the employer accepts subject to an amendment of the offer there is no the contract unless the contractor amends his offer as required, or until both employer and contractor agree upon some other amendment. The contract described comprehensively what the works are, and how payment is to be made.

Hence the contract itself comprises a number of documents as follows:-

The contract drawings Which pictorially show the works to be built, their dimensions and levels.

The specification Which describes in words the works to be built, the quality of materials and workmanship to be used, and methods of testing.

The bill of quantities Which sets out the expected measure of each operation of construction as calculated from the drawings, classified according to trade or location within the proposed works.

The General conditions of contract Which defines the liabilities, responsibilities and powers of the employer, contractor and engineer and covers such matters as methods of payment, insurance, liability of parties to the contract.

The tender Which is the signed financial offer of the contractor to construct the works in accordance with i, ii, iii, and iv above.

Tender bond and schedules for completion Are the schedules dealing with tenderer's estimated division of his expenditure in local and foreign currency, for labour and for materials and the phasing thereof and rates of exchange taken.

Any letters of explanation Which are agreed between the parties to the contract as elucidating or amplifying their intentions with regard to the foregoing matters.

The legal agreement Which is signed by both parties confirming their respective intention to have a contract between them as defined by all the foregoing documents.

2.7.4 Local Politics

Politicians have crucial role in project implementation because they are elected from the communities and are community leaders. Some of the said projects are initiated by them for

political expediency while others are used as agents of resource mobilization. Politicians play a great role in recruitment of labour force, sources of construction materials like gravel, water, sand and aggregate, land compensation and provision of security for the contractor to have conducive environment to implement the road projects.

The research project should seek to establish the role played by the local politicians in creating a favourable environment for successful implementation of road projects.

2.7.5 Government policies and Regulations

According to Kenya Roads Acts 2007 and Road Sub-sector Institutional Framework Sessional Paper (2006), the establishment of three road authorities; Kenya National Highways, Authority (KeNHA), Kenya Rural Roads Authority (KeRRA) and Kenya Urban Roads Authority (KURA) has been the country's road sector institutional arrangement in order to have functional and sustainable authorities with four basic building blocks. These basic building blocks are:

Ownership Involving road users in the management of roads and thereby win their active support.

Clarified responsibility A clear mandate and legal identity for each organization involved with the road sector.

Stable financing Secure, adequate and stable flow of funds to the road sector through the approval of five year road investment plan (RIM) by members of parliament.

Commercialized management Providing effective and appropriate technical and commercialized management capability for each road authority.

The function of the Ministry of Roads is to formulate and harmonize the policies and strategies related to development, rehabilitation, and maintenance of the entire road network in the country. Other government regulations adhering to statutory regulations passed by Member of Parliament like National Environmental Management Authority (NEMA), Taxation and among others

2.7.6 Organizational Culture

According to Graw-hill (2005) and Handy (1985), rewards convey to the entire team which behaviour is desired and also reinforce success when it occurs. What leadership chooses to reward conveys to the rest of the team what values are to be recognized and what behaviour

is considered to be above the ordinary. A good amount of the potential for quality performance still rests with the individual's own initiative. To tap the individual initiative, in a project management context and to create a project management culture within the team, one tries to reward or to rein force the following:-

Prevention Encourage people to identify errors or omissions and to submit corrections, focusing on the process and not on people.

Continuous improvement Negative feedback should focus on the processes and make corrections to the process so that a responsible professional who follows the agreed – on process can deliver the work successfully.

Team performance Everyone in the team should share in the reward if the team meets its goals.

Goal achievement Actions that contribute substantially to the final project outcome and customer requirements deserve more acknowledgement than exemplary individual's tasks or early finishes that gain nothing for the project.

After the formation of the three authorities, KeNHA, KeRRA and KURA, the organization culture is changing positively through rewarding systems

2.8 Conceptual Framework

The conceptual framework portrays a picture of the proposed relationships between the variables of the study. Independent variables, also known as predictor variables, are the force that is presumed to be the causes of the changes in the dependent variables. The dependent variable, also called the criterion variable, indicate total influence arising from the effects of the independent variable. In this study, the independent variable will include those factors that influence successful project implementation. The dependent variables are defined as those variables affected by the independent variables. In this case the successful project implementation will be a function of resource mobilization approaches, leadership and management, contract documentation and local politics.

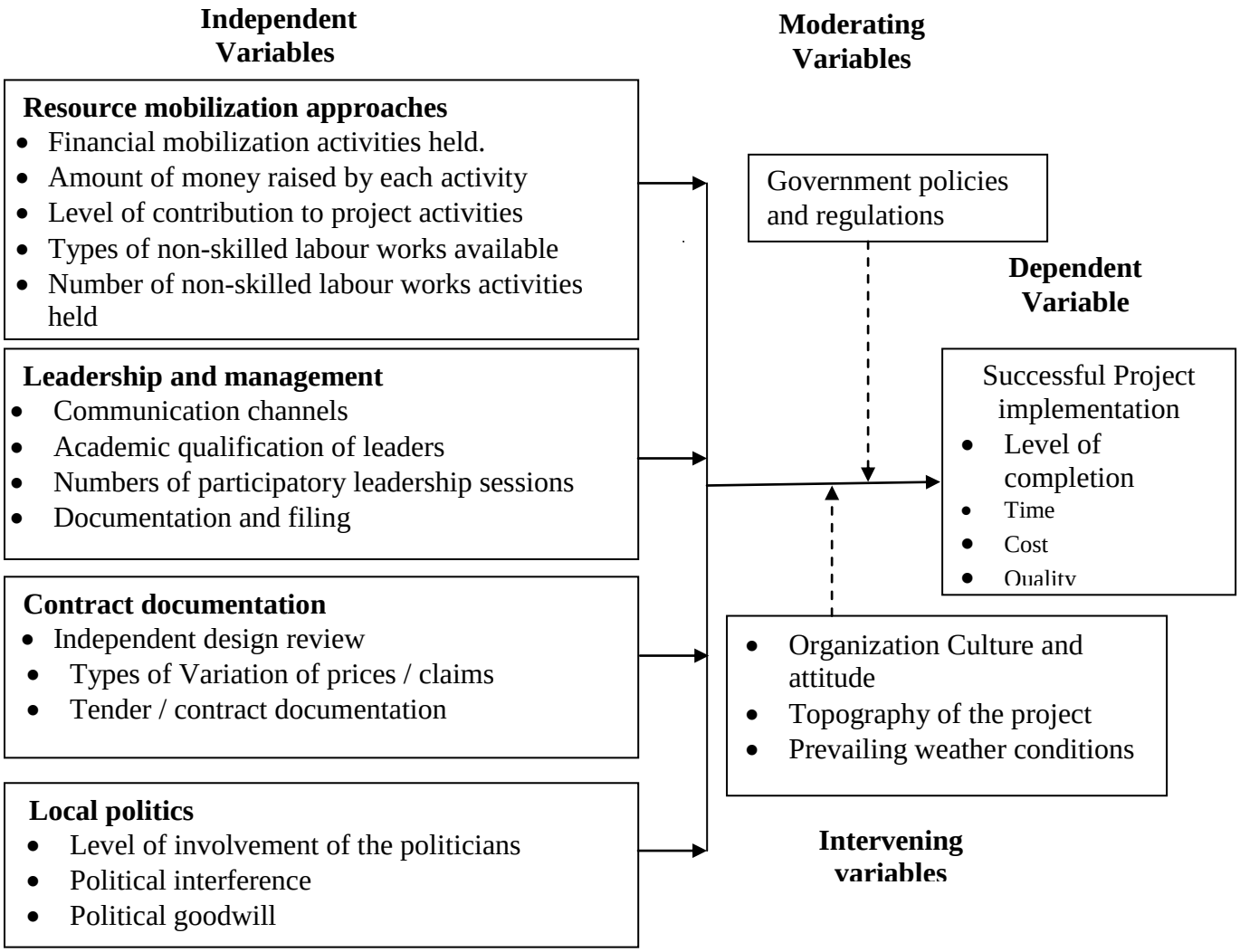

Figure 1. Conceptual Framework

The research report assumes a well defined and managed resource, both human and capital, good leadership and proper management and detailed contract documentation would affect the efficiency, quality and sustainability of the road project implementation. Local politics is an external factor of the independent variables which may affect the project positively or negatively leading to a failure or success of the project implementation respectively.

2.9 Knowledge Gap

The literature review shows that there is a problem in the implementation of road projects in the Country. There is limited information on the implementation of road construction projects in rural areas and in Isiolo County. This study will address the problem by looking at the

factors influencing implementation of road construction projects in Kenya with special focus on Isiolo - Merille road, Lewa – Isiolo road and Isiolo – Muriri road projects in Isiolo County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter deals with the research design, population targets, sampling process, data collection methods, the validity and reliability of data collection methods, methods of data analysis and operationalization of variables.

3.2 Research Design

The study used a descriptive survey design in order to describe the situation as it is in the natural setting yielding maximum information with minimal expenditure of effort, time and money (Kothari, 1995). The method is chosen since it is more precise and accurate since it involves description of events in a carefully planned way (Kothari, 1995). This research design also portrays the characteristics of a population fully. Margaret (1995) supports this type of research design which attempts to describe such things as possible behaviour, attitudes and characteristics. Surveys are more efficient and economical methods of gathering information using a few well – chosen questions which would take much less time and efforts. Also surveys have the advantage of having the potential to provide a lot of information obtained from a large sample of individuals or groups.

3.3 Target Population

The research covered three road projects: Isiolo – Merille (A2) road, Isiolo – Muriri (D485) road and Lewa - Isiolo (A2) road projects. The population was drawn from the 670 staff members of the contractor, employer, consultants, and Heads of Departments of relevant Ministries at Isiolo County level and land owners seeking compensation from each road project.

Table 3. 1: Target Population

	Category	Frequency	Percentage
	Contractors' Staff	140	20.9
	Employers'/ Consultants' Staff	200	29.9
	Land Owners	330	49.3
Total		**670**	**100**

3.4 Sampling Procedure

A stratified random sampling was used to select samples in order to ensure that all the units of the sampling frame have equal chance. According to Kothari (1995), strata are purposively formed and are usually based on past experience and personal judgement of the researcher. The researcher should remember that careful consideration of the relationships between the characteristics of the population and the characteristics to be estimated are normally used to define the strata.

Kothari (1995) argues that the researcher must follow the method of proportional allocation under which the sizes of the samples from the different strata are kept in proportional to the sizes of the strata. That is, if *i* represents the proportion of population included in stratum *i,* and n represents the total sample size, the number of elements selected from stratum is *npi.*

According to Mugenda (2003), 10% of the accessible population in a descriptive study is an adequate sample. This research used a sample of 30% of the population which was tested from all categories of each project coverage and at all levels of leadership and management. The target population and sample size is illustrated in Table 3.2.

Table 3. 2: Target Population and Sampling Frame

	Category	**Frequency**	**Ratio**	**Sample**
	Contractors' Staff	140	0.3	42
	Employers'/ Consultants' Staff	200	0.3	60
	Land Owners	330	0.3	99
Total		**670**		**201**

3.5 Methods of Data Collection

This section focuses on how the data to be used in completing the study was collected including tool selection and administration.

3.5.1 Data Collection Instruments

The primary data was collected using structured and unstructured questionnaires. According to Kothari (1995), questionnaires are generally sent through mail to informants and questions are answered as specified in the covering letter, without further assistance from the researcher but some parts are generally filled with assistance of the researcher or research assistants, who can interpret questions when necessary.

The data was collected by using questionnaires administered to members of staff of the contractors, employers, consultants, project management, committees and the land owners seeking compensation from each road project. The structured and unstructured questionnaire method was mainly employed in primary data collection although, observation method was also used to get the respondents open up and the researcher to stimulate the respondents in view to produce more information. The Observation method provided the means of verifying information answered in the questionnaires and a detailed understanding of the organization culture, leadership and management. Whereas a secondary data are those which have already been collected by someone else and which have already been passed through the statistical projects. The secondary data was collected through the monthly and quarterly progress reports, site meeting minutes, books, magazines and various publications of the central, state and local governments.

According to Kothari (1995), the researcher should select judiciously the appropriate method or methods of data collection by keeping in view of the following factors:-

Nature, scope and objective of enquiry This factor is important in deciding whether the data is already available (secondary data) can be used or the data is not yet available (primary data) and need to be collected.

Availability of funds This determines to a large extent the method which will be used for the collection of data.

Time factor Availability of time should be taken into account in deciding a particular method of data collection which should take comparatively shorter duration.

Precision required That each method of data collection has its uses and none is superior in all situations.

The researcher should apply the above factors in selecting the methods of data collection in a study.

3.5.2 Data Collection Procedure

The researcher furnished the respondents with an introductory letter certified by the course coordinator of the university in order to ensure that the respondents have confidence in the study. The respondents were not required to give their names so that information they were giving would not be biased and enhance the accuracy of the outcome. The researcher administered the questionnaires to the respondents and later picked them. The target population was assumed to be literate hence no interpretation was required. The

questionnaires had open and close – ended questions in order to collect as much information as possible. The researcher organized a meeting with the respondents in order to administer structured and unstructured questionnaires and field visits for an observation method.

3.6 Validity of the Research Instruments

Pilot testing was used to pre-test instruments of this research study. The piloting exercise was carried out in another site on four staff member of the contractor, six employer's staff member and engineer's staff member and ten land owners seeking compensation. The main reason of conducting the pilot study is to predict the warnings and risks about the research project especially when the proposed methods or instruments are inappropriate and too complex.

The Validity of the findings are those which make sense persuasive, appearance of truth and reality. The findings of the research were validated in consultation with the supervision by randomly selecting the target population and conducting a pilot study.

3.7 Reliability of the Research Instruments

Reliability is the measure to which a research instrument yields consistent results after repeated trials. The researcher selected a pilot group of 20 individuals from the target population to test the reliability of the research instruments. The study used Test-retest method to establish the reliability which assessed the degree to which test scores are consistent from one test administration to the next. Measurements were gathered from a single rater who uses the same methods or instruments and the same testing conditions. If the correlation between separate administrations of the test is high (e.g. 0.7 or higher), then it had good test-retest reliability. All the four variables were reliable as their reliability coefficients exceeded the prescribed threshold of 0.7.

3.8 Methods of Data Analysis

Descriptive statistics was used to summarize the quantitative data so as to allow the meaningful description of a distribution of the scores. The collected data was compiled, edited and coded into categories using numeric values after assessing its consistency and relevance to the study. The quantitative data was analyzed using spread sheet and the statistical package for social scientists version 17.0 and the conclusive analysis was presented

in percentages, mean and standard deviation by use of frequency tables. While qualitative data was analysed and summarized in narrative form.

Inferences from analyzed data were made and this helped to answer the research questions relating to factors influencing the implementation of road projects in Isiolo County. The results were also compared to previous research findings from various scholars in order to determine the degree of relationship or accuracy of the study.

3.9 Ethical Considerations

Considering that the research subjects in a qualitative research are human beings, great care was taken to prevent harm to these people. In this research, consent was obtained, firstly, by talking to the resident engineer in the respective project areas, who was instrumental in commissioning the course, to gain his trust, support and permission to conduct the research on the projects. Consent was also obtained from individual participants before they were interviewed. The nature of the research was explained to them and after several questions on anonymity and confidentiality had been answered and the participants had been reassured that their identities as well as the information would remain confidential, they agreed to take part in the study. Consequently, the questionnaires were administered and interviews were conducted and transcribed anonymously for analysis and the report writing.

3.10 Operational Definitions of Terms

The operational definitions of variables are given in Table 3.2.

Table 3. 3: Operationalization of variables

Research objectives	Type of variable	Indicator	Measurement of indicator	Data collection methods	Measu-rement scale	Approach of analysis	Type of analysis	Level of Analysis
1. To determine how project resource mobilization approaches influence the implementation of road construction projects	**Independent variable:** project resource mobilization approaches	• Number of resource mobilization approaches • Member contribution to project activities	• Number of financial mobilization activities held. • Amount of money raised by each activity • Level of contribution to project activities • Types of non-skilled labour works available • Number of non-skilled labour works activities held • Rate of members participation	Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis	Nominal Ratio Nominal Ratio Ordinal Ratio Nominal Ratio Nominal Ratio	Quantitative Quantitative Qualitative Quantitative Quantitative	Non-parametric Non-parametric Non-parametric Non-parametric Non-parametric	Mean Percentage Mean Percentage Mean Percentage Mean Percentage Mean percentage

			in non-skilled labour works		Ordinal Ratio	Qualitative	Non-parametric	Mean Percentage
2. To assess how project leadership and management influence the implementation of road construction projects.	**Independent variable:** Project leadership and management	• Communication channels • Academic qualification of the leaders • Numbers of participatory leadership sessions • Documentation and filing	• Number of communication channels used • Level of education • Number of participatory or consensus meetings held • Number and type of records kept	Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis Questionnaire document analysis	Nominal Ratio Ordinal Ratio Nominal Ratio Nominal Ratio	Quantitative Qualitative Quantitative Quantitative	Non-parametric Non-parametric Non-parametric Non-parametric	Mean Percentage Mean Percentage Mean Percentage Mean Percentage
3. To assess how contract documentation influence the	**Independent variable:** contract documentation	• Independent design review • Types of Variation of	• Number of areas reviewed • Amount of money paid	Questionnaire document analysis Questionnaire document	Nominal Ratio Nominal	Quantitative Quantitativ	Non-parametric Non-	Mean percentage Mean

implementation of road construction projects		prices / claims • Tender / contract documentation	on variations • Number of contract documents	analysis Questionnaire document analysis	Ratio Nominal Ratio	e Quantitative	parametric Non-parametric	Percentage Mean Percentage
4. To establish how local politics influence the implementation of road construction project	**Independent variable:** Local politics	• Level of involvement of the politicians	• Degree of involvement of the local politics	Questionnaire document analysis	Ordinal Ratio	Qualitative	Non-parametric	Mean percentage
	Dependent variable: successful project implementation	Level of completion	Degree of completion	Observation document analysis	Ordinal Ratio	Qualitative	Non-parametric	Mean Percentage

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents data analysis, presentation and interpretation of the findings of the study. The chapter is divided into subsections where general characteristics of the respondents comprise of age, gender, marital status and educational background. The purpose of this study was to investigate the factors which influence the implementation of road construction projects. The study also sought to determine how project resource mobilization approaches, project leadership and management, contract documentation and local politics influence the implementation of a road construction project.

4.2 Response Rate

Out of 201 questionnaires distributed for the study; 201 respondents filled and returned them representing a 100% response rate. According to Babbie (2002) any response of 50% and above is adequate for analysis thus 100% was excellent.

4.3 Analysis of Background Information

4.3.1 Contractor/ Staff Members Findings

The study sought the opinion of the contractors and staff members on the factors influencing implementation of road construction projects in Kenya with reference to Isiolo - Merille road, Lewa – Isiolo road and Isiolo – Muriri road projects in Isiolo County, Kenya.

This section presents the project in reference to gender and age of the contractors and staff members.

4.3.1.1 Project in Reference

The researcher requested the respondents to indicate the project to which they were affiliated. The results are shown in Table 4.1.

Table 4. 1: Project in reference

Project in reference	Frequency	Percentage
Isiolo – Merille (A2) Project	21	52.5
Isiolo –Muriri (D485) road Project	11	27.5
Lewa – Isiolo (A2)	8	20
Total	40	100

The study sought to establish the project the respondents were involved in. From the findings, 52.5% of the respondents indicated that they were involved in Isiolo – Merille (A2) Project, 27.5% indicated that they were involved in Isiolo –Muriri (D485) road Project while 20% indicated that they were involved in Lewa – Isiolo (A2) project.

4.3.1.2 Gender of the contractors

The study sought to establish the respondents' gender. The results are shown in Table 4.2.

Table 4. 2: Gender of the contractors

Gender	Frequency	Percentage
Male	28	70
Female	12	30
Total	40	100

From Table 4.2, majority of the respondents indicated that they were males as indicated by 70% while the rest (30%) indicated that they were females. This shows that that majority of employees in the three projects are males.

4.3.1.3 Age of the contractors

The respondents were requested by the study to indicate their age. The results are shown in Table 4.3.

Table 4. 3: Age of the Contractors

Age	Frequency	Percentage
33- 37 Years	13	32.5
48- 52 Years	11	27.5
53- 56 Years	9	22.5
57- 61 Years	7	17.5
Total	**40**	**100**

According to the findings, most of the respondents were aged between 33 and 37 years, 32.5% were between 33 and 37 years of age, 27.5% were aged between 48 and 52 years while 22.5% were aged 53 to 56 years and17.5 were aged between 57 and 61 years. The results show that majority of the three contracting companies employees are below 50 years and therefore energetic to perform their tasks accordingly.

4.3.2 Employer's/Consultant's Staff Members findings

The study sought the opinion of the employer's/consultant's staff members on the factors influencing implementation of road construction projects in Kenya with reference to Isiolo - Merille road, Lewa – Isiolo road and Isiolo – Muriri road projects in Isiolo County, Kenya.

This section presents the project in reference, gender and age of the employers/consultants staff members.

4.4.1.1 Project in Reference

The researcher requested the respondents to indicate the project to which they were affiliated. The results are shown in Table 4.4.

Table 4. 4: Project in reference

Project in reference	Frequency	Percentage
Isiolo – Merille (A2) Project	25	41.7
Isiolo –Muriri (D485) road Project	21	35.0
Lewa – Isiolo (A2)	14	23.3
Total	**60**	**100**

The study sought to establish the project the respondents were involved. From the findings of the study 41.67% were involved in Isiolo – Merille (A2) Project, 35% Isiolo –Muriri (D485) road Project while 23.3% were involved in Lewa – Isiolo (A2) project. From the finding, we can deduce that most respondents came from Isiolo – Merille (A2) Project.

4.4.1.2 Gender of the employers/consultants staff members

The study sought to establish the respondents' gender. The results are shown in Table 4.5.

Table 4. 5: Gender of the employers/consultants staff members

	Frequency	Percentage
Male	42	70
Female	18	30
Total	**60**	**100**

From the findings, majority of the employers/consultants staff members were male as indicated by 70% while the rest 30% were female. This therefore indicates that majority of employers/consultants staff members in the three projects are male.

4.4.1.3 Age of the employers/consultants staff members

The employers/consultants staff members were requested by the study to indicate their age. The results are shown in Table 4.6.

Table 4. 6: Age bracket of the employers/consultants staff members

	Frequency	Percentage
23 - 27 years	5	8.3
28 – 32 years	6	10.0
33 – 37 years	8	13.3
38 – 42 years	9	15.0
43 – 47 years	11	18.3
48 – 52 years	13	21.7
52 – 56 years	4	6.7
57 – 61 years	4	6.7
Total	**60**	**100.0**

The respondents were required by the study to indicate their age bracket. According to the findings, most of the respondents were aged between 48 to 52 years, 21.67% were aged between 42 and 52 years of age, 18.33% were aged between 43 and 47 years while 6.67% were aged 52 to 56 years, 15% aged between 38 to 42 years, 13.33% aged between 33 to 37 years, 10% aged between 28 to 32 years, 8.33% aged between 23 to 27 years and 6.67% were aged between 57 and 61 years. This depicts that majority of the employers/consultants staff members were below 35 years and therefore well experienced to perform their tasks accordingly.

4.3.3 Land Owners Seeking Lands Compensation Findings

The study sought the opinion of the land owners seeking lands compensation on the factors influencing implementation of road construction projects in Kenya with reference to Isiolo - Merille road, Lewa – Isiolo road and Isiolo – Muriri road projects in Isiolo County, Kenya.

This section presents the project in reference, gender and age of the land owners

4.5.1.1 Project in Reference

The researcher requested the respondents to indicate the project to which they were affiliated. The results are shown in Table 4.7.

Table 4. 7: Project in reference

Project in reference	Frequency	Percentage
Isiolo – Merille (A2) Project	43	43
Isiolo –Muriri (D485) road Project	23	23
Lewa – Isiolo (A2)	34	34
Total	**100**	**100**

The study sought to establish the project the respondents were involved in. From the findings, 43% of the respondents indicated that they were involved in Isiolo – Merille (A2) Project, 34% indicated that they were involved in Isiolo –Muriri (D485) road Project while 23% indicated that they were involved in Lewa – Isiolo (A2) project.

4.5.1.2 Gender of the Land owners

The study sought to establish the gender of the land owners involved in this study. The results are shown in Table 4.8 below.

Table 4. 8: Gender of the land owners

Gender	Frequency	Percentage
Male	72	72
Female	28	28
Total	**100**	**100**

From the table above, majority of the respondents indicated that they were males as indicated by 72% while the rest (28%) indicated that they were females. This shows that majority of land owners in the three projects were males.

4.5.1.3 Age of the land owners

The respondents were requested by the study to indicate their age. The results are shown in Table 4.9.

Table 4. 9: Age of the Contractors

Age	Frequency	Percentage
33- 37 Years	40	40
48- 52 Years	32	32
53- 56 Years	23	23
57- 61 Years	5	5
Total	**100**	**100**

According to the findings, most of the respondents were aged between 33 and 37 years (40%), , 32% were aged between 48 and 52 years while 23% were aged 53 to 56 years and 5%were aged between 57 and 61 years. It therefore depicts that majority of the three contracting companies employees are below 50 years and therefore energetic to perform their tasks accordingly.

4.4 Contractor/ Staff Members Findings

4.4.1 Resource Mobilization Approaches

The study sought to determine how project resource mobilization approaches influence the implementation of road construction projects in contractors/ staff members' views.

4.4.1.1 Strategies to Mobilize Members

The researcher requested the respondents to indicate whether they knew the strategies used for resource mobilization. The results are shown in Table 4.10.

Table 4. 10 Strategies for resource mobilization

Strategies	Frequency	Percentage
Yes	23	57.5
No	17	42.5
Total	**40**	**100**

According to Table 4.10, majority of the contractors (57.5%) had knowledge of the strategies used in mobilizing members for the project while 42.5% of them had no knowledge of any strategies. This is an indication that majority of the contractors were well informed of the various strategies employed in mobilization of members such as donor funding and community support by supplying labour and finances which may affect implementation of the road projects.

4.4.1.2 Strategies used to Mobilize Resources

The researcher also requested the contractors/ staff members to state the strategies they were using to mobilize members. The results are shown in Table 4.11.

Table 4. 11: Strategies to mobilize members

Strategies	Mean	Std deviation
Employment of the local in the project	4.021	0.9872
Involvement of stakeholders with the government	3.892	0.8172
Public meetings	3.621	0.7288

From the findings, the respondents agreed with a mean of 4.0121 that they were using employment of the locals in the project as their strategy to mobilize members. In addition, the respondents agreed with a mean of 3.892 that they were using involvement of stakeholders

with the government to mobilize members. Further, the respondents agreed with a mean of 3.621 that they were using public meetings to mobilize members.

4.4.1.3 Response of the locals toward involvement in projects

The researcher also requested the respondents to indicate the response of the locals towards involvement of projects. The results are shown in Table 4.12.

Table 4. 12: Response of the locals towards involvement in projects

	Frequency	**Percentage**
Highly respond	11	27.5
Moderate respond	14	35
Reluctantly respond	6	15
Complain of over involvement	7	17.5
They ignore	2	5
Total	**40**	**100**

The respondents were required by the study to indicate the respond of the locals towards their involvement in projects. According to the findings, 35% of the respondents indicated that community members moderately respond toward involvement in projects, 27.5% indicated that community members highly respond toward involvement in projects, while 17.5% indicated that community members complain over involvement. Futher15% of the respondents indicated that the locals reluctantly respond and 5% indicated that they ignore. This clearly shows that community members moderately respond to involvement in projects.

4.4.2 Project Management and leadership

The study also sought to assess how project leadership and management influence the implementation of road construction projects from the contractors and staff members.

4.4.2.1 Duration in the company

The researcher also requested the respondents to indicate the duration of time they had spent in their company. The results are shown in Table 4.13.

Table 4. 13: Duration in the company

	Frequency	percentage
6 – 12 months	4	10
11 – 15 months	6	15
16 – 21 months	10	25
22 – 27 months	10	25
28 – 33 months	7	17.5
More than 33 months	3	7.5
Total	**40**	**100**

As indicated in the findings, 25% of the respondents indicated that they had spent between 16 and 21 months in their company, 25% had spent between 22 and 27 months in their company, 17.5% had spent between 28 to 33 months in their company, 15% had spent between 11 and 15 months in their company, 10% had spent between 6 and 12 months in their company and 7.5% had spent more than 33 months in their company. From the results, it is clear that majority of the employees had been working in their company for between 22 and 27 months.

4.4.2.2 Stages that take place in the road construction projects

The study sought to establish the stages that take place in the road construction projects and the extent to which project is complete by stage. The results are shown in Table 4.14.

Table 4. 14: Stages that take place in the road construction projects

Activity	Mean	Std. deviation
Analysis of requirements	3.874	0 946
Development of project rules	3.820	0.678
Development of fundraising strategies	3.678	0.935
Design of implementation work plan.	3.923	0.787
Requisition of technical drawings and site instructions	3.564	1.034
Construction of resident engineer's (RE's) office	4.043	0.896
Construction of contractors site	3.984	0.863
Procurement of materials	3.967	0.789
Involvement of local politics/leaders	3.894	0.560
Engagement of casual laborers	3.945	0.833
Acquisition of land or the site	3.878	0.945
Actual road construction	3.913	0.928
Substantial completion	4.023	0.935
Taking over	4.079	0.874

According to the findings, the respondents agreed that design of implementation work plan had been completed to a great extent with a mean of 3.923, Construction of contractor's site had been completed to a great extent with a mean of 3.874, Development of project rules had been completed to a great extent with a mean of 3.820 and Development of fundraising strategies had been completed to a great extent with a mean of 3.678 meant that the project was 25% complete.

Further the respondents agreed that, Construction of resident engineer's (RE's) office had been completed to a great extent with a mean of 4.043, Construction of contractors site had been completed to a great extent with a mean of 3.984, Procurement of materials had been completed to a great extent with a mean of 3.967, Acquisition of land or the site had been completed to a great extent with a mean of 3.945, Actual road construction had been completed to a great extent with a mean of 3.913, Involvement of local politicians/leaders Engagement of casual laborers had been completed to a great extent with a mean of 3.894 and Requisition of technical drawings and site instructions had been completed to a great extent with a mean of 3.564.

4.4.2.3 Scale of project management

The study sought to establish the scale of management of the projects. The results are shown in Table 4.15.

Table 4. 15: Scale of project management

	Frequency	**percentage**
Board of Directors	12	30
Board of Trustees	10	25
Steering Committee	11	27.5
Project management committee	7	17.5
Total	**40**	**100**

According to Table 4.15, 30% of the respondents indicated their project had board of directors, 27.5% indicated that their project had steering Committee, 25% indicated that their project had board of trustees and 17.5% indicated that their project had project management committee. From the findings, we can deduce that most projects were headed by board of directors.

4.4.2.4 Gender composition of the project management team

The study sought to establish the composition of the management team of the project. The results are shown in Table 4.16.

Table 4. 16: Gender composition of the contractors

Type	Gender	Frequency	Percentage
Board of Directors	Male	9	75
	female	3	25
	Total	12	100
Board of Trustees	Male	8	80
	female	2	20
	Total	10	100
Steering Committee	Male	7	63.64
	female	4	36.36
	Total	11	100
Project management committee	Male	5	71,42
	female	2	28.58
	Total	7	100

According to the findings, for those projects headed by board of directors, 75% of the team was men and 25% women. Further, for those projects managed by board of trustees, 80% were men while 20% women. The finding also revealed that for those projects managed by steering committee, 63.64% were men and 36.36% were women. Also for those projects headed by project management committee 71.42% of its members were men while women representation was 28.58%. From the findings of the study it is deduced that majority of the project management committee are men.

4.4.2.5 Period of service of management team

The Table 4.17 shows how often the management team of the project was chosen.

Table 4. 17: Period of service of management team

	Frequency	percentage
After I year	16	40
After 3 years	20	50
When there is a crisis	4	10
Total	**40**	**100**

From the findings 50% of the respondents stated that the team was chosen after 3 years, 40% indicated after 1 year and 10% indicated when there are crisis. From the finding, we can deduce that the management team of construction projects is chosen after every three years.

4.4.2.6 Criterion for choosing leaders

The study sought to establish the manner at which leaders of the management team were chosen. The results are shown in Table 4.18.

Table 4. 18: Criterion for choosing leaders

	Frequency	Percentage
Appointment on recommendations of the supervisors	7	17.5
Appointment on recommendations of the councilor or MP	11	27.5
Appointment on family background	6	15
Appointment in loyalties	4	10
Secret ballot	3	7.5
Show of hands	9	22.5
Total	**40**	**100**

According to findings, 27.5 % of the respondents indicated that the management team was appointment on recommendations of the councilor or MP, 22.5% indicated by Show of hands, 17.5% indicated by appointment on recommendations of the supervisors, 15% indicated by Appointment on family background while 10% indicated by secret ballot. From the findings we can deduce that majority of the members of the management team are appointed on recommendations of the councilor or Member of Parliament.

4.4.2.7 Factors considered when choosing leaders

The study sought to establish the factors considered when choosing the members of the management committee and results are shown in Table 4.19.

Table 4. 19: Factors considered when choosing leaders

	Frequency	percentage
Academic qualifications	5	12.5
Academic and experience in road construction projects	7	17.5
Ability to persuade	15	37.5
Closeness to political leadership	13	32.5
Total	**40**	**100**

According to the findings as shown by Table 4.19, 37.5% of the respondents stated that the leaders were chosen due to their ability to persuade, 32.5 due to their closeness to the political

leaders,17.5% due to Academic and experience in road construction projects and 12 5% due to their academic qualification. Further from the results of the study we can deduce that most of the management team is chosen due to the ability to persuade or political affiliation to the local political leaders.

4.4.2.8 Effectiveness of project leadership to influence project implementation

The respondents were required to indicate their agreement with the stated statements regarding effectiveness of project leadership to influence project implementation and results are given in Table 4.20.

Table 4. 20: Effectiveness of project leadership to influence project implementation

Activity	Mean	Std. deviation
Analysis of requirements	3.761	0.963
Development of project rules	3.829	0.852
Design of implementation work plan	3.623	0.632
Requisition of technical drawings and site instruction.	3.927	0.769
Procurement of materials	3.782	0.954
Construction of RE's office	3.832	0.653
Construction of contractors site	3.672	1.069
Engagement of casual labourers	3.926	0.826

Majority of the respondents were in agreement with the statement that efficient leadership aid in Requisition of technical drawings and site instruction shown by a mean of 3.927. The respondents also agreed with a mean of 3.926 that engagement of casual labourers influence project implementation to a great extent. The respondents also agreed with a mean of 3.832 that construction of RE's office influence project implementation to a great extent. It was also agreed with a mean of 3.829 that development of project rules influence project implementation. The respondents also agreed with a mean of 3.782 that procurement of materials influence project implementation to a great extent. Further, the respondents agreed with a mean of 3.672 that construction of contractors' site influence project implementation. In addition, the respondents agreed with a mean of 3.761 that analysis of requirements influence project implementation to a moderate extent. Lastly, the respondents agreed with a mean of 3.623 that design of implementation work plan influence project implementation to a great extent.

4.4.3 Contract Documentation

The study also sought to assess how contract documentation influences the implementation of a road construction project from contractors and staff members.

4.4.3.1 Missing items in the contract documents

The study sought to establish whether there were missing items in the contract documents. The results are shown in Table 4.21.

Table 4. 21: Missing items in the contract documents

	Frequency	Percentage
Yes	12	30
No	28	70
Total	**40**	**100**

From the findings, 70% of the respondents stated that there were missing items in the contract document while 30% stated the contract documents were complete. From the results of the study we can deduce that most contract documents are incomplete.

4.4.3.2 Influence of the contract documents on the project status

The respondents were required by the study to indicate their agreement with the stated factors in relation to influence of the contact document on the project status. The results are shown in Table 4.22.

Table 4. 22: Contractor/ Staff Members findings on Influence of the contract documents on the project status

	Mean	Std deviation
Adequacy of contract documents	4.176	0.987
Design review	3.976	0.9173
Environmental factors	3.658	1.064
Variation of prices /claims	3.516	0.983

According to the findings, the respondents agreed with a mean of 4.176 that adequacy of contract documents influences projects status to a great extent. In addition, the respondents agreed with a mean of 3.976 that design review influences projects status to a great extent. Further the respondents agreed with a mean of 3.658 that environmental factors influences projects status to a great extent. Lastly, the respondents agreed with a mean of 3.516 that variation of prices /claims influences projects status to a great extent.

4.4.4 Local Politics

The study also sought to establish how local politics influence the implementation of a road construction project from contractors and staff members.

4.4.4.1 Politician involvement in projects

The study sought to establish whether the political leaders were involved in the project. The results are shown in Table 4.23.

Table 4. 23 Contractor/ Staff Members findings on Politician involvement in projects

	Frequency	Percentage
Yes	21	52.5
No	19	47.5
Total	**40**	**100**

From to the findings, 52.5% of the respondents indicated that political leaders were involved in the project while 47.5% stated that they were not involved in the projects. From the finding we can deduce that political leaders are involved in majority of the projects.

4.4.4.2 Influence of the local politics on the project

The respondents were required by the study to indicate their agreement with the stated factors in relation to influence of the local politics on the project. The results are shown in Table 4.24.

Table 4. 24: Influence of local politics on the project

	Mean	Std. deviation
Scope of the project	3.893	0.952
Design review	3.579	0.878
Land acquisition	3.976	1.056
Engagement of cause labourers	3.856	0.763
Actual road construction	3.674	0.877
Materials sites acquisition	3.876	0.676
Relocation of structures	3.695	0.929
Water sources	3.727	0.912

According to the findings, the respondents agreed with a mean of 3.976 that local politics on the project influenced land acquisition to a great extent. The respondents also agreed with a mean of 3.893 that local politics on the project influenced the scope of the project to a great extent. Further, the respondents agreed with a mean of 3.876 that local politics on the project influenced materials sites acquisition to a great extent. The respondents also agreed with a

mean of 3.856 that local politics on the project influenced engagement of casual labourers to a great extent. In addition, the respondents agreed with a mean of 3.727 that local politics on the project influenced water sources to a great extent. Further, the respondents agreed with a mean of 3.695 that local politics on the project influenced relocation of structures to a great extent. It was also agreed among the respondents with a mean of 3.674 that local politics on the project influenced actual road construction to a great extent. Lastly, the respondents agreed with a mean of 3.579 that local politics on the project influenced design review to a great extent.

4.5 Employer's/Consultant's Staff Members findings

4.5.1 Resource Mobilization approaches

The study sought to determine how project resource mobilization approaches influence the implementation of road construction projects in employers/consultants staff member's views.

4.5.1.1 Resource mobilization strategy knowledge

The researcher requested the respondents to indicate the whether they had knowledge of the existence of the strategies for mobilizing resources. The results are shown in Table 4.25.

Table 4. 25: Resource mobilization strategy knowledge

Strategies	Frequency	Percentage
Yes	38	63.3
No	15	25.0
Don't know	7	11.7
Total	**60**	**100.00**

The Table 4.25 shows that majority of the contractors (63 33%) have knowledge of the existence of the strategies for mobilizing resources. While 25% do not have the knowledge of the resource mobilization strategy. Further 11.67% of the respondents were not aware of whether the strategies existed or not

4.5.1.2 Fundraising strategies

One of the most vital requirements in road construction is finance and that is why the respondents were required to indicate whether there existed any fundraising strategies in place. The results are shown in Table 4.26.

Table 4. 26: Fund raising strategy

Strategy existence	Frequency	Percentage
Yes	38	63.3
No	22	36.7
Total	**60**	**100.0**

The research sought to establish whether there were fund raising strategies for the projects From analysis majority of the respondents (63.3%) indicated that there were strategies in place while 36.67% indicated that there were no fund raising strategies in place.

4.5.1.3 Funding organization

The research sought to establish that main funding organization of the projects. The results are shown in Table 4.27.

Table 4. 27: Funding organization

Fundraising strategies	Frequency	Percentage
GOK vote	31	51.7
GOK vote/ Donors	29	48.3
Total	**60**	**100.0**

According to Table 4.27, majority of the respondents indicated that various projects were funded by GOK (51.67%) while 48.33% indicated that the projects were funded by GOK/ Donors. This shows that the Government of Kenya and the donor community were the main sources of funding road projects with minimal or no community participation at all.

4.5.1.4 Members' reaction to direct involvement in the project activities

The respondents were requested to indicate the communities' response to active participation in project activities. Their responses are presented Table 4.28.

Table 4. 28: Members reaction to direct involvement in the project activities

Response	Frequency	Percentage
Highly respond	19	31
Moderately respond	23	38
Reluctantly respond	13	22
They ignore	5	9
Total	**60**	**100**

4.5.2 Project Management and leadership

The study also sought to assess how project leadership and management influence the implementation of road construction projects from the employers/consultants staff members.

4.5.2.1 Duration of membership in the project

The researcher also requested the respondents to indicate the duration of time they had spent in their company. The results are shown in Table 4.29.

Table 4. 29: Duration of membership

Duration of membership	Frequency	Percentage
6- 10 Months	14	23
16- 21 Months	20	34
22- 27 Months	16	26
More than 33 Months	10	17
Total	**60**	**100**

From the findings, 34% of the respondents indicated that they had spent between 16 and 21 months in their membership, 26% had spent between 22 and 27 months, 23% had spent between 6 and 10 months and 17% had spent more than 33 months.

4.5.2.2 Type of leadership

The researcher requested the respondents to indicate the type of leadership in their projects. the results are shown in Table 4.30.

Table 4. 30: Type of leadership

	Frequency	Percentage
Board of Directors	18	30
Board of Trustees	15	25
Steering Committee	17	27.5
Project management committee	11	17.5
Total	**60**	**100**

According to Table 4.30, 30% of the respondents indicated their project had board of directors, 27.5% indicated that their project had steering Committee, 25% indicated that their project had board of trustees and 17.5% indicated that their project had project management committee. From the findings, we can deduce that most project were headed by board of directors.

4.5.2.3 Gender composition of the Employer's/Consultant's Staff Members

The study sought to establish the composition of the management team of the project. The results are shown in Table 4.31.

Table 4. 31: Gender composition of the project management team

Type	Gender	Frequency	Percentage
Board of Directors	Male	14	77.8
	female	4	22.2
	Total	18	100
Board of Trustees	Male	12	80
	female	3	20
	Total	15	100
Steering Committee	Male	10	58.8
	female	7	41.2
	Total	17	100
Project management committee	Male	7	63.4
	female	4	36.6
	Total	11	100

According to the findings, for those projects headed by board of directors, 77.78% of the team was men and 22.22% women. Further, for those projects managed by board of trustees, 80% were men while 20% women. The finding also revealed that for those projects managed by steering committee, 58.82% were men and 41.18% women. Also for those projects headed by project management committee 63.37% of its members were men while women representation was 36.63%. From the findings of the study we can deduce that majority of the project management committee are men.

4.5.2.4 Leaders' selection

Respondents were required to indicate how they selected their management committee. Table 4.32 shows how the management committees of different groups were selected.

Table 4. 32: Factors considered when choosing leaders

Appointment methods	Yes		No	
	Frequency	Percentage	Frequency	Percentage
On recommendations of councilors/ MP	0	0	60	100
On recommendations of the supervisors	100	60	0	0
On family background	0	0	60	100
Appointments in loyalties	0	0	60	100
By a secret ballot	0	0	60	100
By show of hands	0	0	60	100

Table 4.32 shows that majority of the employers/consultants staff members (100%) indicate that there leaders are appointed on recommendation of supervisors. Appointment on supervisors' recommendation may be good for the project as the supervisors may appoint leaders on merit. The respondents also indicated that recommendation on the supervisors may lead to problems as the appointed leader may act as a pawn for the leader leading to conflicts within the project eventually delaying the project and consequently affecting implementation. In addition, the respondents indicated that the land owners on the other hand have mixed reaction without really giving a clear indication as how the leaders are selected. This shows that the leaders lack the inside knowledge on how the leaders are appointed which may negatively influence the project implementation as a result of interferences from the land owners demanding information on the running of the project and on who is in charge.

4.5.2.5 Factors considered when choosing leaders

In choosing leaders it is important to select a leader with integrity, transparency and accountability. A good leader is one that is honest, focused and with good governance and it is for this reason that the respondents were requested to indicate the quality they look at when choosing a leader. Table 4.33 presents the results.

Table 4. 33: Factors considered when choosing leaders

	Frequency	**Percentage**
Academic qualification	5	8
Academics and experience in Road construction projects	55	92
Total	**60**	**100**

According to Table 4.33, majority of both the consultants (92%) indicated that the most important factor they look at when choosing their leader is their academic and experience in road construction. This was followed by academic qualification (8%).

4.5.3 Contract Documentation

The study also sought to assess how contract documentation influences the implementation of a road construction project from employers/consultants staff members.

4.5.3.1 Missing item in the contract documents

The study sought to establish whether there were missing items in the contract documents. The results are shown in Table 4.34.

Table 4. 34: Missing items in the contract documents on the project status

	Frequency	**Percentage**
yes	40	67
no	20	33
Total	**60**	**100**

From the findings, 67% of the respondents stated that there were missing items in the contract document while 33% stated the contract documents were complete. From the results of the study we can deduce that most contract documents are incomplete.

4.5.3.2 Influence of the contract documents on the project status

The respondents were required by the study to indicate their agreement with the stated factors in relation to influence of the contact document on the project status. The results are shown in Table 4.35.

Table 4. 35: Employer's/Consultant's Staff Members findings on influence of the contract documents on the project status

	Mean	**Std deviation**
Adequacy of contract documents	4.236	0.987
Design review	3.982	0.9173
Environmental factors	3.658	1.0646
Project appraisal	3.453	0.9278
Mitigation of risk and uncertainties	3.502	0.9287
Variation of prices /claims	3.516	0.9833

According to the findings, the respondents agreed with a mean of 4.236 that adequacy of contract documents influences projects status to a great extent. In addition, the respondents agreed with a mean of 3.982 that design review influences projects status to a great extent. Further the respondents agreed with a mean of 3.658 that environmental factors influences projects status to a great extent. The respondents agreed with a mean of 3.516 that variation of prices /claims influences projects status to a great extent. The respondents also agreed with

a mean of 3.502 that Mitigation of risk and uncertainties influence project status to a great extent. Lastly the respondents agreed with a mean of 3.453 that project appraisal influences project status to a moderate extent.

4.5.4 Local Politics

The study also sought to establish how local politics influence the implementation of a road construction project from employers/consultants staff members.

4.5.4.1 Politician involvement in projects

The study sought to establish whether the political leaders were involved in the project. The results are shown in Table 4.36.

Table 4. 36 Employer's/Consultant's Staff Members findings on politician involvement in projects

	Frequency	**Percentage**
Yes	52	87
No	8	13
Total	**60**	**100**

According to the findings, 87% of the respondents indicated that political leaders were involved in the project while 13% stated that they were not involved in the projects. From the finding we can deduce that political leaders are involved in majority of the projects.

4.6 Land Owners Seeking Lands Compensation Findings

The findings from land owners seeking lands compensation on the study variables are presented below.

4.6.1 Resource Mobilization approaches

The study sought to determine how project resource mobilization approaches influence the implementation of road construction projects in land owners' views.

4.6.1.1 Prompt payment for land acquisition

Land owners were requested to indicate whether they were paid promptly when land was acquired from them for the purposes of road construction. Table 4.37 presents the findings.

Table 4. 37: Prompt payment for land acquisition

Response	Prompt payment	
	Frequency	**Percentage**
Yes	21	21
No	79	79
Total	**100**	**100**

Table 4.37 shows that majority of the respondents were not paid promptly (79%) while 21% indicated that they were paid promptly. This shows that land owners were not paid promptly.

4.6.1.2 Method of payment

The respondents were also requested to indicate their method of payment. The results are shown in Table 4.38.

Table 4. 38: Method of payment

Method of payment	Frequency	Percentage
Direct personal account	17	17
Cheques	4	4
D.C's office	3	3
Cash	3	3
None payment	73	73

At least 21% of the respondents stated that they got paid promptly and the majority of them are by deposits to their personal accounts (17%), Cheques (4%), cash (3%) and at the District Commissioner's office (3%). Delayed payments to the land owner may slow down the project implementation efforts.

4.6.1.3 Reason for delayed payments

The land owners were requested to indicate the reasons they were given as to why their payment was delayed. Table 4.39 shows the results.

Table 4. 39: Reasons for delayed payments

Reasons for delayed payments	Frequency	Percentage
Money not yet disbursed from the Ministry responsible	32	32
Payment promises	42	42
Government process	12	12
Lack of title deeds	8	8

According to Table 4.39, lack of title deeds (8%) and government processes (12%) were some the reasons given for delayed payments. Other reasons include payment promises and bureaucracies involved with the major reason being the delayed disbursement of cheques from the ministry responsible (32%). This calls for the Government to work towards quickening the payment process to enhance project implementation process.

4.6.1.4 Improving payments process

The respondents were required to suggest ways that could help improve the payment process minimize friction between workers and land owners that may lead to slowing down project implementation. Their suggestions are presented in Table 4.40.

Table 4. 40: Improving payment processes

Suggestion	Frequency	Percentage
Paying land owners before project commencement	27	27
Paying he land owner directly and promptly	14	14
Educating the community on the project benefits	12	12
Considering land issues when tendering	8	8
Compensating the community	7	7
Engaging the community/ Government in acquisition	6	6
Government to issue title deed promptly	5	5

According to Table 4.40, majority of the contractors suggested that the land owners be paid before the commencement of the project (27%), 14% indicated that the land owner should be paid directly and promptly, 12% that the ministry involved should educate the community on the benefits of the projects in order to avoid misunderstandings with the contractors and 8% that the Ministry responsible for tendering should consider the land issue and (6%) engage the community/ government during land acquisition. A reason cited for land owners delayed payments was due to lack of title deed and therefore 5% of the respondents indicated that the Government should promptly issue title deed so as to avoid delays that may cause the projects to stall and eventually derailing the implementation process.

4.6.1.5 Land utilization

Natural resources of the local area enable the local community to cope with the impact of any change in their livelihood. Land is one of the major natural resource of a developing country support the vast of Kenyan population. Respondents were asked to indicate if they allowed the contractors to utilize their land to be compensated while awaiting payments. Table 4.41 shows their responses.

Table 4. 41: Land utilization

Land utilization	Frequency	Percentage
Yes	52	52.0
No	48	48.0
Total	**100**	**100.0**

Table 4.41 indicates that majority of the land owners (52%) indeed allowed contractors to utilize their land while the minority 48% did not allow utilization of their land. This shows that the land owners were in support of the construction of roads in their community indicating that the land owners fully understood the benefits of basic infrastructure like road in the community. Having good infrastructure helps in the development of communities contributing to improvement of the locals' livelihood. Direct project benefits may encourage the communities to get more engaged in the process consequently improving implementation. Those who did not allow utilization of their land, were requested to indicate some of the reasons as to why they did not allow contractors to utilize their land before payment and their responses are presented in Table 4.42.

Table 4. 42: Reasons for refusal of land utilization

Reasons	Frequency	Percentage
Lack of compensation assurance	19	19
Lack of adequate compensation	9	9
Government disregard for land owners	6	6
Lack o information on compensation	5	5
Destruction of resources	3	3
Land is a burial ground for family members	3	3
Land in use	3	3

According to the Table 4.42, majority of the land owners (19%) did not allow utilization of their land for fear of compensation and lack of adequate compensation (14%). This shows that the landowners were not well informed (5%) on compensation process which was also a reason to why some land owners did not give out their land. Other reasons for not allowing the use of their land included their belief that giving of land would lead to destruction of resources (3%), their lands was in use (3%) and that their land was burial grounds for their relatives (3%) among others. Good communication between the government and the land owners is necessary to inform land owners adequately on the processes of land acquisition, compensation and the benefits of road construction for the project to achieve their full

potentials and realize full implementation.

4.6.1.6 Members' reaction to direct involvement in the project activities

The respondents were requested to indicate the communities' response to active participation in project activities. Their responses are presented in Table 4.43

Table 4. 43: Members reaction to direct involvement in the project activities

Responses	Frequency	Percentage
Highly respond	36	36
Moderately respond	39	39
Reluctantly respond	17	17
They ignore	8	8
Total	**100**	**100**

4.6.2 Project Management and leadership

The study also sought to assess how project leadership and management influence the implementation of road construction projects from the land owners.

4.6.2.1 Duration of membership in the project

To investigate on the management of the projects the respondents were requested to indicate the duration of their membership in order to understand their relationship with the management and their understanding of how the groups' activities are managed. Table 4.44 shows the results.

Table 4. 44: Duration of membership

	Frequency	Percentage
Less than 5 Months	21	21
6- 10 Months	16	16
11- 15 Months	17	17
16- 21 Months	13	13
22- 27 Months	18	18
28- 33 Months	10	10
More than 33 Months	5	5
Total	**100**	**100**

4.6.2.2 Type of leadership

The researcher requested the respondents to indicate the type of leadership in their projects the results are shown in Table 4.45.

Table 4. 45: Type of leadership

	Frequency	percentage
Board of Directors	30	30
Board of Trustees	25	25
Steering Committee	27	27
Project management committee	18	18
Total	**100**	**100**

According to Table 4.45, 30% of the respondents indicated their project had board of directors, 27% indicated that their project had steering Committee, 25% indicated that their project had board of trustees and 18% indicated that their project had project management committee. From the findings, we can deduce that most project were headed by board of directors.

4.6.2.3 Selection of management teams

Term length of the Management Committee is the time allowed for the committee to manage the group activities. The interviewees were asked to indicate the length of the management committee term by showing how often they were selected. The results are shown in Table 4.46.

Table 4. 46: Selection of management teams

	Frequency	Percentage
After 1 year	6	6
After every 3 year	21	21
During a crisis	55	55
Once	18	18

Majority of the land owners (55%) state that their leaders are chosen whenever there is a crisis. This indicates that the leaders are brought in to help solve the problems when they arise This affects implementation as the leaders in case are not appointed for their ability to lead but for the ability to solve problems arising in the group thus lacking confidence with the people. Depending on how often crisis arises this would therefore indicate that the chosen leaders have no enough time to make changes if any to the development of the group

eventually affecting the projects implementation ability.

4.6.2.4 Factors considered when choosing leaders

In choosing leaders it is important to select a leader with integrity, transparency and accountability. A good leader is one that is honest, focused and with good governance and it is for this reason that the respondents were requested to indicate the quality they look at when choosing a leader. Table 4.47 presents the results.

Table 4. 47: Factors considered when choosing leaders

	Frequency	Percentage
Academic qualification	3	3
Academics and experience in Road construction projects	83	83

According to Table 4.47, majority of the land owners (83%) indicated that the most important factor they look at when choosing their leaders is there academic and experience in road construction. Having a leader who is educated in road construction and has experience would possible improve the implementation of the construction because the leader would have the knowledge and skills on how to handle the projects. Though education and experience are ingredients in good leadership there is also need for the leader to be able to handle issues that arise during project implementation among other leadership qualities.

4.6.3 Contract Documentation

The study also sought to assess how contract documentation influences the implementation of a road construction project from land owners' staff members.

4.6.3.1 Missing items in the contract documentation

Missing items in any contract document could lead to misunderstanding between the contractor and the employer so it is important to always to scrutinize a contract and to understand clearly the details in the contract in order to have a harmonious working relationship. The respondents were asked if they had encountered some missing items in the contract document and the missing items. Their responses are shown in Table 4.48.

Table 4. 48: Missing items in the contract documentation

Presence of missing items	Land owners		Missing items	Land owners	
	F	Percentage		F	Percentage
Yes	30	30	Inaccurate bill	3	3
No	65	65	Working conditions	8	8
Don't know	5	5	Cleanup measures	9	9
			Re- allocations	13	13

According to Table 4.48 majority of the consultants (69%) had items missing from the contract documentation while the minority (39%) did not have missing items. This is an indication of the consultants' dedication to the project. Since the contract document disrobe the work to be built, the quality and quantity of material, the workmanship and the methods to be tested, it is necessary to read and understand the project before coming to an agreement with the contractor. Therefore, based on the project implementation plan and the implementation frame, the understanding of the document is necessary for the smooth progress of the projects and consequently the implementation. On the other hand, majority of the land owner had no missing items and 30%, the minority had had missing items. Some of the missing items as stated by the respondents are working conditions, clean up measures and some items from the tender and re- allocation.

4.6.4 Local Politics

The study also sought to establish how local politics influence the implementation of a road construction project from land owners.

4.6.4.1 Involvement of politicians

The respondents were requested to indicate whether any politicians had been involved in the project and in what time and activity involved in. Table 4.49 presents the results.

Table 4. 49: Involvement of politicians

	Frequency	**Percentage**
Yes	79	79
No	21	21
Total	**100**	**100**

From the findings, 79% of the respondents indicated that the politicians were involved in projects while 21% disagreed. This shows that politicians were involved in projects and Table 4.50 presents the results.

Table 4. 50: Activities in which politicians were involved

Activity	Frequency	Percentage
During land acquisition	21	21
During disputes	17	17
During recruitment	13	13
During re- allocations	9	9
During casual engagements	6	6

The land owners indicated that the politicians have been involved during land acquisition (21%), during conflicts and disputes (17%), during re- allocations of services and structures (9%) and during casual engagements (6%) e.g. at commencement of the project (Table 4.50).

4.6.4.2 Influence of the local politics on the project status

The researcher requested the respondents to rate the influence of the local politics on the project status. The results are shown in Table 4.51

Table 4. 51: Influence of the local politics on the project status

Activity	Mean	Std deviation
Scope of the project	3.982	0.8292
Relocation of structures	3.893	0.9963
Environmental factors	3.764	0.7382
Land acquisition	4.028	0.9283
Material sites (quarries)	4.029	0.9273
Water sources	4.111	1.0283
Engagement of casual labourers	3.651	0.9273

From the findings, the respondents agreed with a mean of 4.111 that local politics were highly influencing water sources. In addition, the respondents agreed with a mean of 4.029 that local politics were highly influencing material sites (quarries). Further, the respondents agreed with a mean of 4.028 that local politics were highly influencing land acquisition. The respondents also agreed with a mean of 3.982 that local politics were highly influencing the scope of the project. The respondents further agreed with a mean of 3.893 that local politics were highly influencing relocation of structures. In addition, the respondents agreed with a mean of 3.764 that local politics were highly influencing environmental factors. Further, the

respondents agreed with a mean of 3.651 that local politics were highly influencing engagement of casual laborers.

4.7 Correlation Analysis

A correlation is a number between -1 and +1 that measures the degree of association between two variables. A positive value for the correlation implies a positive. A negative value for the correlation implies a negative or inverse association.

Table 4. 52: Correlation coefficients

		Implementation of road construction projects	Resource mobilization approaches	Project management and leadership	contract documentation	Local politics
Implementation of road construction projects	Pearson Correlation	1				
	Sig. (2-tailed)	.				
Resource mobilization approaches	Pearson Correlation	.763	1			
	Sig. (2-tailed)	.021	.			
Project management and leadership	Pearson Correlation	.683	.323	1		
	Sig. (2-tailed)	.023	.006	.		
contract documentation	Pearson Correlation	.881	.243	.667	1	
	Sig. (2-tailed)	.022	.002	.000	.	
Local politics	Pearson Correlation	.734	.423	.450	.541	1
	Sig. (2-tailed)	.021	.000	.000	.000	.

The analysis of correlation results between the Implementation of road construction projects and Resource mobilization approaches show a positive coefficient 0.763, with p-value of 0.021. It indicates that the result is significant at α =5% and that if the Resource mobilization approaches increase it will have a positive impact on the implementation of road construction projects. The correlation results between project management and leadership and implementation of road construction projects also indicates the same type of result where the correlation coefficient is 0.683 and a p-value of 0.023 which significant at α = 5%. The

results also show that there is a positive association between contract documentation and implementation of road construction projects where the correlation coefficient is 0.881, with a p-value of 0.022. Further, the result shows that there is a positive association between local politics and implementation of road construction projects where the correlation coefficient is 0.734, with a p-value of 0.021 (Table 4. 52).

This therefore infers that contract documentation contributed most to the implementation of road construction projects followed by resource mobilization approaches, then local politics while project management and leadership had the least effect on the implementation of road construction projects.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings, discussion, conclusions drawn from the analysis of data and the recommendations made. The main objective of this study was to investigate the factors which influence the implementation of road construction projects in Isiolo County.

5.2 Summary of Findings

A summary of major findings is presented in Table 5.1. The summary is presented according to the objectives of the study.

Table 5. 1: Summary of Major findings

Objective	Major findings
To determine how project resource mobilization approaches influence the implementation of road construction projects.	• 61% of the contractors had knowledge of any strategies used in mobilizing members for the project. • 76% of the contractors had knowledge of the existence of the strategies made by the consultants. • 52% of the respondents were not aware of the availability of any fundraising strategies which had been used by the project. • 79% of the respondents were not paid promptly and this could delay and slow down the project implementation efforts. • 21% of the contractors mention holding public meetings as one of the strategies of mobilizing members. Other strategies included employment of the locals (4%) and involvement of all the stake holders (6%).
To assess how project leadership and management	• Both the consultants (83%) and the land owners (85%) have been members of the projects for at least 2 years and below. • 71% of the consultants indicated that they have a project management committee that manages the group. • Land owners also indicated that they had project management committee (67%). • The leaders were mainly appointed on recommendation of supervisors. • Academic qualification and experience were most important factors looked

Objective	Major findings
influence the implementation of road construction projects.	at when choosing their leaders • Consultants indicated that the leaders' effectiveness highly influenced the extent of the project implementation. Effectiveness of the leadership highly influenced the extent of requisition of technical drawing and site instruction (40%), procurement of materials (53%) and actual road construction (62%). • Land owners felt that leadership effectiveness highly influenced relocation of structures (56%), construction of RE's office (30%) and contractors site (32%), material site (44%) and water sources (47%) and engagement of laborers (29%).
To assess how contract documentation influence the implementation of a road construction project.	• 69% of the consultants have had items missing from the contract documentation including - working conditions, clean up measures and some items from the tender and re- allocation. 70% 0f the land owners had no missing items and 30%, the minority had had missing items. • Consultants rated the influence of contract documentation on the project appraisal (48%), environmental factors (66%) and reduction of variations prices/ claims (66%) and mitigation of risk and uncertainties (41%) fairly. • Land owners rated the influence of contract documentation to the relocation of structures (55%), land acquisition (41%), material site (55%) and water sources (31%) very highly. • The environmental factor (40%) was rated on the other hand is rated highly by majority of the land owners.
To establish how local politics influence the implementation of a road	• Both the consultants (68%) and the land owners (79%) agreed that there were politicians who had been in the past involved in the project. • The consultants indicated that the politicians had been involved during land acquisition (13%), during conflicts and disputes (20%), for project review (21%), during re- allocations of services and structures (8%) and during casual engagements (8%) e.g. at commencement of the project. • The land owners indicate that the politicians were involved during land acquisition (21%), during disputes and conflicts (17%), during recruitments (13%), during reallocations (9%) and during casual engagements (6%). • Majority of the consultants rated the influence of local politics on the scope of the project (45%), the environmental factors (39%) and the engagement of casual laborers (36%) fair.

Objective	Major findings
construction project.	• Majority of the land owners rated the influence of local politics on the land acquisition (44%), engagement of casual laborers (40%) and water sources very high. • Local politics influence on relocation of structures highly and the scope of the project (43%), environmental factors (31%), and the material sites (55%) are fairly influenced by local politics.

5.3 Discussion of Findings

A discussion of the major findings on the how project resource mobilization approaches, project leadership and management, contract documentation and local politics influence the implementation of a road construction project is given below.

5.3.1 Resource Mobilization Approaches

The study established that majority of the contractors (63.33%) have knowledge of the existence of the strategies for mobilizing resources. The researcher sought to establish whether there were fund raising strategies for the projects and established that there were strategies in place.

It was established that they were using employment of the locals in the project (M=4.0121), use of public meetings (M=3.892) and using involvement of stakeholders with the government to mobilize members (M=3.621). The study also sought to establish the response of the locals toward involvement in projects and it was established that majority of the respondents moderately respond to involvement in projects.

The study sought to establish whether land owners were paid promptly when land was acquired from them for the purposes of road construction and established that they were not paid promptly (79%).The researcher set to find out the reasons for the delayed payment and established that the major reason was the delayed disbursement of cheques from the ministry responsible (32%).The study found that the following ways of improving payment process They were paying land owners before project commencement (27%), paying the land owner directly and promptly (14%), educating the community on the project benefits(12%), considering land issues when tendering (8%), compensating the community (7%), engaging the community/ Government in acquisition (6%) and government to issue title deed promptly (5%).

It is necessary to focus projects efforts towards the strategic plan of the project so that resources are not wasted in non-value added activities (Gray and Larson, 2008). Respondents claimed that they were not paid promptly (79%) and this could delay and slow down the project implementation efforts. According to Twort (1984) and Clarke, (1988), for effective implementation of road construction projects, enough recourse are needed to enable the contractor to immediately get to site a wide variety of equipment, machinery, materials and labor force.

Both human and financial resources are important factors determining the success of any project. If well mobilized and used well they can guarantee successful implementation of road construction projects. The study established that the contractors (61%) had knowledge of any strategies used in mobilizing members for the project. Furthermore, majority of the contractors (76%) had knowledge of the existence of the strategies made by the consultants. Additionally, 52% respondents were not aware of the availability of any fundraising strategies which had been used by the project. This is an indication that few strategies known to respondents were used in fundraising for the projects.

5.3.2 Project Management and Leadership

According to Twort, (1984), the key personnel employed by a contractor to take charge of the construction depend on magnitude or scope and type of works. Also the number of persons employed depends not only on the size but also on the complexity of the job and its physical extent. In line with this, the study established that majority of the employees had worked for the organization for more than 2 years. The gender composition of the project management team was also established to be mainly men (80%).The criterion of choosing leaders was established to be appointment on recommendations of the councilor or Member of Parliament (27.5%).

Effective leadership ensures that the contractors work with owners and the communities from the beginning and make recommendations on design improvements, construction technology, schedules and construction economy. Propose design and construction alternatives if appropriate, and analyze the effects of the alternatives on the project cost and schedule. Monitor subsequent development of the project in order that these targets are not exceeded without the knowledge of the owner. Coordinate procurement of material and equipment and the work of all construction contractors, and monthly payments to contractors, changes, claims and inspection for conforming design requirements. Perform other project related

services as required by owners. This kind of leadership and management ensures effective implementation of road construction projects.

The researcher also sought to find out whether the project had Board of Directors / Trustees/Steering Committees and or Management Committee and established that there were a project management committee that manages the group (70%).In terms of gender composition, the study established that majority of the respondents were males. In selection of the management teams, majority of the consultants indicated that their leaders are appointed once and for all (79%).The study also established that the choosing of leaders was done through appointment on recommendation by supervisors (100%). This is consistent with Twort (1984) that the engineer's representative (resident engineer) job is primarily one of seeing that the works are built as the engineer has designed and instructed they shall be built, and that the contractor carries out all his obligations under the contract for the construction.

5.3.3 Contract Documentation

The study sought to establish whether there were missing items in the contract documents and established that there were missing items in the contract (70%).The study established that these missing items were adequacy of contract documents (M=4.176), design review(M= 3.976), environmental factors (M=3.658),and variation of prices /claims (M= 3.916). Contract documentation for labour-based road projects is necessary for effective road construction projects implementation and must be simplified since most contractors may not understand voluminous contract documents.

According to Twort (1984), the contract for the construction of the works binds the contractor to construct the works and the employer to pay for them. If not well done, then there might arise problems between contractors, employees and other stakeholders which may affect implementation of road projects. This was confirmed by majority of the consultants who rated the influence of contract documentation on the project appraisal. The study sought to establish the missing items in any contract document could lead to misunderstanding between the contractor and the employer and established that majority of the consultants have had items missing from the contract documentation (69%).

The study set to find out to the duration of the membership of the respondents and established that most of them had duration of 22 to 27 months. The study also sought to find out the gender composition of the management team and established that majority were males (67%).The study also established that the leaders are appointed on recommendation of supervisors (100%).

5.3.4 Local Politics

The study established that majority of both the consultants (68%) and the land owners (79%) stated that there were politicians who had been involved in the project. The researcher sought to find out the rate of influence of the local politics on the project status. In relation to this, the study established that local politics were highly influencing water sources (M=4.111), were highly influencing land acquisition (M=4.029) and were highly influencing material sites (quarries) (M=4.028). The study sought to establish whether the political leaders were involved in the project and established that they were not (47.5%). Such political involvement is normally marred with nepotism resulting in inefficient management of projects coupled with transition problems. This becomes a problem with long term sustainability of the projects. According to Muiruri, (2009), new MPs simply abandon projects initiated by their predecessors even where they are 80% completed.

Further the researcher sought to find out the influence of the local politics on the project and established environmental factors (M=4.015), land acquisition (M=3.976) ,scope of the project (M=3.893) ,engagement of cause laborers (M=3.856) ,water sources(M= 3.727), materials sites acquisition(M=3.727), actual road construction (M=3.674), relocation of structures (M=3.695) and design review (M=3.579) are influenced by local politics

5.4 Conclusions

It is also concluded from the study that there is a positive correlation between implementation of road construction projects and resource mobilization approaches with a coefficient of 0.763 and a p-value of 0.021. The value indicates that the result is significant at α =5% and that if the Resource mobilization approaches increase it will have a positive impact on the implementation of road construction projects. Most of the contractors have knowledge of the existence of the strategies for mobilizing resources. Land owners were not paid promptly when land was acquired from them.

It is concluded that there is a positive correlation between project management and leadership and implementation of road construction projects where the correlation coefficient is 0.683 and a p-value of 0.023 which significant at α = 5%. The criterion of choosing leaders was established to be appointment on recommendations of the councilor or member of parliament. Effective leadership ensures that the contractors work with land owners and the communities from the beginning and make recommendations on design improvements, construction technology, schedules and construction economy

It is also concluded that there is a positive correlation between contract documentation and implementation of road construction projects where the correlation coefficient is 0.881, with a p-value of 0.022. The study also found that there were missing items in the contracts.

The study also showed that there is a positive correlation between local politics and implementation of road construction projects where the correlation coefficient is 0.734, with a p-value of 0.021. The study established that local politics were highly influencing water sources, land acquisition and material sites (quarries).

5.5 Recommendations of the Study

The Land owners should be paid before the commencement of the project directly and promptly in order to avoid confrontations. This will ensure that the land owners will offer any assistance requested due to the good relationship maintained.

The Ministry of Roads should educate the community on the benefits of the projects and engage it during land acquisition in order to avoid misunderstandings with the contractors.

All stakeholders in the road construction projects should ensure that good contract documentation is done with the contract describing comprehensively what the works are, and how payment is to be made in order to avoid missing items in the contract documents.

Regulations should be enforced in order to block the involvement of the politicians in the implementation of road construction projects implementation. The role of politicians should be limited to legislative and oversight.

Lastly, funds should be mobilized and promptly disbursed to various projects in the main project in order to avoid ineffective allocation of funds.

5.6 Areas of Further Research

The following areas of further research were identified from the study.

i. Further study should be done on the key performance indicators (KPIs) in order to identify the causal relationships between effective implementation of road construction projects and KPIs. The causal relationships, once identified, will be a useful piece of information in order to implement projects successfully.

ii. A study should also be conducted in order to assess the resource mobilization approaches and capacity needs for effective implementation of road construction projects

iii. A study should also be conducted in order to assess the optimal staffing levels and capacity needs for effective implementation of road construction projects.

iv. A comparative study should also be done on the effectiveness of contract documentation in different types of projects to allow for generalization.

v. Lastly, a study should also be done on how national politics influence the effective implementation of road construction projects

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APPENDICES

APPENDIX 1 LETTER OF TRANSMITTAL

Patrick Peter Mbaabu

P.O Box 528 – 60300

ISIOLO

Date…….

To……...….

Dear Sir/ Madam

RE: LETTER OF TRANSMITTAL OF DATA COLLECTION INSTRUMENTS.

This is to inform you that I am carrying out research that will lead to the award of master of Arts Degree in Project Planning and management of the University of Nairobi. The focus of the study is on the factors influencing the successful implementation of road projects in Kenya with specific reference to Isiolo – Merille (A2) road, Lewa – Isiolo (A2) and Isiolo – Muriri (D485) road projects.

Once the research is completed, the findings will offer lessons on the implementation of road projects to the government, Donors and Project Management teams. All information obtained will be strictly handled with confidentiality.

Attached, please find a copy of the questionnaire which requires you to provide information by filling it.

Kindly be honest and objective and do not write your name. You are also requested to kindly cooperate with my research assistant (s) when you are approached by him or her.

Yours faithfully

Patrick Peter Mbaabu

Reg No. L50/60773/2010

APPENDIX 2 QUESTIONNAIRE FOR CONTRACTOR'S STAFF MEMBERS

Instructions

Kindly respond by ticking or writing briefly where appropriate.

Section A: Background Information

1) Project in reference

(i). Isiolo – Merille (A2) Project ☐

(ii). Isiolo –Muriri (D485) road Project ☐

(iii) Lewa – Isiolo (A2) ☐

2) State your gender

(i). Male ☐

(ii) Female ☐

3) State your age

Below 22 years	☐	43 – 47 years	☐
23 - 27 years	☐	48 – 52 years	☐
28 – 32 years	☐	52 – 56 years	☐
33 – 37 years	☐	57 – 61 years	☐
38 – 42 years	☐	Above 61 years	☐

Section B: Resource Mobilization approaches

4) Do you know of any funding strategy that has been used by the project?

Yes ☐ No ☐

5) If Yes, which one (s)?

Member contributions

Loan request for partnership with corporate organizations

Request for partnership with corporate organization

If others, specify

……

……

6) Do you know of any strategies made to mobilize members to participate actively and own the project?

Yes ☐ No ☐

If yes, specify.

……

……

7) Do you know of any strategies made to mobilize plants, equipment and materials effectively?

Yes ☐ No ☐

If yes, specify

……

……

8) How do members react to the direct involvement in the project activities?

Highly respond ☐

Moderate respond ☐

Reluctantly respond ☐

Complain of over involvement ☐

They ignore ☐

Section C: Project Management

9) How long have you been a member of the project?

Less than 5 months ☐

6 – 12 months ☐

11 – 15 months ☐

16 – 21 months ☐

22 – 27 months ☐

28 – 33 months ☐

More than 33 months ☐

10) Listed below are some of the stages that take place in the road construction projects. Please indicate with a tick the extent to which you think the project is complete by stage in accordance to the scale given.

Stages	Activity	Less than 25%	Between 25-50%	Between 51-75%	Above 75%	Do not know	Month of activity
Projects Design	Analysis of requirements						
	Development of project rules						
	Development of fundraising strategies						
	Design of implementation work plan.						

Implementation	Requisition of technical drawings and site instructions						
	Construction of resident engineer's (RE's) office						
	Construction of contractors site						
	Procurement of materials						
	Involvement of local politics/leaders						
	Engagement of casual labourers						
	Acquisition of land or the site						
	Actual road construction						
Commissioning	Substantial completion						
	Taking over						

11) Any other comment and the corresponding scale of project management on the extent to which you think the project would be complete?

……

……

Section D: Leadership

12) Does your project have Board of Directors / Trustees/Steering Committees and or Management Committee?

Board of Directors	Yes	☐	No	☐
Board of Trustees	Yes	☐	No	☐
Steering Committee	Yes	☐	No	☐
Project management committee	Yes	☐	No	☐

13) If Yes, to the above specify the gender composition of the team.

Types	Male	Female
Board of Directors		
Board of Trustees		
Steering Committee		

Project management committee		

14) How often is the management team choosing?

After I year ☐ Once ☐

After 3 years ☐ Other, specify ☐

When there is a crisis ☐

15) How does you project choose its leaders?

	YES	NO
Appointment on recommendations of the supervisors		
Appointment on recommendations of the councilor or MP		
Appointment on family background		
Appointment in loyalties		
Secret ballot		
Show of hands		
Other, specify		

16) What factor do the members mostly consider in choosing their leaders?

Academic qualifications ☐

Academic and experience in road construction projects ☐

Ability to persuade ☐

Closeness to political leadership ☐

If others, specify.

17) ……

……

……Rate of the effectiveness of your leadership in influencing the extent of the project implementation by activity.

Stages	Activity	Very high	High	Fairy high	low	Very low
Project Design	Analysis of requirements					
	Development of project rules					
	Design of implementation work plan					
Implementation	Requisition of technical drawings and site instruction.					
	Procurement of materials					
	Construction of RE's office					

	Construction of contractors site					
	Engagement of casual labourers					

18) Any other comment and the corresponding rate of leadership on the extent to which you think the project would be complete?

……

……

Section E: contract documentation

19) Do you encounter some missing item in the contract documents?

Yes ☐ No ☐

If yes, specify them.

……

……

20) Rate the influence of the contact document on the project status in accordance to the scale given.

Stage		Very high	High	Fairly	Low	Very low
Project design	Adequacy of contract documents					
Implementation	Design review					
	Environmental factors					
	Variation of prices /claims					

Sections F: Local Politics

21) Has any politician been involved in your projects?

Yes ☐ No ☐

22) If Yes, specify the activity and time of involvement.

……

……

……

23) Rate the influence of the local politics on the project status in accordance to the scale given.

Stage		Very	High	Fairly	Low	Very

		high				low
Project design	Scope of the project					
Implementation	Design review					
	Environmental factors					
	Land acquisition					
	Engagement of cause labourers					
	Actual road construction					
	Materials sites acquisition					
	Relocation of structures					
	Water sources					

24) Any other comments and corresponding rate of local politics involvement on the extent to which you think the project would be complete?

……

……..…

……..

THANK YOU

APPENDIX 3 QUESTIONNAIRE FOR EMPLOYER'S/CONSULTANT'S STAFF MEMBERS

Instructions

Kindly respond by ticking or writing briefly where appropriate.

Section A: Background Information

1) Project in reference

(i). Isiolo – Merille (A2) Project ☐

(ii). Isiolo –Muriri (D485) road Project ☐

(iii) Lewa – Isiolo (A2) ☐

2) State your gender

(i). Male ☐

(ii) Female ☐

3) State your age

Below 22 years	☐	43 – 47 years	☐
23 - 27 years	☐	48 – 52 years	☐
28 – 32 years	☐	52 – 56 years	☐
33 – 37 years	☐	57 – 61 years	☐
38 – 42 years	☐	Above 61 years	☐

Section B: Resource Mobilization approaches

4) Do you know of any funding strategy that has been used by the project?

Yes ☐ No ☐

5) If Yes, which one (s)?

GoK vote ☐

Donors ☐

If others, specify

……

……

……

6) Do you know of any strategies made to mobilize members to participate actively and own the project?

Yes ☐ No ☐

If Yes, specify.

……

……

7) Do you know of any strategies made to mobilize plants, equipment and materials effectively?

Yes ☐ No ☐

If yes, specify

……

……

8) How do members react to the direct involvement in the project activities?

Highly respond ☐

Moderate respond ☐

Reluctantly respond ☐

Complain of over involvement ☐

They ignore ☐

Section C: Project Management

9) How long have you been a member of the project?

Less than 5 months ☐

6 – 12 months ☐

11 – 15 months ☐

16 – 21 months ☐

22 – 27 months ☐

28 – 33 months ☐

More than 33 months ☐

10) Listed below are some of the stages that take place in the road construction projects. Please indicate with a tick the extent to which you think the project is complete by stage in accordance to the scale given.

Stages	Activity	Less than 25%	Between 25-50%	Between 51-75%	Above 75%	Do not know	Month of activity
Projects Design	Analysis of requirements						
	Development of project rules						
	Development of fundraising strategies						
	Design of review						
Implementation	Requisition of technical drawings and site instructions						
	Construction of resident engineer's (RE's) office						
	Construction of contractors site						
	Project appraisal						
	Procurement of materials						
	Involvement of local politics/leaders						
	Engagement of casual labourers						
	Acquisition of land or the site						
	Actual road construction						
Commissioning	Substantial completion						
	Taking over						

11) Any other comment and the corresponding scale of project management on the extent to which you think the project would be complete?

……

……

……

Section D: leadership

12) Does your project have Board of Directors / Trustees/Steering Committees and or Management Committee?

Board of Directors	Yes	☐	No	☐
Board of Trustees	Yes	☐	No	☐
Steering Committee	Yes	☐	No	☐
Project management committee	Yes	☐	No	☐

13) If Yes, to the above specify the gender composition of the team.

Types	Male	Female
Board of Directors		
Board of Trustees		
Steering Committee		
Project management committee		

14) How often is the management team choosing?

After I year	☐	Once	☐
After 3 years	☐	If others, specify	☐
When there is a crisis	☐		

15) How does you project choose its leaders?

	YES	NO
Appointment on recommendations of the supervisors		
Appointment on recommendations of the councilor or MP		
Appointment on family background		
Appointment in loyalties		
Secret ballot		
Show of hands		
Other, specify		

16) Which factors do the members mostly consider in choosing their leaders?

i. Academic qualifications ☐
ii. Academic and experience in road construction projects ☐
iii. Ability to persuade ☐
iv. Closeness to political leadership ☐

If others, specify.

……

……

…..……

17) Rate of the effectiveness of your leadership in influencing the extent of the project implementation by activity.

Stages	Activity	Very high	High	Fairy high	low	Very low
Project Design	Analysis of requirements					
	Development of contractual rights and obligation					
	Design of implementation work plan e.g. contract period					
Implementation	Requisition of technical drawings and site instruction.					
	Procurement of materials					
	Construction of RE's office					
	Construction of contractors site					
	Engagement of casual labourers					
	Actual road construction					

18) Any other comment and the corresponding rate of leadership on the extent to which you think the project would be complete?

……

……

……

Section E: Contract Documentation

19) Do you encounter some missing item in the contract documents?

Yes ☐ No ☐

If yes, specify them.

……

……

…..……

20) Rate the influence of the contact document on the project status in accordance to the scale given.

Stage		Very high	High	Fairly	Low	Very low
Project design	Adequacy of contract documents					
	Design review					
Implementation	Project appraisal					
	Environmental factors					
	Reduction of variation of prices or claims					
	Mitigation of risk and uncertainties					

Sections F: Local Politics

21) Has any politician been involved in your projects?

Yes ☐ No ☐

22) If Yes, specify the activity and time of involvement.

……

……

……

23) Rate the influence of the local politics on the project status in accordance to the scale given.

Stage	Contract documents	Very high	High	Fairly	Low	Very low
Project design	Scope of the project					
	Design review					
	Adequacy of contract document					
Implementation	Project appraisal					
	Environment factor					
	Variation of prices or claims					
	Materials sites					
	Water sources					
	Location of project offices					
	Land acquisition					
	Actual construction					
	Engagement of casual laborers					

24) Any other comments and corresponding rate of local politics involvement on the extent to which you think the project would be complete?

……
……
…..……..

THANK YOU

APPENDIX 4 QUESTIONNAIRE FOR LAND OWNERS SEEKING LANDS COMPENSATION

Instructions

Kindly respond by ticking or writing briefly where appropriate.

Section A: Background Information

Project in reference

(i). Isiolo – Merille (A2) Project ☐

(ii). Isiolo –Muriri (D485) road Project ☐

(iii) Lewa – Isiolo (A2) ☐

State your gender

(i). Male ☐

(ii) Female ☐

State your age

i. Below 22 years ☐
ii. 23 - 27 years ☐
iii. 28 – 32 years ☐
iv. 33 – 37 years ☐
v. 38 – 42 years ☐
vi. 43 – 47 years ☐
vii. 48 – 52 years ☐
viii. 52 – 56 years ☐
ix. 57 – 61 years ☐
x. Above 61 years ☐

Section B: Resource Mobilization approaches

Is payment for land acquisition made promptly?

Yes ☐ No ☐

If Yes, which one (s)?

i. Direct personal account ☐

☐

i. Cheques

ii. District commissioner's office ☐

If others, specify

……

……

……

If no, what reason given by the Resident Engineer (RE)?

……

……

……

……

If No, what are your recommendations to improve the mode of payment?

……

……

……

Do you allow the contractor to utilize your land to be compensated while awaiting payment?

Yes ☐ No ☐

If yes, specify.

……

……

……

How would you react to the direct involvement in the project activities?

Highly respond ☐

Moderate respond ☐

Reluctantly respond ☐

Complain of over involvement ☐

They ignore ☐

Section C: Project Management

How long have you been a member of the project?

Less than 5 months ☐

6 – 12 months ☐

11 – 15 months

16 – 21 months ☐

22 – 27 months ☐

28 – 33 months ☐

More than 33 months ☐

Listed below are some of the stages that take place in the road construction projects. Please indicate with a tick the extent to which you think the project is complete by stage in accordance to the scale given.

Stages	Activity	Less than 25%	Between 25-50%	Between 51-75%	Above 75%	Do not know	Month of activity
Implementation	Relocation of structures						
	Construction of resident engineer's (RE) office						
	Construction of contractors site						
	Procurement of materials						
	Engagement of casual labourers						
	Acquisition of land						
	Actual road construction						
Commissioning	Substantial completion						
	Taking over						

Any other comment on the extent to which you think the project would be complete?

……

……

……

Section D: Leadership

Does your project have Board of Directors / Trustees/Steering Committees and or Management Committee?

Board of Directors	Yes	☐	No	☐
Board of Trustees	Yes	☐	No	☐
Steering Committee	Yes	☐	No	☐
Project management committee	Yes	☐	No	☐

If Yes, to the above specify the gender composition of the team.

Types	Male	Female
Board of Directors		
Board of Trustees		
Steering Committee		
Project management committee		

How often is the management team choosing?

i. After I year ☐
ii. After 3 years ☐
iii. When there is a crisis ☐
iv. Once ☐

If others, specify

……

……

……..

How does you project choose its leaders?

	YES	NO
Appointment on recommendations of the supervisors		
Appointment on recommendations of the councilor or MP		
Appointment on family background		
Appointment in loyalties		
Secret ballot		
Show of hands		
Other, specify		

What factor do the members mostly consider in choosing their leaders?

i. Academic qualifications ☐
ii. Academic and experience in road construction projects ☐
iii. Ability to persuade ☐
iv. Closeness to political leadership ☐

If others specify,

……

……

……

Rate of the effectiveness of your leadership in influencing the extent of the project implementation by activity.

Stages	Activity	Very high	High	Fairy high	low	Very low
Implementation	Relocation of structures					
	Land acquisition					
	Construction of RE's office					
	Construction of contractors site					
	Material site (quarries)					
	Water sources					
	Engagement of casual labourers					

Any other comment and the corresponding rate of leadership on the extent to which you think the project would be complete?

……

……

……

Section E: Contract Documentation

25) Do you encounter some missing item in the contract documents?

Yes ☐ No ☐

If Yes, specify them.

……

……

……

26) Rate the influence of the contact document on the project status in accordance to

Section E: Contract Documentation

27) Do you encounter some missing item in the contract documents?

Yes ☐ No ☐

If yes, specify them.

……

……

……

28) Rate the influence of the contact document on the project status in accordance to the scale given.

Stage	Activity	Very high	High	Fairly	Low	Very low
Implementation	Relocation of structures					
	Land acquisition					
	Environmental factors					
	Materials sites					

	(quarries					
	Water sources					

Sections F: Local Politics

29) Has any politician been involved in your projects?

Yes ☐ No ☐

If Yes, specify the activity and time of involvement.

……

……

……

30) Rate the influence of the local politics on the project status in accordance to the scale given.

Stage	Activity	Very high	High	Fairly	Low	Very low
Implementation	Scope of the project					
	Relocation of structures					
	Environmental factors					
	Land acquisition					
	Material sites (quarries)					
	Water sources					
	Engagement of casual labourers					

31) Any other comments and corresponding rate of local politics involvement on the extent to which you think the project would be complete?

……

……

THANK YOU

APPENDIX 5: ISIOLO COUNTY ROAD MAP AND ROAD PROJECT UNDER STUDY