

**FACTORS INFLUENCING PROJECT IMPLEMENTATION IN
CONSTRUCTION INDUSTRY: A CASE OF ROAD CONSTRUCTION IN
ELGEYO MARAKWET COUNTY**

BY

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DECLARATION

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

Signed..... Date.....

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This research project report has been submitted for examination with my approval as the university supervisor.

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DEDICATION

I dedicate this research project to my parents Mr. and Mrs. Michael Kurui, my brother David and James who offered me their support as I attended my classes.

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LIST OF ABBREVIATIONS AND ACRONYMS

TRM: Time Result and Means

TQC: Time Cost and Quality

ABSTRACT

Elgeyo Marakwet county is one of the counties in Kenya that have been marginalized both in practice and literature. The construction industry is considered to be one of the most important industries in the economy but road construction in the county has slowed questioning its implementation. The purpose of this study was to examine the factors influencing project implementation in construction sector in Elgeyo Marakwet County. The objectives that guide this study included: To examine the influences of technical capacity on implementation of construction projects in Elgeyo Marakwet County; find out the influence of communication systems on implementation of construction projects in Elgeyo Marakwet County and to explore the influence of commitment on implementation of construction projects in Elgeyo Marakwet County. The study utilized the institutional theory and management theory in explaining behaviors on project success in Elgeyo Marakwet. The findings can be of immense use to industry players as they use the recommendation in developing road construction sector policies and frameworks. It will also help government and other stakeholders including construction companies and regulators who are directly affected by planning to understand how project meetings affect project implementation. The study adopted descriptive analysis with a questionnaire used as an instrument of data collection. The researcher analyzed both primary and secondary data that provided information on the study. Results have been presented in frequency tables, pie charts and graphs. Using a sample of 36 respondents, the study achieved a response rate of 88%. The findings show that proper implementation techniques especially with the use of charts by road contractors as well as communication systems and commitment of project stakeholders influence implementation of road construction projects. Road construction projects experience challenges such as increased number of projects by contractors and hence they should not increase the number of projects that cannot be performed successfully. Further the study recommends that future studies can examine the factors that influence project implementation in other parts of the country as the current study was conducted in Elgeyo Marakwet County.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Project management involves coordinating various aspects of a project to bring forth a positive result. This coordination can include elements such as personnel, materials, procedures, and facilities. Indeed, browsing through an online bookshop will reveal thousands of titles focused on improving the practice and discipline of project management. Yet, as many scholars seek to expand the horizons and boundaries of what is known by identifying, exploring and exploiting new territory, some of the most fundamental insights remain buried in older source material. Over the past five to ten years, there have been increasing challenges faced by Project Managers. Some of the aspects of project management that are particularly challenging are (TRM) time, the result (quality of the output of the project) and means (resources) (Wysocki, 2014). Evidence suggests that this is far from the truth. Hence, the construction industry needs to pay special attention to critical success factors, besides the ‘iron triangle (or the sometimes used term: golden triangle), if it is to survive the challenges posed by globalization (Toor & Ogunlana, 2005).

The construction industry is considered to be one of the most important industries in the economy. It interacts with nearly all fields of human endeavors. Unfortunately, the intrinsic complexity, uncertainty and dynamics of most construction projects create difficulties for even the best project managers. Decision milestones are used to anticipate outcomes, risk management is done to prevent disasters and sequential iteration is employed to ensure that the desired facilities are available, yet projects still end up with schedule delays, budget overruns and compromised specifications (Meyer et al., 2002). Therefore, the challenge of how to handle a construction project successfully has attracted substantial research attention in the past couple of decades.

The road construction industry is one of the largest job creators in developing countries has become highly competitive due to the effect of globalization (Nguyen, Ogunlana & Lan, 2004). Contractors, consultants and project managers in South Africa are finding it

increasingly difficult to attract new clients. In addition, it is not clear as to what actions need to be taken in order to improve project success. According to Ojiako, Johansen & Greenwood (2008), project success in the construction industry in South Africa and most developing countries is measured by the 'iron triangle' parameters of time, result, and means. The high number of project failures suggests the existence of underlying critical success factors which have not been identified.

Project implementation is a process whereby project inputs are converted to project outputs. It involves putting in action the activities of the project, putting into practice what was proposed in the project document and management of the project or executing the project intentions. Although the topic under review has been previously explored extensively out of the country but most of these studies were context specific, their implementation and implication are usually limited to countries, and the operating environment where these studies were conducted (Toor & Ogunlana, 2009). There is a lack of effort to contextualise the findings into local context where the structure, culture and maturity of the concerned organisations are different. Although emphasis has been given on the integration of process improvement programmes and conflict resolution process in the project management, but potential of human-related factors are not explored in detail. On the other hand, Lim and Mohamed (1999) suggested that project success can be classified into two categories, which are the macro- and micro-viewpoint. Both viewpoints consider the usual criteria of time, cost and quality but remain silent on human-related factors as well.

Construction progress meetings are held on a regular basis throughout the construction period, a forum for all parties to meet and review the progress of the project. It has been argued that construction progress meetings are little more than a ritual, with participants acting out a series of roles (Majid, Zakaria, Lamit, Keyvanfar, Shafaghat & Bakti, 2012). More recent research by Gorse and Emmitt (2009) have helped to illustrate some of the more subtle complexities of interaction within project activities; a combination of formal roles and structures, interspersed with informal episodes of communication has been identified. From a project management perspective, it could be insightful to gather data

from live construction project success in an attempt to see how interaction within meetings influences the performance of the project. Thus, the aim of this study is to gather data from a series of construction project success in Elgeyo Marakwet County to explore progress meetings and its relationship to the performance of the project.

According to County database, currently there is a total road network of 1,579.4 km of which 152 km (9.6 percent) is Bitumen (tarmac), 996.2 km is gravel surface (63.1 percent) and 431.2 km is earth (27.3 percent). Notwithstanding the relatively high cost of road construction, the county government embarked to ambitious targets aimed improve all the earth surface roads to gravel standards by 2017 as stated in the Elgeyo Marakwet Government 2015 Fiscal report.

1.2 Statement of Problem

Studies undertaken in the construction sector shows that road construction faces numerous challenges (Kaliba, Muya & Mumba, 2009; Mak & Picken, 2000). Some are new to the industry, and some are old. Many of these challenges are a direct result of construction operations while others a result of indirect, peripheral activities. A surprising number of the challenges are not construction issues but must be addressed and managed by the construction manager to ensure project success. It is critical that the construction manager understands the demanding realities that he or she faces in the planning and control of construction operations.

Information sharing, either on a one to one basis or in small workgroups allows individuals to share knowledge and test ideas in a supportive project activities. In a project environment, the face-to-face inter-disciplinary social interaction will usually occur in meetings, of various types and formality. Despite the amount of time and energy consumed by meetings they are relatively under-researched (Dainty et al, 2006; Emmit & Gorse, 2007). Although there are a number of books written mainly by practitioners with the aim of providing guidance, (Hartley,1997) in his study concluded that despite their familiarity we do not know what goes on within this forum.

Previous research have shown that construction projects represent a unique set of activities that must take place to produce a unique product (Kerzner, 2013; Aksorn, & Hadikusumo, 2008). However, the success of a project is judged by meeting the criteria of cost, time, safety, resource allocation, and quality as determined by the owner. In spite of an obvious gap between project success and completion, a direct connection between them still exists. Numbers of studies raise a question of a bottleneck in researches in this area related to a success judgment. Discussing success factors it would be logical to address a definition of project success which in turns is caused by sevarl factors. Therefore this study seeks to examine the factors influencing project implementation of road construction in Elgeyo Marakwet County.

1.3 Purpose of the Study

The main purpose of this study was to examine the factors influencing project implementation of road construction sector in Elgeyo Marakwet County.

1.4 Objectives of the Study

- i. To examine the influence of technical capacity on implementation of road construction projects in Elgeyo Marakwet County.
- ii. To examine the influences of commitment of stakeholders on implementation of road construction projects in Elgeyo Marakwet County.
- iii. To find out the influence of communication systems on implementation of road construction projects in Elgeyo Marakwet County.

1.5 Research Questions

- i. How does technical capacity influence implementation of road construction projects in Elgeyo Marakwet County?
- ii. To what extent does commitment of stakeholders influences implementation of construction project in Elgeyo Marakwet County?
- iii. To what extent do communication systems influence project implementation of road construction in Elgeyo Marakwet County?

1.6 Significance of the Study

As is the case in any business, people are a construction organization's greatest resource. Construction operations depend on the knowledge and skills of people planning and executing the work. The quality of this most important resource: people, is what distinguishes one team or company from another. Having experienced management in place to guide and direct operations is crucial. Obviously, having an adequate number of skilled and unskilled workers to perform the work is a bare necessity. Finding and recruiting sufficient numbers of skilled, experienced people is becoming increasingly difficult. There are several factors contributing to this problem. The study is quite significant, and it is going to be relevant to the following organization and individuals.

The researcher is going to benefit a lot from the study. Being the main protagonist, the researcher is going to acquire skills in the study because he/she is fully involved in the undertaking the research. The research would also act as a basis for future research in the same area of study. This clearly means that the researcher who will come later would be able to commence his/her research from where the original research is left. The researcher would be part of a vast amount of research and publication. The research work would also benefit students who would be taking the project planning and management course. They would be able to acquire the skills applied in negotiation as well as knowing their research by using this research as their guideline in case of any problem that they might encounter.

Various construction companies are also going to benefit from this study. This benefit is because the organization would get now solutions instead of dealing with many obstacles and challenges and hence will be able to achieve their set objectives faster and more effectively. As a rule, the organizations would become powerful and very competitive. Other organizations too would be able to access this information and would be able to obtain benefits emerging from this research.

1.7 Limitation of this Study

During the time of this study, the study is likely to encounter and encountered the following problems:

Some respondents might use other terminologies which they could not explain vividly to the researcher the clear meaning of the terminologies either because they want their information to be confidential or because they did not know the meaning of the terminologies.

Some of the staff could not have time to respond to the researcher questions; hence, they see it as a waste of time. Then the researcher will have a difficulty in data collection. The little data collected could not be sufficient enough for the research.

Some questions asked by the researcher were considered sensitive, private and confidential to the organizations policies. Therefore, they did not want to respond. Some thought that they were being investigated, and their organization's weaknesses might be exposed.

Bureaucracy as a result of hierarchical rigidity in the organization where the top management operates in the zone of satisfaction of not being met, many project managers did not act as good ambassadors as they treated the researcher impolitely.

1.8 Delimitation of the study

Several roads have being constructed or renovated in Elgeyo Marakwet County, but this study will be conducted in Iten township, the headquarters of the county where major offices are located and where most of the decision or project meetings are held. Specifically, the study will focus on Iten-Chebiemit road in which there has been intense pressure from the local and county government about the completion date. The road construction began in 2013 and was expected to be completed December 2014. But till date it has not been completed.

1.9 Basic assumption of the study

The target respondents who will participate in this study are assumed to collaborate and provide adequate information which will enrich this research.

The researcher has selected methodology which is assumed to help examine the topic under study.

As required, this study attempts to examine factors influencing project success in the construction sector in Kenya and as such, the assumption adopted by the study is that the study will be completed with few challenges.

1.10 Definition of Terms

Construction: this is the process of building something.

County: Is a geographical region of a country used for administrative or other purposes, in certain modern nations.

Project implementation: Is a process whereby project inputs are converted to project outputs.

Project: a planned piece of work that has a specific purpose (in this case road construction in Elgeyo Marakwet County and that usually requires a lot of time).

Road construction: is the act of building of a roadway on the county government of Marakwet.

Road: a hard flat surface for vehicles, people, and animals to travel on by (Marriam –Webster).

Success: this is the fact of getting or achieving results upon completion of activity such as road construction.

1.11 Organization of the study

A construction project is commonly acknowledged as successful when it is completed on time, within budget, and in accordance with specifications and to stakeholders' satisfaction. Chapter one is background describes . Chapters two describes the literature utilized as well as theoretical review. Chapter three describes the methodology adopted, for example, descriptive research design, target population, questionnaire. Chapter four discusses the results of the study and offers recommendations for improvements to this work. Finally the study will present the summary of findings and concludes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter provides details of the theoretical review used in explaining the topic under study, examine project completion in literature by reviewing existing published materials and finally conclude with the conceptual framework.

2.2. Concept of Project Implementation

There is growing recognition that different types of projects require different approaches to their management, requiring management procedures tailored to the needs of the project (Crawford et al, 2005) and project managers selected with appropriate competencies (Mulle & Turner, 2007). Increasing globalization of projects and project management adds to this diverse mix, creating intercultural challenges for project managers (Mulle and Turner, 2004). Professional associations are beginning to recognize this diversification of project management. The project management literature agrees that there are two components of project success (Jugdev & Mulle, 2005; Turner, 1999). Achieving project success is becoming more important in the highly competitive construction industry. Large and complex construction projects are becoming more difficult to complete successfully in developing countries such as Kenya (Swan & Khalfan, 2007). It is against this background that this study focuses on progress meeting as a factor pertaining to project implementation of road construction industry in Elgeyo Marakwet County, Kenya.

Recent report shows implementation of road project in Elgeyo Marakwet has experienced several challenges. For example laying of a Sh1.8 billion road in Elgeyo-Marakwet County was halted after protests from residents demanding compensation (Suter, 2013). The need to establish this semi-autonomous agency was due to the need to restore the highway disintegrated road network built by colonial government to satisfy the basic social and economic needs of population and government.

Considerable literature has been published on the topic of success including in depth reviews on Project Management success (Muller and Jugdev, 2012). Muller and Jugdev (2012) examined literature on project success by using keywords and identified publications, each with over 200 citations in Google Scholar. The literature typically divides project success into two whereby project success factors are analogous to independent variables that contribute to the likelihood of success and project success criteria are measures used to determine if a project was successful or a failure. In the latter case, the success criteria are like the dependent variables (Muller & Jugdev, 2012). In relation to this paper the various methods, tools, and techniques can be viewed of as independent variables and as outlined in the methodology section, the positive and negative project success factor counts are the dependent variables.

The quest for achieving greater productivity in road construction projects, and their quality need has been the desire of road project clients in financing projects involving huge contract sums, yet this vision keeps failing due to the perceived “conflicts of interest” existing among project parties. In addition, many projects have failed due to the inability to maintain standard procedures and the required operational effectiveness regarding the attainment of targeted project goals. The World Bank (2003) mentioned that some of these procedures are loose and are often supplemented by circulars that are unclear and often contradictory and this greatly influence project outcome. Clearly, the study has shown that seven out of ten projects surveyed suffered delays in their execution (Odeyinka & Yusuf, 1997). Several researchers have addressed similar studies on cost overruns, unbudgeted financial burdens, disputes, arbitration, adversarial relationships, cash flow problems and time overruns, among others (Odeyinka & Yusuf, 1997; Saleh, 2009).

2.3. Technical capacity

The majority of literature on project management stresses the importance of techniques in achieving project objectives (Kerzner, 2013; Meredith, 2011). They stress how successful implementation of techniques contributes to a successful project. Avots' and Duncan and Gorsha (1983) claim that project management is an important part of project success.

(Avots, 1989), in studying the reasons for project management failure, argued that failure could be avoided by paying careful attention to the project management factors which caused failure. Duncan and Gorsha (1969) identified three problem areas which indicate the success of a project. These are under-costing, overspending and late delivery of project materials. It is suggested that project planning is needed to overcome these problems. Lackman (1987) has discussed the different tools available to a project manager to achieve success. These include work breakdown structures, client information sheets, and project plans, among others. The early development of strategies, philosophies, and methodologies of project implementation has been stressed by Kumar (1989) as the most important factors in achieving success. He suggested that by gathering sufficient site information and being aware of project considerations and constraints; it is possible to tailor strategies and methodologies which are specific to a certain situation. Such well-defined strategies will assist in providing a satisfying and successful implementation of a project.

Ogunlana & Lan (2004) believe that adopting new technology and utilizing it to its full potential has become critical in achieving a competitive advantage in the construction industry. The construction industry has witnessed significant technological developments in recent years. Selecting the appropriate new technology and optimal utilization is fundamental to project success. Secondly, there must be proper emphasis on past experience. According to Pathirage, Amaratunga & Haigh (2007), tacit knowledge plays a key role in this regard. In addition, project members should be encouraged to document tacit knowledge gained from the project in order to prevent mistakes in subsequent projects. Thirdly, there must be competent teams in place, implying that staff members must have the necessary skills (Melkonian & Picq, 2010). To know these skills a comprehensive skills analysis should be undertaken to reveal the gaps in skills.

The construction industry in Kenya has witnessed an increase in the number of contractors, resulting in more intensive competition in this sector. The Black Economic Empowerment status of a contractor plays a key role in the selection of contractors, especially in the case of public sector projects. Other considerations when selecting

contractors include company track record, quality management, health and safety, and technical proficiency (Philip, Martin, Dainty & Price, 2008).

2.4. Commitment by Project Stakeholders

The project stakeholders runs the risk of becoming squeezed between the various stakeholders and thus get into a "no-win" scenario. In such a case, a Project Manager is expected to be completely in touch with all aspects of progress, performance, expectations, issues, etc. At the same time, the senior leadership will not wish to see the Project Manager or team-members seemingly wasting time doing administrative tasks. Equally, the team members will often consider that such administrative tasks distract them from their work. The complexity of the project is often a major factor in delegating more administrative tasks. A small team based in a single location could sometimes be managed with no specific process or procedures installed but simply executed by the Project Manager, who is taking a continuous interest in what the participants are doing and what they have achieved. Unless there is a requirement for audit information, for example where a third party is billing for time or deliverables, the project could be managed without documenting the individual participants' work and progress.

The closer a project is to completion, the more likely decision makers are to exhibit escalation of commitment. Invested time is one form of sunk cost, so it is more difficult to abandon a project the nearer it comes to completion (i.e. as sunk costs will increase). However, there is evidence that proximity to project completion is related to the likelihood of independent sunk cost considerations.

Goal substitution theory maintains that, as the end of a project nears; completion-oriented goals begin to supersede the original goals of the project (for instance profit goals). Because decision makers become caught up in the desire to finish the project, they are more likely to escalate commitment to attain completion goals even when more profitable alternatives are available.

Maylor (2010) put a great emphasis on managers and leaders in a project situation; he explains that there is a clear role for both managers and leaders. Furthermore, he refers to project management as having three different components: management, leadership, and individual skills. Commitment emphasizes the support of top management, commitment to the project, clear objectives and scope, and political support. The support of top management goes beyond the provision of funds and making resources available (Johnson, Schooles & Wittingtin, 2006). Kerzner (2006) believes that commitment to the project is very closely linked to a sense of collectivism, rather than individualism. An environment needs to be created, in which team members experience job satisfaction and are, therefore, motivated to be part of the team. Optimal performance by team members is important. Having clear objectives and scope are key in providing direction to team members. Objectives must be clear, and scope should be as simple as possible in order to avoid “grey areas”. It is inevitable that changes will occur during the course of the project. Flexibility and adaptability are, therefore, central to achieving success. Finally, political support is important for project success, given that a large proportion of projects are public projects. To this end, support from non-governmental organizations and the ruling party is important (Jacobson & Choi, 2008).

A potential mechanism by which commitment may contribute to project performance is through its influence on individuals’ inclinations to communicate or report important project status information. A key element in preventing project failure is to report accurately the status of the project so that warning signs of impending disaster can be identified and addressed before a project becomes another failure statistic. Information systems project failures typically exhibit ample warning signs of impending failure, but for reasons that are not well understood, these warning signs are frequently ignored. The tendency of individuals to remain silent about a project’s status has been likened to the mom effect, in which individuals are reluctant to relay unpleasant (Smith, Keil & Depledge, 2001).

When a group of people is operating from commitments, their conversations tend to orient around bringing about the future they have committed. So when a project team

operating from commitments goes into a project review meeting, instead of discussing what went wrong, they are inclined to discuss what needs to happen now to make sure the week's commitments are met. Scherr (1990) explains that "because they are based on evidence, assertions are always about the past or extrapolations from the past". Commitments are a different class of speech act. When someone makes a commitment, they are telling you what you can expect in the future, regardless of what has occurred in the past. Commitments are personal promises from one person to another that put one's personal reputation at stake.

Project completion has eluded the construction industry to the point where keeping existing clients has become a battle, let alone attracting new clients (Toor & Ogunlana, 2005). An assumption is made that, if a project is completed on time, within the agreed budget and set quality, referred to as the 'golden triangle', then the project is deemed successful. Evidence suggests that this is far from the truth. Hence, the construction industry needs to pay special attention to critical success factors, besides the 'golden triangle', if it is to survive the challenges posed by globalization (Toor and Ogunlana, 2005). Bourne (2003) has reported that project managers focus greatly on standard success factors of a project (scope, time, cost and quality) while neglecting the stakeholder and the communication components. Bourne noted that project managers use and learn from previous projects various tools and techniques for planning and management for future projects.

Zwikael (2009) asserts that the work of construction companies is project-oriented, i.e., it is unique and has a definite start and finish point. This requires the use of project management tools and techniques as opposed to conventional management techniques. Proper usage of project management tools within the project life cycle ensures smooth execution of activities. The project life cycle is the framework upon which the project is carried out. The project manager acts as a single point of contact responsible for harnessing identified critical success factors towards achieving project success. According to Yang, Shen & Ho (2009), the unique nature of projects dictates that critical success factors identified in one industry cannot be directly transferred to other

industries. The similarities found in the construction industry in developing countries such as South Africa make sharing of knowledge easier.

The construction industry is one of the largest job creators in developing countries and has become highly competitive with the advent of globalization (Nguyen, Ogunlana & Lan, 2004). Contractors, consultants and project managers in Kenya are finding it increasingly difficult to attract new clients. Also, it is not clear as to what actions need to be taken in order to improve project competition. According to Ojiako, Johansen & Greenwood (2008) project success in the construction industry in countries such as South Africa and most developing countries is measured by the 'golden or iron triangle' parameters of time, cost, and quality. The high number of project failures suggests the existence of underlying critical success factors which have not been identified. This research, therefore, examines the influence of progress meeting in influencing project competition.

2.5. Communication System in Construction Sector

The modern organization has an increased and more effective communication between and among its many departments or clients. It used to be that different offices within companies had little to do with each other. If they did need to interact, their managers would usually meet and work out any issues, then report back to their respective office. It has been argued that there has been a deficiency of literature regarding project stakeholders and communications: the management of the soft skills as the key to project success (Bourne, 2006). This is further supported by Wideman (2002) and allows the researcher to contend that the current and historical paradigm of project success in the project management industry for so long has been based on what Wideman says is "on time and budget" (p.2).

Traditional accounts of institutionalization and institutional change have treated communication as a black box (Suddaby, 2011). The direct consequence of this neglect has been that when communication is recognized, it is largely assumed to operate as a conduit or channel through which cognitive content (such as information or semantic

meaning) is disseminated and spread across an institutional setting or field (Beckert, 2010). Effective communication is significant for the project team in the organizations so as to perform the basic functions of management, that is, Planning, Organizing, Leading and Controlling. Communication helps project team to perform their jobs and responsibilities. Communication serves as a foundation for planning. All the essential information must be communicated to the project managers who in-turn must communicate the plans so as to implement them.

Communication plays an important role in leading, integrating people, and taking decisions to make a project a success. There must be shared project vision, where the project manager identifies the interests of all relevant stakeholders and ensures that there is buy-in to the project (Yang, Shen & Ho, 2009). According to Zwikael (2009) once the project objectives are set and the scope clarified, there must be constant update as the project progresses. Progress on activities assigned to individuals or groups needs to be monitored to (or “intending to”) achieving overall goals. These updates must be communicated to the relevant parties. Newton, (2005) believes that a detailed communication plan is necessary for the effective dissemination of information. To this end, frequent project meetings are necessary. Apart from consulting with the community, direct local involvement is a key element for project success. Given the relatively high unemployment rates in Kenya, consideration must be given to residents. This could include sourcing materials from local suppliers and employing residents. It is advisable to use an influential community member as a liaison between the project manager and the community (Teo, 2010). Finally, proper handover procedures need to be developed. This is an important consideration, given that the construction industry is being increasingly viewed as a service industry (Karna, Junnon & Sorvala, 2009).

Communications in projects is challenging at best and often leads to misunderstanding about what is to be done and when it is to be completed, or delivered. One of the most difficult situations that can lead is the lack of agreement on a commitment to perform a task or tasks, this is not the “how to” or technical aspect of projects, but the simple “what” and “when” of project work. Often, “commitment” is believed to be obtained by

the project manager from others whereas the actual delivery of the result of the task is delayed through lack of planning or forgetting about the task. How can this happen? The project manager is the single authority in the project and responsible for work getting accomplished.

2.6. Theoretical framework

In the examination of the influence of project meetings on project completion, this study utilizes institutional theory and management theory. First, before examining further the theory, it is important to understand what an institution is. Despite no agreed definition of an institution, the study adopts one definition by Scott, (2001) who asserts that “Institutions are social structures that have attained a high degree of resilience.” He says further that institutions are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life. Institutions are transmitted by various types of carriers, including symbolic systems, relational systems, routines, and artifacts. Rowan (2012) examined the growth of three administrative services in construction industry from the standpoint of institutional theory. He found that when there is a high level of consensus and cooperation within the institutional environment, diffusion of innovative structures is steady and long-lasting. However, when the institutional environment is contentious and unfocused, adoption of innovative structures is slow and tentative.

In addition, management theory is a collection of ideas which set forth general rules on how to manage a business or organization. Management theory addresses how project managers and supervisors relate to their organizations in the knowledge of its goals, the implementation of effective means to get the goals accomplished and how to motivate employees to perform to the highest standard. Concerning managerial execution, the language/action perspective, originated by Winograd and Flores, (Winograd & Flores, 1986) conceptualizes two-way communication and commitment, instead of the mere one-way communication of the classical communication theory.

Shewhart & Demming (1939) focuses on finding causes of deviations and acting on those causes, instead of only changing the performance level for achieving a predetermined goal in case of a deviation. The scientific experimentation model adds thus the aspect of learning to control. Shenhar et al.(2002) argue that different factors influence different kinds of projects and that we must adapt a more project-specific approach to identify the causes of project success or failure. They studied 127 projects in Israel and recorded 360 managerial variables. They were and presented these in a list of 22 factors critical for project success independent of the project's characteristics. Their conclusion is that success factors are dependent on contextual influence. This view is supported by Muller and Turner (2007) who observed that the importance attached to project success criteria and project success rates differ by industry, project complexity, and the age and nationality of the project manager.

DeCarlo (2010) states that the traditional project management paradigm for a successful project are managed and delivered under the guise of “on time, on budget, and to a specified scope and specifications”. These elements are also referred to as the project management triangle, where each side represents a constraint. One side of the triangle cannot be changed without affecting the others. Similarly, Kerzner, (2013) posits that project success is defined as “on time, on a budget, to a high quality with respect to functionality and performance. Furthermore, Verzuh (2005) goes on to state that these are the key components that the project manager must manage to ensure a successful project. Hartley (2003) writes that “time, cost, specifications and resources are the project constraints and form the criteria for the completion of a successful project”. Dinsmore (1999) further reinforces this view, noting that “traditionally project management literature targeted how to deal with the specifics of the project such as time, cost and specifications” (p.12).

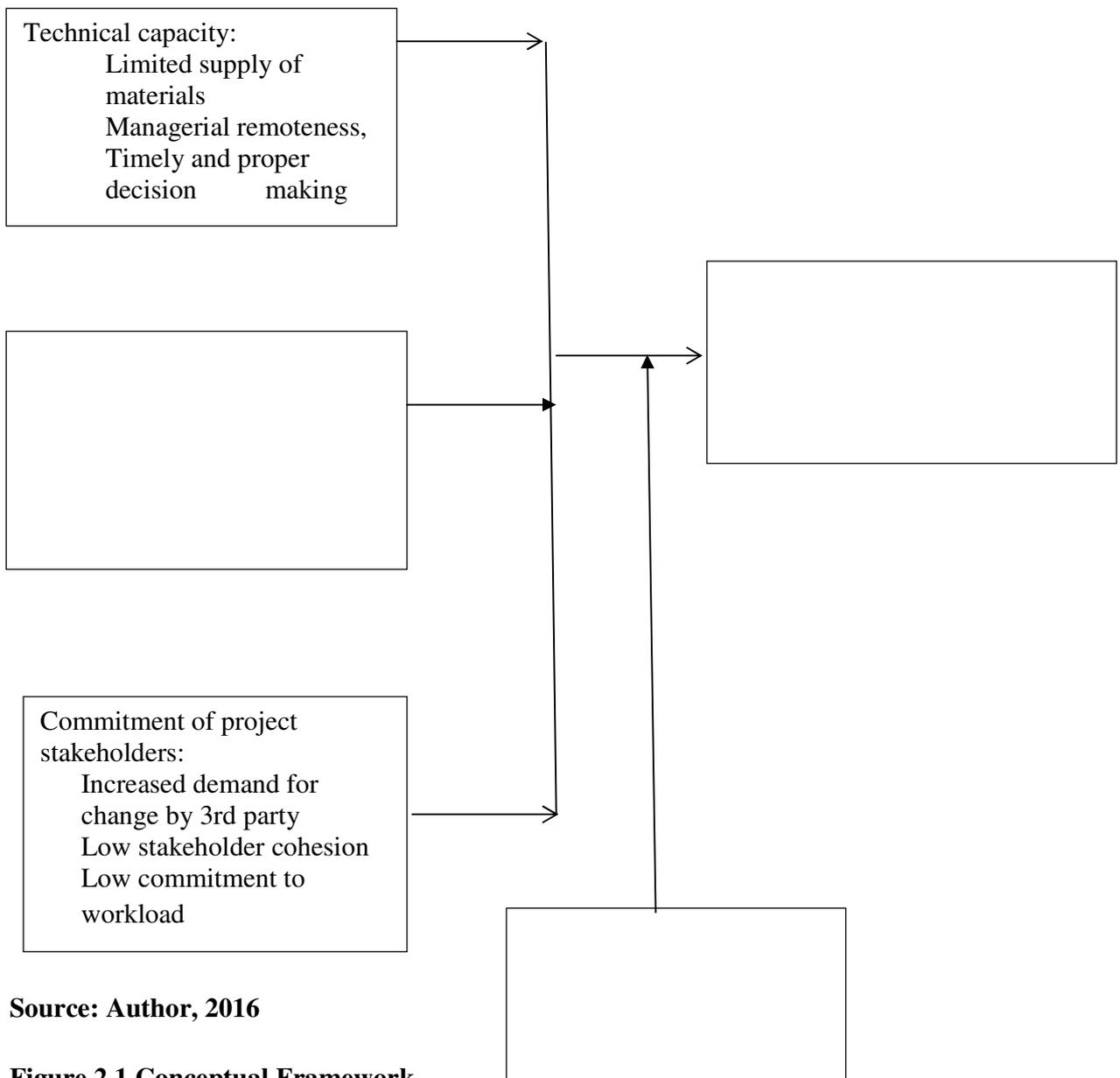
2.7. Conceptual framework

The main objective of this study was to examine factors influencing project implementation in the construction sector with particular focus on Elgeyo Marakwet County. The dependent variable is project implementation while the independent

variables are technical capacity, communication system and commitment of project stakeholders. The intervening or moderating variables are limited supply of materials, managerial remoteness, timely and proper decision making, insufficient information poor language, reporting, ineffective communication, interpersonal abilities, low stakeholder cohesion, low commitment to workload, project life cycle, control measures and sector regulation.

Independent variables

Dependent variable



Source: Author, 2016

Figure 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the research methodology that was used in the study is described. The geographical area where the study was conducted, the study design and the population and sample are described. The instrument that was used to collect the data, including methods implemented to maintain validity and reliability of the instrument are described.

3.2 Research Design

Descriptive research design was used to obtain information from the various departments. Corlane Barclay (2016) describes descriptive survey as a method of collecting information by interviewing or administering a questionnaire to a sample of individuals. It can be used when collecting information about people's attitudes, opinions, habits or any of the variety of education or social issues (Orodho & Kombo, 2003). The research adopted descriptive study aimed at finding out the influence of progress meetings on project completion in Kenya. Primary data was collected by use of questionnaires and the information gathered used to determine the possible answers to the research questions and provide relevant information needed to achieve the research objectives.

For this study, the research used qualitative and quantitative research methods where qualitative method permits a flexible and interactive approach. For example qualitative data will be in form of words rather than numbers and this words are often grouped into categories (Mugenda & Mugenda, 2003) while the quantitative research method includes designs, techniques and measures that produce discreet numerical or quantifiable data. The value of qualitative research can best be understood by examining its characteristics. One of the primary advantages of qualitative research is that it is more open to the adjusting and refining of research ideas as inquiry proceeds.

3.3 Target population

The Cooper and Emory (1995) define population as the total collection of elements about which the researcher wishes to make some inferences. Mugenda and Mugenda,(2003)

defined a sampling frame as a list, directory or index of cases from which a sample can be selected and in this study, the sampling frame are Government officials, construction workers, and independent construction experts/ consultants. In this research, the target population will be project team selected by the contractor, county and national government with a target population of 120. The study aimed to find out the information from project construction activities within Elgeyo Marakwet County.

Table 3.1 Population

Category	Total Population
Government Officials	30
Construction Workers	80
Independent Construction Experts/consultants	10
Total	120

As shown in table 1 above, population of interest was 120 respondents from construction stakeholders with the county. However, the study due to resources selected a small sample from the target population of the study.

3.4 Sample size and Sampling Technique

3.4.1 Sample size

As all members of the population had an equal chance of becoming a research participant, this is said to be the most efficient sampling procedure. In order to conduct this sampling strategy, the researcher defined the population first, listed down all the members of the population, and then selected members to make the sample. For this purpose, a self-administered survey questionnaire in Likert format was given to the respondents to answer. The populations was divided into several sub populations using stratified random sample of different departments.

Because of the nature of the study, the researcher selected a sample of 36 respondents drawn from various project teams. The sample size was 30% of the total target population (Mugenda & Mugenda, 1999) and this is shown in table 2 below.

Table 3.2 Sample Design

Category Responds	Target Population	Sample size
Government Officials	30	10
Construction Workers	80	22
Independent Construction Experts/consultants	10	4
Total	120	36

3.4.2 Sample selection technique

The study focused on employees both project directors, project managers, supervisors and support staff. All of these participants were selected through stratified random sampling. This sampling method was conducted where each member of a population had an equal opportunity to become part of the sample. In stratified random sampling, subjects are selected in such a way that the existing subgroups in the population are more or less reproduced in the sample (Mugenda & Mugenda, 2003) and according to the author, this means that the sample consisted of two or more sub-groups. The advantages of stratified random sampling are that the researcher will be able to represent not only the overall population, but also key subgroups of the population.

3.5 Data collection instrument

A questionnaire was chosen as data collection instrument. A questionnaire is a printed self-report form designed to elicit information that can be obtained through the written responses of the subjects. The information obtained through a questionnaire is similar to that obtained by an interview, but the questions tend to have less depth (Burn & Grove, 1993). Primary data was collected by use of questionnaires, and these questionnaires

were of Likert scale and closed-ended questions which included all possible answers/prewritten response categories where the respondents are asked to choose among them. The questionnaire was divided into two sections. Section one consisted of questions on general information about the respondent; Section two contained specific questions in regards to information on the possible influence of progress meetings on project completion in Kenya. Questionnaires were used because of the following: It ensures a high response rate as the questionnaire was distributed to respondents to complete and was collected personally by the researcher, require less time and energy to administer, it offers the possibility of anonymity because subjects' names are not required on the completed questionnaires, less opportunity for bias as they were presented in a consistent manner and lastly but not least most of the items in the questionnaires were closed, which makes it easier to compare the responses to each item.

One questionnaire was used to collect the data, and they consisted mostly of closed-ended questions and a few open-ended questions, as these provide more diverse detail. In the open-ended questions, the respondents were required to respond in writing, whereas closed-ended questions had options which were determined by the researcher Saunders. Open-ended questions were included because they allowed respondents to respond to questions in their words and provide more detail. Closed-ended questions were included because they are easier to administer and to analyze.

3.5.1 Instrument pretesting

The pretest is used to ensure that the questionnaire is appropriate for the survey in terms of its structure and language, and enabled the researcher to check that the information required from the target population was actually collected through the research instrument. For example the researcher ensured that the words used in survey questions have the same meaning to the respondent as the researcher intended them to have.

3.5.2 Instrument validity

Validity refers to how well the instrument measures what it is intended to quantify (Eiras, Escoval, Grillo and Silva-Fortes, 2014). Validity has to do with whether the instrument is

measuring what it is intended to measure. Empirical evidence that instruments measure the domains of interest allows strong inferences regarding validity.

3.5.3 Instrument reliability

Cronbach's alpha is a popular reliability testing method. It indicates the extent to which questionnaire items can be treated as a single latent construct. A 0.7 reliability was considered adequate for a survey instrument although some researchers consider 0.6 and higher adequate (Eisinga, Grotenhuis & Pelzer, 2013).

3.6 Procedures of data collection

The study seeks to examine factors affecting project implementation and intends to interview Government Officials, Construction Workers and Independent Construction Experts/consultants in Elgeyo Marakwet. Upon approval of the research proposal, the researcher applied for research permit from The National Commission for Science, Technology and Innovation (NACOSTI) and subsequently authority to conduct research in Elgeyo Marakwet through the office of County Commissioner and County Education Officer. In addition the researcher sought permission from the construction companies operating in the region. Respondents were notified of their participation in the providing information required for the final study.

3.7 Methods of Data analysis

In this study, the data was analyzed using the descriptive statistics to facilitate the attainment of the research objectives. Descriptive statistical analysis enables the researcher to describe and compare variables numerically such as; mode, mean and median. It further uses measures of variability to see how scores of each variable are spread out, and other measures of variability such as the range and standard deviation; depending on the kind of data which will be generated from the field and methods used (Mugenda & Mugenda, 2003). A narrative summary of the questionnaire was made which included tables, percentages and mean scores.

3.8 Operationalization of the variables

The subject of project success is at the heart of project management and it is important to note that many factors impact the degree of project success. In this study the key variables are independent and dependent. The independent variables include technical capacity , communication systems and commitment of project stakeholders while dependent variable is the project implimantation.

3.9 Ethical consideration in research

As this study utilized human participants and investigation on construction practices, certain issues were addressed. The consideration of these issues is necessary for the purpose of ensuring the privacy as well as the security of the participants. These issues were identified in advance so as to prevent problems that would have arose during the research process. Among the significant issues that were considered included consent, confidentiality and data protection.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

The study sought to examine the influence of project meetings on project success among road construction projects at Elgeyo Marakwet County. The data was collected through structured questionnaire with both closed and open ended questions from the surveyed respondents. Data editing and reconciliation were undertaken before data analysis was done. This was essential to avoid incoherent which could lead to reaching or making wrong conclusions and drawing wrong inferences. This analysis adopted a quantitative and qualitative method. Data was entered using excel sheets to get the required data for presentation.

4.2 Response Rate

A total of 36 questionnaires were constructed, administered and sent to respondents for the researcher to collect them at a later date. At the end of the study, only 32 questionnaires were returned with 2 returned unfilled or filled wrongly making the researcher to regard as spoiled. Returned questionnaires were coded, entered into the computer and analyzed; the overall response rate was 88%. The relatively high response rate for this type of study was thought to be attributed mainly, to three factors: a clear and simple design questionnaire translated into ordinary Kenyan system, respondents were briefed about the content and purpose of the survey and were guaranteed that their replies would be treated in strictest confidence. Lastly, the high response rate was also attributed to the respondents' enthusiasm or willingness to participate obviously, to what they considered as an interesting subject to put their views across considering that this is their field of expertise which will contribute to the improvement of the sector.

Table 4.1 Response Rate

Description	Frequency	Percentage
Returned/fully filled	32	88%
Not returned/unfilled	4	12%
Total	36	100%

4.3 General information

4.3.1 Gender

Results from this study shows that majority 53% of the study participants were female while male respondents constituted 47% of the total respondents interviewed. Observation from the field study showed that female respondents were majority because most of the road construction companies in the county had embraced gender equality and that means both men and women play similar roles in the construction sector.

Table 3.2 Gender

Description	Frequency	Percentage
Male	16	47%
Female	18	53%
Total	34	100%

4.3.2 Age bracket

The study further sought to understand the ages of the study participants and figure 4 below illustrates distribution of respondents by age bracket. For example majority 41% were aged between 29-39 years while 29% were aged between 18-28 years, 24% aged 40-50 years and only 6 aged 50 and above years.

Table 4.3 Age bracket

Description	Frequency	Percentage
18-28 yrs	10	29%
29-39 yrs	14	41%
40-50 yrs	8	24%
50> yrs	2	6%
Total	34	100%

4.3.3 Highest level of education

The frequency distribution of respondent's highest level of education is shown in figure 4 below, with mean percentage of 44% for those with diploma, 24% bachelors degree, 18 masters, 9% PhD and others such as certificate constituted 6% of the total respondents.

Table 4.4 Highest level of education

Description	Frequency	Percentage
PhD	3	9%
Masters	6	18%
Bachelors	8	24%
Diploma	15	44%
Others	2	6%
Total	34	100%

4.3.4 Degree course at the university

The specific degree course undertaken by the respondents is shown in the table 3 below, with 44% respondents indicating engineering, 35% indicated project management, 15%

business administration and other such as Bachelor of Information Technology or computer science constituted 6%.

Table 4.5 Degree course at the university

Description	Frequency	Percentage
Project management	12	35%
Engineering	15	44%
Business administration	5	15%
Other degree	2	6%
Total	34	100%

4.3.5 Years working a project manager

Project managers are found in every kind of organization - as employees, managers, contractors and independent consultants. As such this study asked respondents to state numbers of years they have been working as project managers and 53% indicated 1-5 years, followed 18% who had worked for 6-10 years. In addition, 12% worked for over 21 years and 9% and 9% for less than one year and 11-20 years respectively.

Table 4.6 Years working as project manager

Description	Frequency	Percentage
Less than 1 yr	3	9%
1-5 yrs	18	53%
6-10 yrs	6	18%
11-20 yrs	3	9%
21> yrs	4	12%
Total	34	100%

4.4 Implementation of techniques in the project success

Table 5 shows that most respondents agree that projects were justifiable to start only if it increased happiness among owners, contractors and clients. The findings show that 44% of the study participants indicated strongly agree, 21% strongly disagree and only 10% disagree. Table 5 shows that the overall performance of the most of consultants and contractors projects is high satisfied by respondents.

Table 4.7 Implementation of techniques in the project success

Statement	SA	A	SD	D	Total
It is only justifiable to start a project if it increases accumulated happiness of all interest groups	44%	25%	21%	10%	100%
Success of the projects increase the happiness of my project team	30%	19%	45%	6%	100%
It is difficult to evaluate project plan's integrity	65%	26%	9%	0%	100%

4.4.1 Time management practice

What kind of method do you use to represent the project planning and scheduling?

Table 4.8 Usage of planning method

	Owner	Consultant	Contractor
Bar Chart method	56.25 (10)	41.67 (10)	53.49 (17)
Critical Path method	43.75 (7)	54.17 (14)	32.56 (12)
S-Curve method	-	4.17 (1)	11.63 (4)
Others	-	-	2.33 (1)
Total	100 (17)	100 (25)	100 (34)

Table 6 shows that Bar Chart method is the most important planning and scheduling method for owners and contractors because Bar Chart method can facilitate time

performance control for each scheduled activity through project implementation. However, Critical Path Method (CPM) is the most important one for consultants because CPM can be used to determine critical activities of project. This will assist consultants to evaluate overall time performance and to identify the effectiveness of critical path on completion date of project. S-Curve method is never used by owners and it is rarely used by consultants and contractors. This is because S- Curve method can compare only between actual time and estimated time at any stage through project implementation. It is difficult to control time performance for each scheduled activity and it is difficult to obtain critical path affecting overall time performance of project.

Chen (2007) remarked that in many situations, time of projects can be complicated and challenging to be managed. When the activity times in the project are deterministic and known, critical path method (CPM) has been demonstrated to be a useful tool in managing projects in an efficient manner to meet this challenge. Koo et al (2007) stated that construction planners face many scheduling challenges during the course of a project. Planners today rely on CPM-based scheduling tools to evaluate different sequencing alternatives for their feasibility and whether they will meet project deadlines.

4.4.2 Coordination of schedule with master schedule of the project owner

Table 7 shows that most of owners and consultants coordinate current schedule with master schedule of the project weekly. This weekly coordination can assist them to evaluate time performance of project comparing with base schedule. However, most of contractors coordinate current schedule with master schedule of the project monthly. In fact, contractors should do that weekly in order to have continuous monitoring, controlling and updating of time performance of project. Generally, monitoring and updating the progress depends up on project duration, type of works and degree of project complexity. Reichelt and Okuwoga (1998) identified that the time performance problem is related to poor time control and updating. Lyneis (1999) obtained that project schedule must be controlled by the dynamic feedback process. Those processes include the rework cycle, feedback loops and effects between work phases.

Table 4.9 Coordinate of schedule with master schedule of the project owner

Item	Percent % (Frequency)		
	Owner	Consultant	Contractor
Daily	11.76 (2)	4.00 (1)	32.61 (15)
Weekly	47.06 (8)	72.00 (18)	30.43 (14)
Monthly	41.18 (7)	24.00 (6)	36.96 (17)
No	-	-	-

4.5 Influences of commitment of project stakeholders on implementation of projects

Table 8 below shows that 40% of project stakeholders agree that their projects undergo changes to some point during the project's execution. This fact also reflects in other results where only 52% of respondent's answer that their projects always finish on time, 42% says that their projects finish within budget and around 52% say that other project goals are met.

What these results show us is that project plans change in 66% cases and these changes then possibly affect how well the project goals are met when, e.g., delivering results is delayed and time goals are not met, according to the original project plan. It can be concluded that project managers regularly have to manage changes to their project plans which then results in the project not meeting the original project goals. Project management frameworks that view changes as exceptions and not as rule will be less efficient and even difficult to apply for project managers facing frequent changes.

Table 4.10 Influences of commitment of project stakeholders on implementation of projects

Statement	SA	A	SD	D	Total
Project managers generally measure the success of their projects in terms of time, cost, quality, and customer satisfaction	27%	40%	30%	3%	100%
Project managers overseeing the projects manages them well	31%	52%	15%	2%	100%
Project stakeholders work together towards similar project goals	20%	66%	14%	0%	100%

When asking about the function of encouraging the team of the project, a significant number of respondents made it clear that other people were involved in encouraging, although in different ways. John Cheboi said that an open dialogue and commitment among the employees at the office is very important, and that the team members learn from each other. Jane Kanda has a different situation where she does not work with the team very day, and arranged meetings and directions is of bigger importance. Robert Sang, who was managing the road construction project, is encouraging the team by herself, but also by using others. He has discovered that quick meetings are a good way of communicating:

“We have a very open company culture that motivate and inspire the employees. As the project manager, I have the responsibility to see and motivate each and every individual to encourage the people in the team, and see each person strengths and weaknesses in order to make them capable to fulfill their task with the right resources and right task to work with. “At Orio Contractors, we are very good at learning from each other. We keep an open dialog and have shared responsibility in every project. Commitment is of great importance” (Female Respondent).

4.6 Communication systems

Information coordination between owner and project parties has been ranked by the owners and contractors respondents in the third position and has been ranked by the consultant respondents in the second position. This factor is more important for consultants because information coordination affects the client satisfaction. Consultants usually are related to client factors. Samson and Lema (2002) and Cheung et al (2004) are in line with our result as this factor is an important for effectiveness on construction project performance because it affects the client satisfaction.

Table 4.11 Influence of communication systems on project success

Statement	SA	A	SD	D	Total
During the meeting, project issues are resolve by the members	39%	42%	19%	0%	100%
Information of project progress the company is always successful	26%	21%	46%	7%	100%
The deliverables of my projects are always successful	56%	17%	23%	4%	100%
The project manager manages the project in the face of often-conflicting interests	11%	15%	49%	25%	100%

4.4 Mean Differences of the Respondents Agreements Regarding the influence of project meetings on project success

The Kruskal-Wallis (KW) test is a statistical test that is used to compare the ranks means between two or more samples. This test is used in order to check out if there are any significant differences in the point of view of the respondents (Owners, Contractors and Consultants) regarding the levels of each of the factors affecting the performance of construction projects. The KW results are shown in the following Table 10.

Table 4.12 Kruskal-Wallis test for factors affecting project success

Field	KW value	DF	P-value (Sig.)
Cost factors	2.141	2	0.343
Time factors	0.097	2	0.953
Quality factors	0.004	2	0.998
Productivity factors	0.302	2	0.860
Client Satisfaction factors	2.634	2	0.268
Regular and community satisfaction factors	1.006	2	0.605
People factors	4.456	2	0.108
Health and Safety factors	0.080	2	0.961
Innovation and learning factors	1.804	2	0.406
Environment factors	2.949	2	0.229
All groups	0.568	2	0.753

DF: Degrees of Freedom

As shown in previous table, all p-value (sig.) for each group is greater than $\alpha = 0.05$ (α is the level of significance), then there are no significant differences between the organization types (Owners, Contractors and Consultants) regarding their respondent degree to all fields.

4.7 Discussion

The project team will shape the implementation of the project. It is important for the team to employ the correct management techniques to ensure that planning, controlling and communication systems are all in place. Without these systems the co-ordination and control of all individuals and resources within the team is difficult. The orientation of the project team will be towards the task rather than the people. This will be particularly true as deadlines for achieving work are stressed and become paramount in people's thinking. The scope of interest here will be the completion of work and delivery of the project. Any rewards for the team will occur at the end of this management phase, therefore their primary concern will be to reach the end of this phase successfully.

The context of the producer can be viewed from two aspects. In the first instance the producer will have a task- oriented view of the project similar to the rest of the project team. The producer's commitment to the project will end once it is handed over to the client. The commitment is therefore towards short-term rather than long-term goals. In the second instance the producer is a user of the project in the sense that information generated by the project team is used to manufacture the end product. The producer will now be concerned with the ease of final assembly, but again in the short-term context of the project development and not the longer-term use.

This discussion has highlighted how the various individuals involved in a project will have different orientations towards the final project outcome. Success will be viewed differently by each group because their expectations for the project will vary. To return to the quote from Kerzner' which opened this section, it would seem inappropriate to place all the responsibility for integration on the project team. Because the involvement of the project team is concerned with only a small subset of the total project it would seem more logical to make an individual who has a wider view responsible for the project. The client has the longer- term and wider orientation and there is a logical argument for making the client responsible for the end project.

Success is often commented on at the end of the project management phase. At this time knowledge about the project management success will be known because the budget, schedule and quality criteria can be measured. Here each of the parties will be able to compare original data requirements to what is achieved. In terms of quality standards it could be monitored by the amount of rework or by the degree of client satisfaction. The long-term indicators will not have been realized yet and consequently they cannot be measured. Therefore, it is convenient to judge success at this time by whether the project management criteria have been satisfied rather than the project criteria. So project management success becomes synonymous with project success, and the two are inseparable.

Weekly meeting assist them for monitoring, updating and controlling the progress through project implementation. In addition, they can solve problems, evaluate current performance, and improve future works. Respondents are rarely meets daily or monthly. Daily meeting are required in the case of sensitive and very important works. Monthly meeting is not effective for monitoring or updating processes. Navon (2005) stated that a controlling and updating is an important element to identify factors affecting construction project performance. Marica (2007) obtained that the controlling and monitoring works affect the quality, production and management system.

CHAPTER FIVE

SUMMARY OF FINDING, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter deals with the summary of the major findings of the study. This study sought to find out the influence of project meetings on project success with focus on road construction in Elgeyo Marakwet County. Moreover, the chapter provides a conclusion and direction for further studies and also gives some recommendations for policy making by the relevant authorities. Questionnaires were used to collect primary data. The questionnaires comprised of both closed and open-ended questions and were strictly administered by the researcher assisted by research assistants. Both primary and secondary information were used to determine the results findings of the study.

5.2 Summary of findings

A total of 36 questionnaires were sent to or administered by the researcher assisted by research assistants but upon completion of the entire study, only 34 were returned fully filled and hence it achieved 88% response rate. Overall, the study participants comprised of 51% female and 49% male. Majority of the respondents on average were aged between 29-39 years old and employees of different educational background were employed in the construction sector and these includes those with degree in project management, business administration and engineering among others.

The main findings show that proper implementation of road construction project is critical to its success. Further the study established that only justifiable to start a project if it increases accumulated targets of the stakeholders. Furthermore, the implementation of road construction is particularly important in the county where the space for professional workers is minimal. When there is not enough space the execution of maintenance affects the road user's extremely.

The study established that during project planning and scheduling, bar chart was the main method adopted by road construction companies in Elgeyo Marakwet but comparatively CPM was utilized mainly by consultants compared to the project owners and contractors. For example orders delivered late have been cited by consultants respondents as one of the challenges in the sector. When orders from consultant to contractor were delivered late, time performance of project will also be delayed. Then the schedule of project will be affected. This result is in agreement with Karim and Marosszeky (1999) because this factor affects strongly on time performance. Chen (2007) remarked that in many situations, time of projects can be complicated and challenging to be managed. When the activity times in the project are deterministic and known, critical path method (CPM) has been demonstrated to be a useful tool in managing projects in an efficient manner to meet this challenge. Koo et al (2007) stated that construction planners face many scheduling challenges during the course of a project. Planners today rely on CPM-based scheduling tools to evaluate different sequencing alternatives for their feasibility and whether they will meet project deadlines.

5.3 Conclusions of the Study

Based on the data presented above, this study concludes that road construction industry has shown necessity for change in order to create efficiency in future implementation. However, there are an amount of challenges needed to be solved and sorted out in order to construct the implementation at a successful phase. Previous initiatives have been done, although it requires other solutions, even though the vision is shared between clients, consultants and contractors. The cohesiveness in vision creates an advantage to create a successful utilization of the checklist. Processes are easy to change compared to changing the mind-set of the personnel working with maintenance, and if they are open and aware of the need for changes, the implementation can therefore be successful.

According to majority of respondents the quality of the project's result is what shows if the project is successful or not. Most of them mentions the budget or the cost, but says that it is irrelevant in comparison to the quality.

Last important finding is that it can be stated that in a project, the project managers do not only have the functions stated for a manager and that the most critical success factor for the evaluation of success will differ depending on project type and industry. However, the truth for a project that holds in all of these three exemplified projects is that the project managers need to act as a leader as well. This study shows that all functions do not have to be fulfilled by the project manager in order to reach the objectives. This imply that the project manager not personally have to perform all the functions. Rather, their functions align and are dependent on the situation.

5.4 Recommendation of the Study

- Consultants should be more interested with design cost by using multi criteria analysis and choosing the most economic criteria in order to improve their performance and to increase owner's satisfaction.
- Contractors should not increase the number of projects that cannot be performed successfully. In addition, contractors should consider political and business environment risk in their cost estimation in order to overcome delay because of closures and materials shortage.

5.5 Recommendations for future research

There is need for future researchers to develop performance measurement framework and modeling system in order to measure performance of construction organizations and projects. In addition, it is recommends future studies can examine the factors that influence project implementation in others parts of the country as the current study was conducted in Elgeyo Marakwet County.

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APPENDICES

Appendix I: Questionnaire

Section A: General information

1. Gender
Male () Female ()
2. Age bracket
18-28yrs () 29-39yrs ()
40-50yrs () 50> yrs ()
3. What is your highest level of academic qualification?
PhD () Masters () Bachelors ()
Diploma () Others () specify_____
4. What degree course have you finished at University level?
Master in project management () Engineering ()
Business administration () Other degrees ()
5. How long have you been working as a project manager?
Less than 1 year () 1-5yrs ()
6-10yrs () 11-20yrs () 21>yrs ()
6. What market(s) does your company serve?
General market ()
Governmental agencies ()
Industrial market ()

Section B: To examine influence of technical capacity on project implementation

7. Would say that road construction companies experience challenges due to geographical remoteness of project site?
Strongly disagree ()
Disagree ()
Neutral ()
Agree ()
Strongly agree ()

8. Do you think supply of construction materials for road construction in this region has influenced implementation of projects?

Strongly disagree ()

Diasgree ()

Neutral ()

Agree ()

Strongly agree ()

9. State whether you agree or disagree: SA-strongly agree, A-agree, SD-strongly disagree, Disagree

statement	SA	A	SD	D
It is only justifiable to start a project if it increases accumulated happiness of all interest groups				
All my projects increase the happiness of my project team				
It is difficult to evaluate project plan's integrity				

Section C: Influences of commitment on project implementation

10. Do you think increased demand for change by third parties has influenced implementation of road projects in this region?

Strongly disagree ()

Diasgree ()

Neutral ()

Agree ()

Strongly agree ()

11. How would you rate stakeholder engagement in implementation of road construction in the region?

- Low ()
- Moderate ()
- Good ()
- Very good ()
- Extremely good ()

12. State whether you agree or disagree: SA-strongly agree, A-agree, SD-strongly disagree, Disagree

Statement	SA	A	SD	D
Project managers generally measure the success of their projects in terms of time, cost, quality, and customer satisfaction				
Project managers overseeing the projects manages them well				
Project stakeholders work together towards similar project goals				

Section D: Communication systems

13. Would you say information on availability of road construction materials is communicated on time?

- Strongly disagree ()
- Disagree ()
- Neutral ()
- Agree ()
- Strongly agree ()

14. How often does project committee meet to discuss project implementation?

- Daily () Weekly () Monthly () Not at all ()

15. State whether you agree or disagree: SA-strongly agree, A-agree, SD-strongly disagree, Disagree

Statement	SA	A	SD	D
During the meeting, project issues are resolve by the members				
Project management in my projects is always successful				
The deliverables of my projects are always successful				
The project manager manages the project in the face of all the often-conflicting interests				

Appendix II: Budget

NO	DESCRIPTION	QTY	Price	AMOUNT (Kshs)
1.	Research assistant fees	5 persons	1500/- per person for 5 days	37,500
2.	Printing	2 copies	10/- per page	1,600
3.	Photocopying	1 copy	1.50/- per page	120
4.	Binding	2copies	500 per piece	1,000
5.	Transport related to research expenditure	5 persons	100 per person	2,500
6.	Proof reading	1 person	3,000	3000
7.	Miscellaneous			8,000
TOTAL EXPENSES				53,720