INFLUENCE OF TEAMWORK APPROACH ON PROJECT PERFORMANCE: A CASE OF ROAD CONSTRUCTION IN KERICHO COUNTY, KENYA

BY

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DECLARATION

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

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This research project has been submitted with my approval as the University of Nairobi Supervisor.

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DEDICATION

This project is dedicated to my family for their support through my study. Without their patience, understanding, support and above all their love it would not have been possible. I thank them for their great support, guidance and encouragement throughout my academic journey.

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ABBREVIATIONS

CPI – Cost Performance Index

KeRRA – Kenya Rural Roads Authority

KURA – Kenya Urban Roads Authority

KeNHA – Kenya National Highways Authority

OPI – Overall Performance Index

TPI – Time Performance Index

RBV - Resource Based Value

ODeL - Open, Distance eLearning

ABSTRACT

Teamwork approach is a feature of the construction industry in the sense that construction projects are delivered by various professions who work as a team. These professionals may include architects, contractors, material suppliers, specialists, government planners and engineers. Teams in construction projects are developed as soon as they begin a new project. Little focus has been given to teamwork in road construction projects in this country. It is believed that adoption of teamwork enables project teams to create an environment that facilitates knowledge sharing among employees. Despite these initiatives, team work approach in road construction projects still requires much attention and improvements. Thus, with the key objective in project management being ensuring successful completion of projects and given the fact that project managers have been reluctant in adopting teamwork due to limited research and inconsistencies in research findings, the need for more research in this area is identified. KeRRA projects are not exception and therefore, there was need to carry out the current study to establish the effect of team work approach on performance of road construction projects in Kenya. In Kenya team work has been encouraged in every sector, more especially in construction industry so as to improve performance and create good working environment. It is not clear whether teamwork in road constructions yield any result at the end of the projects. This study therefore, was a descriptive-based research looking at the contribution of teamwork approach to project performance. In particular, this study focused on team leadership, team trust, team spirit, recognition and reward and how they influence road construction project performance in Kenya. The target population included KeRRA officials/project managers, consultants and contractors at Kericho County, giving a total number to eighty three (83). Since the population was small, census sampling technique was appropriate; this means the entire population in this research was subjected to the study. However, the study adopted a stratified random sampling method to split the population into three strata (i.e. KeRRA Project managers/coordinators, consultants and contractors). Questionnaires and interview schedules were used to collect the data. The collected data were cleaned, coded and entered to a computer Statistical Package for Social Sciences (SPSS) program for analysis. The responses from the open-ended questions were listed to obtain proportions appropriately; the responses were reported by descriptive narrative. The findings showed that teamwork has been encouraged in road construction projects; however, effort is still required to improve the initiative and ensure that teamwork is fully implemented in construction projects. It was found that findings showed that team trust, team leadership, team spirit, recognition and reward had positive significant relationship with project performance. The finding showed R square value as 0.588; indicating that team trust, team leadership, team spirit, recognition/reward accounts for 58.8% of performance of road construction projects. The study recommends for a well defined and realistic goals, roles and responsibilities in construction projects. More so, the government must formulate policies to support team efforts in construction projects. There is an opportunity to advance this research further by examining factors relating to personal traits of team members in construction project and to establish their influence on project performance.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Teamwork approach has emerged recently as one of the most important ways in which project work is reorganized and get accomplished (Waterson *et al*. 2007). Team work is not only applied in manufacturing, but also in management, service oriented activities, construction projects, and other accomplishments. Teamwork in project management refers to the ability for project members to work efficiently as a team (Wang, *et al*., 2005). Thus, teamwork represents a set of values that encourages listening, responding constructively to views expressed by others, providing support and recognizing the achievement of others.

Teamwork is regarded as a key contributor to performance as it provides the means through which team players are able to integrate a multitude of expertise required for successful completion of a project (Mendelsohn, 2008). In most projects, project participants are drawn from different organizations and also from disparate areas of specialization. In addition, project team members usually undertake non-repetitive tasks to produce the expected output through application of specific skills, knowledge and expertise. In order to achieve high level of project performance, project team members must be fully integrated and focused on project objectives which call for high level of teamwork (Cheng, *et al.* 2006).

Recent developments in teamwork in public sector organizations have heightened the need to determine better ways to utilize teams, especially in the construction industry (Waterson *et al*. 2007). Teamwork is regarded important in construction industry where assignments and tasks are shared by various players as a team (Chow *et al*., 2005). These players include; designers, architects, contractors, suppliers, surveyers, and other stakeholders (Winch, 2009). Highly effective teams have proven to establish good working relationships and potentially achieve good performance, since misunderstandings in teams are eliminated (Demkin 2008). Due to this, the concept of working together collaboratively as a team by pooling knowledge and experience ensures quality and timely accomplished projects.

The nature of the construction projects is divided into achievable fragmented tasks. Occasionally, the design phase in a project is considered a different separate activity of the construction phase (Anumba*et al.* 2009). The achievements or success of a construction work is shown by project performance. The project performance will always dependent on various factors including; nature of the project, contractual agreements, relationships between players in the project, competency of project managers, and the abilities of the key team players (Chow *et al*., 2005).

Project performance is usually judged and quantified by performance measurement such as financial resources spent, completion period, achievements of milestones and quality of work. Performance measurement is the common method to collect and report the information related to the inputs, efficiency, and effectiveness of a construction project (Takim, Akitoye and Kelly 2008).Furthermore, measurements are crucial for tracking, forecasting, and controlling the important variables in the end to ensure the success of projects (Stevens 2006).

According to Evbuonwan and Anumba (2008) part of the reasons for poor performance of project delivery in the construction industry is due to the inability of project participants to work collaboratively. They also examined the main causes of poor performance are shortage of labor, untrained manpower, inexperienced contractors, poor management exercises, lake of advanced technology, adversarial relationships, claims, change orders, competition, corruption, manpower costs, unproductive labor, poor quality construction, government rules and regulations, fluctuation in building material prices, unavailability of resources, lack of scheduling and planning effectiveness.

Project performance therefore, can be regarded explicit and verifiable achievements that reflect progress toward achieving project objectives. Performance in construction projects rely on how well projects teams are constituted (Anumba *et al.* 2009). Therefore, it is extremely important for project teams, regardless of their size, to maintain good performance for a project to successfully complete. To maintain high performance team in construction projects, it is necessary to consider such imminent factors as: skills, interests, values, spirit of collaborations, sound behaviors, good leadership and continual improvement (Omid and Mehdi 2016).

Currently, there are many ongoing road construction projects in Kenya, there have been efforts towards successful and fast completion. As a result, teamwork has been one of the strategies adopted to ensure successful completion of such projects. Teamwork enables project members to work efficiently and effectively as one team. Thus, teamwork approach provides a set of values that encourages listening, responding constructively to views expressed by team players and the ability to recognize achievement of others (Wang, *et al*., 2005).

The popularity of teams in road projects has amplified over the past decade. Numerous road construction projects use teams to implement day to day activities to assist them in attaining strategies to cope with complexity and completion, especially in meeting demands and expectations (Winch, 2009). Consequently, teamwork has been impacted by diverse and exceptional features in the construction industry. This is seen more in the application of integrated project delivery method, where teams start to work as one unit, creating faster delivery times, minimizing costs, and creating an enjoyable working relationship for the entire project team (Omid and Mehdi 2016).

Cornick and Mather (1999) emphasized the need for construction companies to more embrace teamwork than just individual work based assignments, due to the workload, complexity and duration to achieve a completion of a construction project. As indicated by Alshawi and Faraj (2002), a typical construction project is a collaborative venture that involves a number of different stakeholders to form a team. This team is responsible for planning and execution of project activities. According to Emmit and Gorse (2007), construction project teams are grouping of interested parties brought together for a specific construction project. Usually, a typical construction project team comprises of; a project manager as an owner's representative, architect, or engineer for the design team and the contractor. Additionally, there are other people under each of these categories, for instance, surveyors, inspectors,construction workers, and others (Omid and Mehdi 2016).

According to Dinsomore and Cooke-Davies, (2006) a sound effective teamwork and clear goals are major elements of construction project success. Parker (2008) further added that scope of the work is brought off in a much better way when goals are apparently defined and substantially understood and thus prospects of project and team success is increased. Therefore, collective responsibility is widely recognized as a positive driver for teamwork in any project. This study therefore seeks to establish the influence teamwork approach on project performance in road construction industry in Kenya.

1.2 Statement of the Problem

One of the most significant trends in the world has been the increasing amount of project activities across different sectors and industries (Winter & Szczepanek, 2008). With the utility of a project being dependent upon successful completion, the search for ways of enhancing project performance has been on for several years. However, in many organizations, there hasbeen much emphasis on personal capabilities especially, in projects where the concept of teamwork is sidelined by most managers. Most project managers in construction sector, do not see importance of teamwork approach as a way to boost performance, this has lead them to achieve low productivity. In road construction sector, project activities are highly interdependent, and therefore, require team members work together to complete assigned task, and must work extensively with other players.

An analysis of existing literature on project management and the role of teamwork and leadership in project success resulted in findings that are inconsistent. For instance, although several studies (Keller, 2002; Waldman & Atwater, 2014; Tabassi& Babar, 2010; Kissi, *et al*., 2013) found transformational team leadership to be a predicator of project performance. Keegan (2014) in his study, found no significant relationship between team leadership and project performance. Other studies like (Chan, *et al*., 2011; Wang, *et al*., 2015; Mishra, *et al*., 2011) found that project manager's leadership style, teamwork and project performance are highly correlated. This shows

that teamwork is an important factor that in one way or the other play a role in project performance. However, measurement of individual performance is still the focus of most research, and many appraisal and reward systems, despite the increase in teamwork approaches.

Further, despite Yang, *et al*., (2011) findings that project characteristics moderates the relationship between teamwork and project performance, Gowan and Mathieu (2015) found that some project characteristics such as technical complexity and project size have no impact on project performance. This is an evident that it is uncertain to rule on the influence of team work on project performance. One possible explanation to the non-conclusive results from the aforementioned empirical studies might be due to the fact the studies assessed direct relationships between team leadership and project performance and did not introduce other variables that more defines teamwork.

In Kenya team work has been encouraged in every sector, more especially in construction industry so as to improve performance and create good working environment. Researchers, practitioners and scholars have established that there is positive link between teamwork and desired performance (Njanja *et al.* 2013; Kelemba and Chepkilot 2017; Nyarangi 2012). However, little focus has been given to teamwork in road construction projects in this country. It is believed that adoption of teamwork enables project teams to create an environment that facilitates knowledge sharing among employees. For instance, the government initiated performance contracts that have encouraged team work among employees, project partners as each player is expected to perform at best to meet targets. Another initiative is ISO compliance; project teams are expected to work closely and adhere to ISO standards so that quality is not compromised.

Despite these initiatives, team work approach in road construction projects still requires much attention and improvements. Thus, with the key objective in project management being ensuring successful completion of projects (Toor & Ogunlana, 2010; Love, *et al*., 2011) and given the fact that project managers have been reluctant in adopting teamwork due to limited research and inconsistencies in research findings, the need for more research in this area is identified. Kenya Rural Roads Authority (KeRRA) projects are not exception and therefore, there is need to carry out the current study to examine the influence of team work approach on success of road construction projects in Kenya.

1.3 Purpose of the Study

The purpose of this study was to establish effects of teamwork approach on project performance, a case of KeRRA road construction in Kericho County.

1.4 Objectives of the Study

The study sought to achieve the following objectives:

1. To determine the influence of team leadership on project performance of road constructions in Kericho County
2. To establish the influence of team trust on project performance of road constructions in Kericho County
3. To determine the effect of team Spirit on project performance of road constructions in Kericho County
4. To assess the influence of recognition and reward on project performance of road constructions in Kericho County

1.5 Research questions

The study sought to answer the following research questions:

1. Did team leadership influence project performance of road constructions in Kericho County?
2. To what extent did team trust influence project performance of road constructions in Kericho County?
3. How did team spirit influence project performance of road constructions in Kericho County?
4. To what extent did recognition and reward influence project performance of road constructions in Kericho County?

1.6Significance of the Study

This study contributed to the body of knowledge relating to project performance and road construction projects, specifically on teams and teamwork approaches. Besides focusing on success aspects of road construction projects, it was also predicted this study will assist project managers and construction team leaders in road construction understand factors that contribute to creation of effective project team.

The findings from this study will assist the policy makers especially in government construction projects to formulate appropriate regulations to guide successful projects. It will also guide the government in setting up a benchmark policy through which teamwork approach will be adopted in public construction projects. More so, this study is anticipated to stimulate other researchers to continue research on teamwork approach and performance in road construction projects.

Focusing in academics, this study contributes to literature or body of knowledge on teamwork and its role in contributing to overall project performance. From a managerial perspective, this

study guides senior managers and project leaders to improve their understanding of teamwork approach and project performance. Consequently, they will learn on how to develop effective project teams based on competencies and skills of project executors.

1.7 Limitations of the Study

This research focused on influence of teamwork approach on the performance of road construction projects in Kericho County. Since there were many ongoing road construction projects in this county, the researcher came across limitations such as inadequate time and resources to fully complete the study. Time constraint limited the scope and content of this study, while inadequate resources hindered success of this research project.

Another limitation was the tendency of respondents not able to divulge needed information. Due to the oath of secrecy taken by people who were involved in this study; it was difficult for them to divulge information which was required to accomplish this research. As a solution, researcher sough research permit and convinced respondents that this research was solely carried out for academic purposes.

1.8 Delimitations of the Study

The structure of this study was descriptive in nature and was delimited to contractors, consultants and project managers that oversee road construction projects in Kericho County. This County is one of the Counties that have benefited from the National Government initiative of Low Volume Seal roads which is among the 10,000 Kilometers in the current Jubilee Government manifesto. The research sample composed of eighty three (83) respondents; and since the researcher was a KeRRA staff stationed in Kericho County, it was easy to conduct and collect necessary data/information that aided success of this research project.

1.9 Basic assumptions of the study

This research was based on these assumptions: first, the sample size in this study was proportionate and representative enough to provide credible information required in concluding the study. Secondly, it was assumed that all the sampled respondents were to provide the required information without any refuse or difficulty. Thirdly, it was assumed that data gathering instruments (Questionnaires and Interviews) used in this study, collected valid and reliable data for the study. Lastly, it was assumed that the findings from this study are valuable not only to road construction projects but to other kind of construction projects too.

1.10 Definitions of Significant terms

Team - A group of people with a full set of complementary skills and competencies required to complete a task, job, or project.

Teamwork -is a combined action in a group, especially when effective and efficient. It brings people together, to cooperate, using their individual skills to ensure they work together to accomplish an assignment.

Project - It is an individual or collaborative task/accomplishment that is carefully planned to achieve a particular aim or objectives at a given time.

1.11 Organization of the study

This research project is composed of the following sections:

Chapter one: This is introductory section; it elaborately provides background to the Study, Problem statement, Objectives, research questions, Significance of the study, Limitation, Delimitation, Definition of terms and Organization of the study.

Chapter two: This section provides literature review; it entails giving an overview of concepts and work related to this study. It reviewed literature on concepts that relate to the study, theoretical review, empirical review, research gaps and finally gives a conceptual framework that guided this study.

Chapter three: This part of the study provides research methodology that is going to be adopted for this study. It elaborately gives; Research design, the study population, Sampling procedures, Sources of data, Data collection instruments, pretest/pilot study, Data collection, Data analysis and presentations.

Chapter four: This section presents the findings of the study. After collecting data, they are analyzed to yield summarized and concise findings. Thus, the value of the study depend on what is contained in this (results) section and it must be presented in an absolutely clear manner guided by the objectives stated in the first chapter of the document.

Chapter five: This is the section that the researcher explains meanings and implications of the results presented in the previous chapter. It contains summary of the findings, conclusion, recommendations both from the study and areas for future research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The influence of team work on project performance has been a topic of many researches done by academics and practitioners for the previous years (Jones *et al*, 2017). The motivation being the belief that team work influences project performance. This chapter gives a review of literature from various sources on team work and how it influences project performance. Teamwork is the concept of putting people together to work cooperatively towards achieving a certain goal. It has become important for many large projects to adopt teamwork and to harness individual's teamwork ability. Hence, it has become a strategy to accomplish tasks in most projects. This is due to the belief that teamwork gives players a sense of ownership and encourages cooperation (Adeleke, 2008).

It is common to hear of management teams, production teams, service team or even whole organizations being referred to as teams that is, many organization today are moving towards "team based" approach to work, this means that working in teams is the basic method used to get work done in these organizations. As a result, employers stress the importance of employees working as a team and advertise for staff with the ability to work in such a way (Richard, 2001). According to Steiner (1972) teamwork is not novel concepts; it has been there for many years. In the 1980s automotive manufacturing industries embraced team-oriented approaches when United States firms strategies to combat Japanese competitor who were quickly gaining market share.

Brown *et al* (2006) on their study found that teamwork can be more useful than the tradition method for making decisions; it has proved to be quick and efficient in decision making. Nowadays, the use of team in construction sector is growing, thus, organizations are always looking for effective ways to assess their own teams. It's been suggested that forming a very powerful project team will result in satisfactory project outcomes that surpass standards and, in turn, increase efficiency as a whole. Teamwork in construction projects is regarded as the best initiative for ensuring that a project is spearheaded by experts working together in groups and a way to ensure that a project is delivered within stipulated time frame.

As indicated by Cornick and Mather (2009), the construction team is organized around specific trades and functions, with project team members selected on the basis of technical and financial soundness of design, and the competitiveness of the tender sum. Focusing on organizations' individual professional capabilities has resulted in construction teams working towards individually-defined objectives, often are in disagreement with other team members. More importantly, team work is gaining popularity in road construction projects, given its nature of collectiveness, collaboration and sharing of tasks and responsibilities.

2.2 Empirical literature on Teamwork and Project Performance

Teamwork approach at work increases the efficiency of the employees, thus influencing overall performance in organizations. It is easy for each team member to learn their roles and responsibilities and to ensure they work with the rest of their team. Workers get opportunity to understand how to effectively speed up work processes and to ease the work load of their peers (Clark, 2007). This peer influence is commonly recognized in projects that are team oriented; it helps instill culture of communal responsibility and help the project activities flow and work towards accomplishment of the assignment given.

2.2.1 Global perspective on teamwork and Project performance

According to Iranian Construction Company, teamwork is critical in the attainment of project objectives in that the responsibility of implementing various activities rests with project team members (Omid and Mehdi 2016). By encouraging teamwork in projects, managers place team members in their right positions. As a result, team members feel valued hence, helps the team member feel more ingrained in the assignment (Aydin &Ceylan, 2009). In this endeavor, team members do not work only to ensure tasks are completed but also ensures that they do not let their team down.

Therefore, embracing teamwork can improve learning and is a much needed skill in today's workplaces. With well planned out tasks, good leadership, guidance, and close supervision, it is easy to make team exercises extremely valuable (Hackman, 2010). Teamwork is a joint action by a group of people; in which each team membergive his or her individual interests and opinions towards unity and efficiency of the group. This does not mean that the individual efforts are notvaluable; however, it means that teamwork approach goes beyond individual accomplishments (Reenen, 2007). The most effective teamsareachieved when all the members involved harmonize their contributions and work towards a common goal.

Teamwork has become an important part of the working culture and many businesses now look at teamwork skills when evaluating a person for employment. Cohan and Bailey (2017), showed that 85% of large organizationsespecially those with large number of employees have embraced teamwork. In this case, commitment of each team member towards a common purpose in a team is very crucial. It is therefore good for individuals to learn to work in a team environment so that they will have teamwork skill when they are engaged for a task. Also, studies have shown that employees learn best from tasks that are carried out in a social manner (Dunkerley, 2005).

In a study by European Working Condition Observatory (EWCO 2017) in Germany showed 80.6% of construction project executors work in teams (Winter &Szczepanek, 2008). Therefore, team work is becoming important in today’s construction projects that are complex and require

multiple professions and skill sets. High group morale and unity, cooperation and trust characterizeeffective teamwork (Dawson, 1997). In teamwork, every member is regarded valuable; consequently, leadership roles and responsibilities are shared among all members. In most cases, members agree to disagree; they work to settle conflicts, to make decisions, and to proceed to work together as a group (Garrido, 2005).

In Saudi Arabia, the construction projects need different people with varied specialization, skills and experience, and require them to work together. Here, attention is given to the talents and skills which each member posse's ant can be tapped to improve on project performance (Mitra and Tan, 2012). It is always important to know the abilities of every team player so that each is given task that suits their competencies (Nguyen, 2003).

According to Chan, *et al*., (2011) in their study carried out in Hong Kong, they found that there is a positive relationship between teamwork, members' job satisfaction and project performance. Gido and Clements (2011) in their study, concluded that there are important characteristics of effective teams, which include; unity, sharing, cooperation, trust, timely effective communication and good ethical behavior. These characteristics are important factors in teamwork that eventually contributes to project success.

Yang, *et al*., (2013) carried a study on effects of project manager's leadership on project performance in the Taiwanese construction industry. The finding showed that there is a significant relationship between team leadership and project performance; meaning sound leadership in teamwork, motivates members to work tirelessly towards achieving the objective laid. It is therefore important to note that the success of a project is heavily dependent on good leadership, strategies to curb conflicts, effective communication, comprehensible goals and establishing good trusting relationships within teams (Kerzner and Saladis, 2013).

2.2.2 Regional perspective on teamwork and Project performance

A study carried out in Uganda hospitals showed that teamwork plays a multitude of roles, in managing modern organizations. It emphasized that team members need to work closely, dedicatethem to work and be willing to act accordingly. To resolve challenges that may arise, the team needs to be accorded support and resources to deal with them in a constructive manner (Tukahebwa 2010).

In South Africa, teamwork is becoming lucrative business idea, and most organizations have work on team based approach responsibilities, whereas in Ethiopia 60 percent of construction projects have adopted team-based structure that has proved to be effective. Team members support each other, besides deciding on a common approach to accomplish their task, resolve conflicts and make decisions (Gordon 2012).

According to Kerznerand Saladis (2013) there are challenges that can impede team spirit, these include; poor communication channels, low motivation to workers, unclear targets and poor project control. Stevens and Campion (1994) reviewed literature on knowledge, skills and ability need for teamwork and concluded that good interpersonal relations, team spirit initiative, trust, respect, discipline, collaborative behavior and cooperative attitude of team members are factors that lead to good team performance. A well stipulated structure and defined roles lead to good coordination and a clear leadership within a team (Molleman *et al*., 2004).

In most African countries, use of work teams or a group of employees with interdependent interactions and mutually-shared responsibilities, has improved dramatically during the past decade. A study conducted by Ondumune (2014) in Nigeria, indicated that over 40% of the 200 organizational units studied were using teams and over 50% had more than half of their employees working in teams. Lawler *et al*. (2015) proved the trend continues to gain momentum, where 60% of the 113 organizations studied in Ethiopia stated increments in their use of teams over the next decade. Only 3% plan to discontinue the use of teams. This is an indication that teamwork has taken root as better and efficient method of getting work done in most organizations in developing world.

2.2.3 Kenyan perspective on teamwork and Project performance

Many organizations in Kenya have embraced teamwork in their operations, it has become part of management initiatives designed to improve employee productivity. Teamwork approach empowers people and helps them develop autonomy, which is a source of good performance by employees. In a study carried out in SOS schools in Eldoret-Kenya, findings showed that for a realization of teamwork performance in any project, good communication, leadership and effective coordination is key and this contribute to better performance (Ooko 2015). In this context, teamwork consists of interdependent individuals, due to the tasks they perform, and view themselves and are viewed by others as a social entity. Consequently, work groups and teams constitute two or more individuals, who exist to perform organizationally relevanttasks, share goals and task interdependencies, interact socially, maintain and manage boundaries, and exist within an organizational context.

A study carried out in UNOPS-EAH, Kenya showed that sound communication channels, team collaboration, and trust within team groups leads to improved teamwork performance. Teamwork also support employee exchange of ideas; sharing of work experiences; networking; information dissemination and sharing; partnership among employees; closeness between employees and managers; working on joint tasks and sharing of ideas are positive impactsin teamwork performance (Aziz 2017). A team is no longer a group of people working in the same area, using the same equipment, dealing with the same clients within the same location. Nowadays, a team is comprised

of people from different organizations, located around the globe with a high degree of interdependence geared toward the accomplishment of mutual goals.

From the study by Mungeria (2012), it was clear that, success of any activity carried out in a group relies on leadership skills by team leader. This is because in a team, very member posses' skills that are exhibited at the same time, therefore, it requires good leadership to ensure that members complement each other within the group. Consequently, complex work is achieved through combined efforts of all team members. It is therefore, important that a team leader acquire the skills necessary to lead the rest of the members in the group. By so doing, the team members will have good sense of direction and guidance and eventually result in success of the project.

According to Oduor (2015), there was no clarity on the nature/ levels of work engagement, teamwork and perceived organizational support in the media houses surveyed. The study found that teamwork and perceived organizational support have positive and significant influence on work engagement. It can be concluded that teamwork is critical in the attainment of project performance targets. Teamwork is a key determinant of project performance and hence project managers should adopt ways of enhancing teamwork through effective communication, stimulating team members intellectually through examination of project assumptions, seeking differing perspectives when addressing project issues and suggesting new ways of executing project activities, and reducing emphasis on identification of irregularities, mistakes and failures during project implementation.

2.3 Team work approach factors

In today's world, organizations in the construction sector have adopted teamwork approaches to allow them compete in global markets and meet customer expectations. To ensure that teamwork becomes successful and effective, construction companies need to promote, emphasize and adopteffectivenessamong teamsthat are assigned task to execute. The following are factors that can be used to determine effectiveness of teamwork.

2.3.1 Team Trust

According to Jones et al (2017) employeeswho are grouped to work as a team produces more output as compared to individual employee given same task. Team members tend to develop confidence in each, thus, achieving confidence in each other leading to competence and good productivity. Jones on his study concluded that trust is one major attribute required among team members (Jones *et al*, 2017). People often portray a typical construction project team as a team that includes a project manager as an owner's representative, architect, or engineer for the design team and the contractor.

Additionally, there may be people under each of these categories, i.e., construction workers, superintendent, etc. Construction stakeholders are regularly viewed as closely associated with the

construction project's team, in which their responsibility and authority range from occasional contributions in surveys and focus groups to full project sponsorship, such as providing financial and political support. Trust therefore is a virtue that ensures that all the stakeholders work seamlessly to ensure work processes are shared and carried out professionally without conflicts.

According to Mickan and Rodger (2000) there is positive association between team trust and performance. Trust is an attribute that give yield to behavioral basis of teamwork, which results in team synergy and productivity. Development of trust within the project teams relies on individual member in a group. On the other hand, creation of conducive environment for synergetic teamwork is the responsibility of project leaders and the company. Creation of conducive and the trustable environment for synergetic teamwork is the responsibility of organization. Organization should transform the trustworthy behavior for measurement into performance appraisal system to promote the organizational values (Erdem *et al*., 2003).

According to Manz and Neck (2002) a goodproject performance is only achieved when there is cooperation and unity between project executors. Cooperation of the team members can be achieved when the trust is regarded important value of the team formation. Trust allows team members to discuss their mistakes, accept criticism and freely expresses their feelings, thus, leading to more cooperation and unity among team members (Edmondson, 2009). Hartenian (2013) noted that trust in teamwork is one aspect that improvesindividual output and potentially raising performance of teams in project execution. Given support from top management in a project, team members work confidently and increases performance.

2.3.2 Team spirit

Organizations or projects that have adopted teamwork approaches have realizedbetter performance, increased productivity and good decision making at work. Team spirit is one of the key factors in team work; it enables team members share their problem and resolve conflicts with each other (Jaworski & Kohli, 2003). Team spirit is built from team members' confidence in each other. It involves individual members' feelings, beliefs, perceptions and values. Therefore, team spirit becomes a key factor in achieving objective or set goals of the team (Boyt, Lusch & Mejza, 2005).

Participants in an effective team care about the group's well-being skillfully combined individual talents with a positive team spirit to achieve results regardless of whether the program effort is that of an individual or several individuals. Developing team skills have been seen as important because of the tremendous explosion in the use of teams in work organization over the

last decade. Team spirit has been found that it dramatically affects project performance. Some managers have credited teams with helping them to achieve incredible results.

According to Homburg, Workman & Jensen, (2002) team spirit is a valuable asset for team members as well as a recipe for success in project management. This study further suggested that more emphasis in improving team spirit resultsto a better performance. In another study that was conducted in Korean hospitals indicated that team spirit has negative influence on performance of physicians (Hwang & Chang, 2009). Therefore, it is evident that team spirit is major factor of team performance in any assignment. The use of team work approach in execution of project activities, require motivation of team members to ensure that team spirit is maintain throughout project cycle.

2.3.3 Recognition and Rewards

According to Rabey (2003) recognition and rewards are two primary issues of the individuals who are working in teams. Teamwork is collectiveendeavor and therefore team members need to be recognized and rewarded in order to boost on the motivation and morale of each individual in a team. Managers are required to critically observe and monitors team members working potential or performance and give credits where possible. According to Herzberg (1987) reward and recognition can provide both intrinsic and extrinsic motivation. He reported that extrinsic rewards are the main factor to provide employee movement in positive manner.

According to (Staniforth, 2000) teamwork is the collective work and therefore need an appropriate reward system that is suitable and encourages membersto improve on the output. Team leaders are expected to be friendly and be fair to team players; any assignment has to be coined towards the overall objective or goal, in order to motivate team member to work towards achieving the goal. Managers must plan and design an appropriate reward system for the employee and encourage their participation in team projects. They must also set the group goals which are connected towards the company strategic plan, building of employee performance and fair payment methods. After implementation of above captioned concern, managers are able to establish their teams. Periodically monitoring the team work activities in order to check its effectiveness should be the primary focus of every business strategy (Musselwhite, 2001).

According to Anderson & West (2002) effective teamwork environment is one in which team membersparticipate and work; thus require a reward system that is fair and satisfactory to each member. Herzberg (1987) states that reward and recognition influence motivation of team players; it catalyzes individual member of a team to work hard to achieve a milestone, and earn sense of recognition and reward form the organization. It is important to reward and to appreciate the best performing teams in a project. After every achievement of a milestone, team members are

encouraged by rewarding them. This is one way to ensure that project is executed as required and project activities are completed in the right time.

2.3.4 Team leadership

A sound leadership is one important factor that needs to be instilling in teamwork. Good leadership in teams, yield to a clear guide and procedures that result to a better achievements. Team leaders therefore, are tasked with effectively guiding goal achievement, while considering team member skills necessary to produce the desired output (Stallkamp, 2008).Most observers have agreed that effectively managed workplace teams have contributed to improved processes, higher quality products and services, and more cost-effective operations (Banker *et al*., 2006).

However, when team members are not in sync with the laid procedures, work ethics and guidelines, there is a possibility of failure by team leaders; this lead to lack of focus and control in teamwork, thus affecting the operations and execution of work (Thompson, 2000). Cooperation of the team members can only be created when sound leadership comes to be most important value of the team culture. A good leadership provides an atmosphere for the team members where members can discuss their mistakes, accept criticism and freely express their feelings so this leads to more synergy

A focus on balancing team leadership and need to achieveset goals as well as maintaining unity and good relations among team members rely on leadership strategies that have been laid down to guide project execution. Success in project performance therefore, can only be achieved througha sound teamleadership. Essentially, team leaders should reflect behaviors that inspire and motivate people to perform. Project team leaders and coordinators are expected to give sound leadership to teams that execute activities in a project.

2.4 Theoretical Review

Theories provide a means for identifying and defining applied problems. Here we will look at theories that explain teamwork and how it influence project performance in road constructions. The Star team theory is much suitable to this study, it elaborates how various team attributes can translate to better achievements.

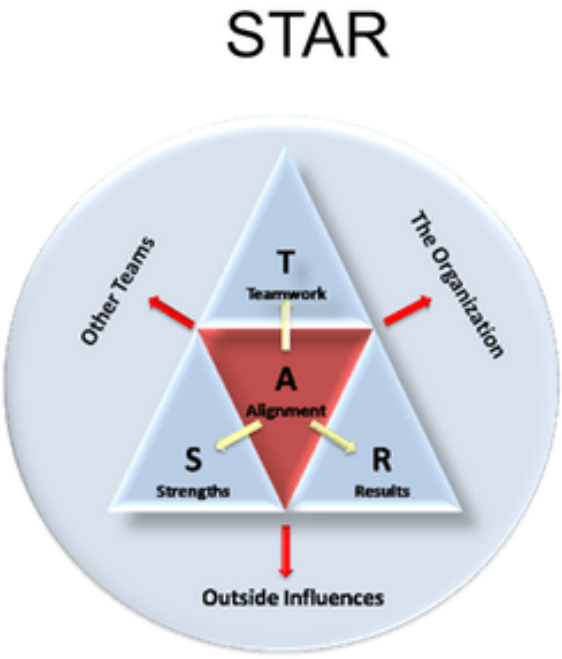
2.4.1 The Star team Model

The Star team model developed by Jay Galbraith provides the substance (or content) to the stages, situation and surroundings of the teamwork theory mentioned above. It helps to determine what a team and team leader need to focus and put in place to ensure achievements. This theory gives leadership strategies that every team leader need to adopt in order to perform well and lead

the rest of team members achieve good performance. It offers practical tips and guidelines to help team leaders focus their activity. There are three key strengths that explain the model:

- Integration – this is centered on the need for leaders to align key elements so that individual, team and organizational outcomes are achieved.
- Strengths-based – It emphasizes the emerging area of strength-based leadership
- Outside factors – it recognizes what is often missing from some leadership models; that leaders need to be as adept at managing outside their team as they do within the team.

Figure 2.1 – Star model



Source: (Jay 1960)

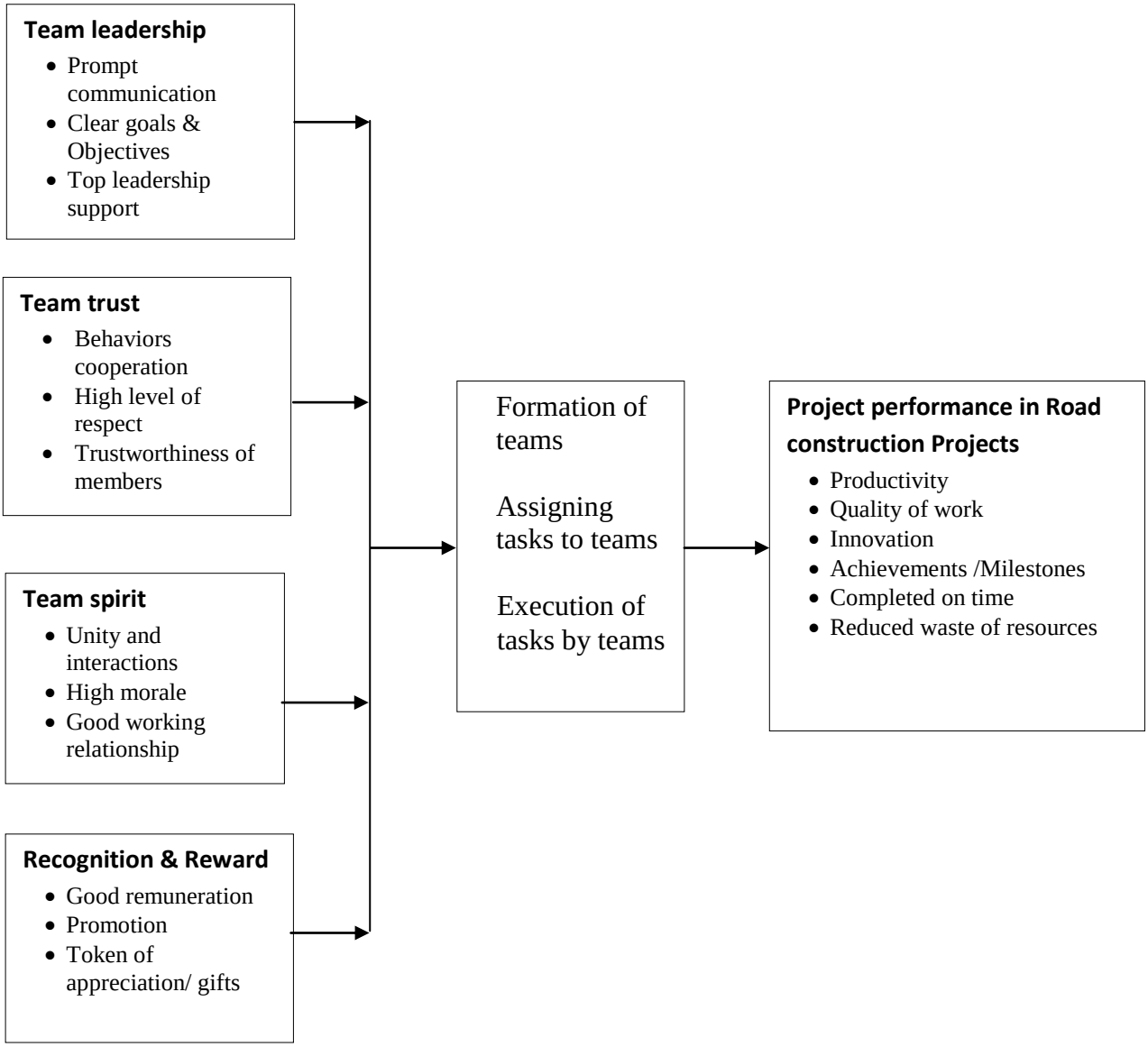
The model stipulates that good team leadership is about creating the conditions that allow team members share ideas, work together for a common goal to ensure uplift in performance. It is always important to balance development of team member's strengths, with building good relationships and connections between members, in the pursuit of challenging and meaningful team goals thus, encouraging effective teamwork in a project.

This model therefore, shows that leadership is important to teamwork approach; it encourages team members to work towards a clear vision and objectives, thus improving their performance. In a project scenario, there must be clear objective and goal that allow individual team members to work towards achieving it. Project leaders, coordinators, consultants and lead contractors are required to provide sound leadership on how to execute project activities to ensure that a good performance is achieved. This model/theory is more appropriate to inform this study since it focuses on attributes that are key to team based activities.

2.5 Conceptual framework

This is a model/schematic diagram that elaborates the relationship between independent variables and dependent variables used in this research. The conceptual framework for the research is presented below:

Figure 2.2 - Conceptual Framework



Independent Variable **Dependent Variable**

Source: Author, 2018

From the conceptual framework above, there are four independent variables; team leadership, team trust, team spirit, recognition and reward while the independent variable is project performance in road constructions. To elaborate on the relations of each of the variables as shown above;

Team leadership is believed to influence project performance. It entails giving direction, goals or a general objective that every team member has to follow and strive to achieve. Team leadership involves formulation of mission, vision, goals and core values that dictates the operations and activities involved to ensure a project is successfully accomplished.

On the other hand team spirit is taken to influence project performance in the sense that; team members shares opinions or challenges among each other and share with the project leadership. A team is composed of a group of people who jointly work together in order to achieve team objective. Team spirit involves issues touching group member's feelings, beliefs and values. Therefore, team spirit in a project is key to achieve common goal of the team.

Team trust is another factor that is believed to be crucial in project performance. Trust is achieved by team members when all players develop sense of confidence in each other capabilities. Trust generates the behavioral basis of teamwork, which results in team synergy and better performance of a project. Creation of conducive and the trustable environment for synergetic teamwork is the responsibility of organization and project leadership.

Recognition and reward is also a factor in project performance. This is the primary focus of the individuals who are working in teams. Project leaders are urged to plan and design an appropriate reward system for teams and encourage them work hard to be rewarded and get recognized. They must also set the group goals which are connected towards the project accomplishment, and the overall achievement in the project. Ultimately, such initiative translates to better project performance.

2.6 Knowledge gap

From the reviewed literature, the effect of teamwork on projects performance has been a topic of many researches done by academics and practitioners for the previous years (Jones *et al*, 2008). However, most of the studies that have been done in Kenya, focuses on the impact of teamwork on employee performance (Njanja*et al*. 2013; Kelemba and Chepkilot 2017; Nyarangi 2012) and none has focused on teamwork and construction project performance. The main likely reason for this is the belief that teamwork can stimulate individual's input and therefore, result to the overall performance. Teamworkhas been deliberated by many researchers and found tofocus in achieving organizational goals and performance. Given the focus of this study, few studies have been done to establish the effects of teamwork on project performance, more importantly, none have focused on road construction projects in Kenya. It is through this fact that this study be done to ascertain the effects of teamwork on the performance of road construction projects in Kenya.

2.7 Summary of Literature reviewed

It is presumed that there is a relationship between teamwork and projects performance. From the literature, researchers have suggested that effective team approaches are effective strategies to improve project performance. Elaborate understanding of the impact of teamwork on project performance is important because teamwork is regarded as a driving force for boosting project performance. In projects, teams are formed to execute specifictasks that focus one clear goals and obective. Once the target is achieved, these teams are in most cases disbanded and team members go back to their routine tasks.

In construction industry each project needs different people in accordance with their professionalism, knowledge, and experience, and requires them to work and coordinate with other stakeholders. It always deal with the relationship between teams, tasks, and leadership units. It is sufficient to say that teamwork is dominant in construction's cultural tradition and at the foundation of successful construction projects. It is therefore imperative to understand the value of teamwork and its effects on project performance at large.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This part of the study elaborately explains methodology used in the research. It has such subsections; research study design, population, sampling design, data collection instruments, data collecting procedures, data analysis, and presentation and interpretation techniques.

3.2 Research Design

According toLavrakas (2008) and Kothari (2004) research design is the overall plan for obtaining answers to the questions being studied. It is a plan by which study findings is achieved and interpreted. It is therefore a methodology adopted for collection and analysis of data based on purpose and research objectives. This study adopted a mixed approach that involved the use of both qualitative and quantitative approaches; at same the time employing a descriptive survey design.

It was quantitative on one part because empirical data was used to determine correlation coefficient between variables and perform non-parametric tests to test the validity in the relationship between variables in this study. This design was found more appropriate because it allowed respondents to comfortably provide information on the issues of interest to the study, (Cooper & Schindler, 2006). This research design was used since it enabled the researcher to observe and gather data from the respondents in their natural setting without manipulating their environment. Other research designs were not suitable for this study. The data was collected, analyzed and finally presented in tables and in form of charts.

3.3 Target Population

Population is the total collection of all the elements about which the researcher wishes to use (Cooper and Schindler, 2006). The study population for this study comprised of KeRRA officials/project managers, consultants and contractors giving a total number to eighty three (83). These were individuals who are involved in road projects in Kericho County. Respondents were required to provide information by filling questionnaires and participated on an interview session that yielded the necessary data needed for this study.

3.4 Sample and Sample size

Sampling design is the procedure by which a sample is selected from an entire population. Sampling involves selection of some part of a population in order to observe and estimate some characteristics about a whole population where generalization can be made (Thompson, 2010). A sample in this context is a representative group of the target population that is obtained using various sampling methods (Cooper and Schindler 2006).

In this case, the population engaged was regarded small and therefore, census sampling technique was appropriate; i.e. subjection of the entire population to the study. However, the study adopted a stratified random sampling method to split the population into three strata (i.e. KeRRA Project managers/coordinators, consultants and Contractors). This method was considered appropriate since the population of the study has unique characteristics and can be divided into groups (strata) with each group (stratum) capable of being studied independently without interfering with one another during the course of the study as shown in the table 3.1 below.

Table 3.1 Sampling matrix

Strata (Population)	Sampling method	Sample size
KeRRA managers or Project coordinators	Census	**20**
Project Consultants	Census	**42**
Constructors	Census	**21**
Total		**83**

Source: Author (2018)

3.5 Research Instruments

Data was obtained using self-administered questionnaires and Interviews. They were used to obtain the desired information from the population of interest and each item designed addressed a specific objective of the study. The questions were simplified in order to promote convenience and ease of use by the respondent.

A questionnaire is a data collecting instrument containingquestions for the purpose of gathering information from respondents. Questionnaires are more appropriatethan other types of data instruments in the sense that they are cheap and not require much effort from the questioner, and often have standardized answers that make it simple to compile data.

Conversely, questionnaires are limited by the fact that respondents must be able to read the questions and respond to them. Thus, for some demographic groups conducting a survey by questionnaire may not be practical. In view of the context in which the research was conducted, interviewing road project contractors alone was not sufficient. To get a second opinion, KERRA managers and other project coordinators were required to fill a self administered questionnaire comprising various items under study.

Interviews were used to providemore insight into the contractors' thoughts, ideas and memories particularly on issues relating to the objectives in this study. Furthermore interviews helped the

researcher to understand more deeply into the issues and to clarify any doubts that may arise from other sources. The interview guide was semi-structured, contained questions that were formulated based on the objectives in this study.

In addition to the primary data sources, secondary sources were also used to provide information. The researcher sought data from the Ministry of Transport documentation center, annual reports and other published documents on road constructions in Kenya. Time Performance Index (TPI) and Cost Performance Index (CPI) were computed for each of the project in which complete data was available. Computation of TPI and CPI was derived as follows:

TPI = (actual contract duration/projected contract duration)

CPI = (actual contract cost /budgeted contract cost)

The computed TPI showed the efficiency in which project activities is undertaken, with index less than one indicating completion of the project before the planned project duration; index equal to one indicating completion of the project on time and index being greater than one indicating the project had a time over-run (project taking a longer duration than planned).

On the other hand, CPI indicates the efficiency in which resources are utilized within the project with index less than one indicating completion of the project at a cost lower than budgeted; index equal to one indicating completion of the project within the budgeted cost, and index being greater than one indicating the project had a cost over-run (project cost being greater that the budget). An Overall Performance Index (OPI) was computed as an average of time performance index and cost performance index.

3.5.1 Piloting of the study

Prior to data collection exercise, the researcher was required to pilot the instrument with other project coordinators of other projects other than road construction projects within the Ministry. The purpose of the pilot study was to enable the researcher to improve on the validity and reliability of the data collecting instruments and to check for anomalies in the instruments. According to Kasomo (2006), piloting provides a check on the feasibility of the proposed procedure for coding data and shows up flaws and ambiguities in the instruments of data collection. It also yielded suggestions for improvement of data collecting tools. In this case, questionnaire and interviews were administered to five pilot contractors and project coordinators twice with a time lapse of one week.

3.5.2 Validity of the Instruments

From Mugenda and Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. In this case, validity was tested by ensuring that each of the items in the questionnaire and interview schedule addresses specific concept of study. More so,

data collecting instruments were issued to three experts who reviewed the contents in the instrument. The opinion of the supervisor was sought on the structure and interpretation of the questions.

3.5.3 Reliability of the Instruments

Reliability is the consistency of the instrument; it refers to the degree of getting consistent results from the same instrument (Cronbach, 1951). Reliability is the the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects.

In this case, Cronbach`s alpha tests was used to test the reliability. Six questionnaires were piloted by issuing them to staff at KeRRA who was not included in the final study sample. The six questionnaires were then coded in SPSS application to generate the reliability coefficient. When high coefficient is seen, the implication is that, the factors are reliable and consistent in measuring the concept.

3.6 Data Collection Procedure

The questionnaire was hand-delivered to the respondents to fill by the researcher. The filled questionnaires were collected from the respondents after three days. An interview schedule was used to collect data from the contractors. The responses obtained were recorded exactly as they are expressed by the respondents. In addition secondary data were obtainedparticularly on road project performance to ascertain the primary data obtained.

3.7 Data Analysis techniques

Data analysis involved synthesizing information gathered from the field using suitable statistical techniques and models to make meaningful results. Numerical data was analyzed quantitatively, specifically using descriptive statistics that included frequencies, mean, median and standard deviation.

These statistics were presented in frequency tables, histograms and charts. Statistical Program for Social Sciences (SPSS) software was used to analyze data descriptively (mean, mode and standard deviations) and present them in tables, percentages and charts. To establish correlation and effects of the variables, regression and correlation tests were carried out.

The multiple regression equation for the study is shown below:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon_0}$$

where - β_0 is the coefficient regression,

- β_1, β_2, $\beta_3$and $\beta_4$are the regression coefficients,
- Y is Project performance in Road construction
- X_1, X_2, X_3 and X_4 are the variables; team leadership, team trust, team spirit, recognition and reward respectively.
- ε_0 is the error term for the extraneous variables.

3.8Operationalization of Variables

Table 3.2 – Operationalization of variables

Variable name	**Notation**	**Measurement**	**Description**
Project performance	Y	a. Time Performance Index (TPI) and Cost Performance Index (CPI) b. Ordinal scale, 1-5	a.TPI = (actual contract duration/projected contract duration) CPI = (actual contract cost /budgeted contract cost) b. Rank order data
Team Leadership	X_1	Ordinal scale, 1-5	Rank order data
Team Trust	X_2	Ordinal scale, 1-5	Rank order data
Team Spirit	X_3	Ordinal scale, 1-5	Rank order data
Recognition & Reward	X_4	Ordinal scale, 1-5	Rank order data

CHAPTER FOUR
DATA ANALYSIS, PRESENTATIONS AND INTERPRETATIONS

4.1 Introduction

This part of the study presents the analysis and the results. The analysis was based on the data collected by use of questionnaires an interviews which were administered to KeRRA Project managers/coordinators, consultants and Contractors in Kericho County. The information presented is based on the objectives of the research.

4.2 Demographic Information

This part gives overview of the respondents based on demographic information such as gender proportion, level of education and the duration at which they have worked in KeRRA in the region.

4.2.1 Gender proportion

It was necessary to know gender proportion of the respondents, the researcher found out that the male respondents constituted 74.6% of all the respondents while female respondents were 25.4% .This is an indication that most road construction projects are mostly managed by males and therefore gender proportions of male in this study was higher than that of females. Government need to embrace gender equality in this sector.

4.2.2 Academic Qualification

The researcher wanted to determine academic qualifications of respondents;KeRRA Project managers/coordinators, consultants and Contractors in Kericho County. The findings showed that majority of them are graduates 34(41%), a number of them have master degrees 29(35%), while 12(14%) are diploma holders, very few 3(4%) have doctorate degree while small proportion had other qualifications (e.g. CPA, certificates).

The possible reason for having high number of graduate proportion is because road construction involve engineers who must qualified and registered under the Association of Consulting Engineers of Kenya, and it is a requirement that one must be a graduate. However, given the complexity nature of the project, other professionals with varied qualifications were involved.

4.2.3 Duration worked for KeRRA

The study sought to determine duration by which Project managers/coordinators, consultants and Contractors have worked for KeRRA road construction projects in Kericho County. The findings showed that majority 25(30%) have worked for period between 1-5 years (especially contractors and consultants), while 20(25%) have worked for a long period of over 20 years (these are project coordinators in KeRRA) , others 18(21%) have worked for a period 11-15 years and

12(14%) have worked for period between 16-20 years, few 8(10%) have worked for 6-10 years as shown in table 4.1 below. This fact is attributed by the fact that most of the road construction projects in this County were recently initiated and therefore, project players have not spent more years working on these projects. However, there are KeRRA officials who have been working under ministry of Transport and Infrastructure but also part of the road construction projects by playing supervisorial role.

Table 4.1Period worked

Duration	Frequency	%
1-5 yrs	25	30
6-10 yrs	8	10
11-15 yrs	18	21
16-20 yrs	12	14
Over 20 yrs	20	25
Total	**83**	**100**

Source: Field Data 2018

4.3 Teamwork and Project performance

Adoption and use of teamwork in many aspects in organizations have proved to providea better relationship between team members and potentially achieve high productivity, since high level cooperation is achieved among team members. This has led to unity, combine efforts and diverse thinking, geared to achieving success.

4.3.1 Relations between teamwork and Project performance

This sought to explore relationship between teamwork approach and project performance in road constructions. The findings found that teamwork is encouraged in road construction projects in Kenya, 53(64%); it was also clear from the findings that majority of project executors 78(94%) in road construction projects has turned to believe on teamwork approach in such projects because it contributes to good project performance. This is because collective action is widely recognized as a positive force for teamwork to effectively spearhead a project successfully.

As a matter of fact, teamwork has not been given much emphasis in most construction projects, however, this study has proved that most of the construction projects are now team based, and however, there is still need for much emphasis to improve on team-based construction projects in the country as shown in table 4.2. It is therefore important that the government formulate policies to support team work in construction projects. This will give a clear framework on how to deal with

multi stakeholder construction projects and to ensure that projects are executed jointly by experts and professionals.

Table 4.2 Relationship between teamwork and project performance

Response	Encouragement of teamwork in road construction projects		Contribution of teamwork to good project performance	
	freq.	**%**	**freq.**	**%**
Yes	53	64	78	94
No	30	36	5	6
Total	**83**	**100**	**83**	**100**

Source: Field Data 2018

4.3.2 Road Project performance indicators

Project leadership is one factor that requires an individual who can make decisions, resolve personnel issues and show sense of authority and direction especially in projects that are team based. Below is a table that shows road construction project performance indicators. The findings shows that the Cost Performance Index of road construction projects in Kericho County is fair 46 (55%), this means that the cost utilization is within the budgeted cost. Cost control is a must in order to make sure that the project can make profits or make sure that the budget of a project does not burst. The time overrun in construction projects has become one of the most common problems in road construction projects. This study showed that Time Performance Index is poor 42(51%) meaning that many road construction projects lack behind projected time schedule as shown in table 4.3 below. It therefore requires intervention to fast-tract project activities and to ensure the project is completed before deadline.

Table 4.3 Project Performance indicators

	CPI		**TPI**	
Response	freq.	%	freq.	**%**
Poor	4	5	42	**51**
Fair	46	55	36	**43**
Good	33	40	5	**6**
Total	**83**	**100**	**83**	**100**

Source: Field Data 2018

4.4 Influence of Teamwork on project performance in Road Constructions

4.4.1 Team trust

The first objective of this study was to determine the influence of team trust on project performance of road constructions. It was found that majority of the respondents were in agreement that teamwork in construction projects has led teams act cohesively with high level of cooperation (Mean = 4.0, Std. dev =1.0) and that team trust has led to teams work towards common goals (Mean = 3.8, Std. dev =1.1).

It was also found out that trust has made team members work as a unit through motivation and high team spirit (Mean = 4.9, Std. dev =0.9) and that it has allowed team members to make decisions and resolve problems that arise during project execution (Mean = 3.8, Std. dev =1.1) as shown in table 4.4 below.

Table 4.4 Influence of Teamwork on project performance in Road Constructions

	Mean	**Std. Dev**	**Min**	**Max**	**Sample (N)**
The teams in construction projects act cohesively with high level of cooperation	4.0	1.0	1	5	83
Team trust has led to working towards common goals	3.8	1.1	1	5	83
Trust has made team members work as a unit through motivation and high team spirit	4.9	0.9	1	5	83
Trust allows team members to make decisions and resolve problems that arise during project execution	3.8	1.1	1	5	83
Average for Mean &Std dev.	**4.1**	**1**			

Source: Field Data 2018

4.4.2 Team leadership

The other objective was to determine the influence of team leadership on project performance of road constructions. The findings found out that in road construction projects, there is always mutual support from supervisors and top management (Mean = 3.8, Std. dev =0.9) and that participative leadership has provided for early detection of problems, leading to project success (Mean = 4.5, Std. dev =1.2).

It was also established that a good team leadership, translates to team motivation leading to achieving laid goals with less number of internal conflicts and issues (Mean = 4.2, Std. dev =1.1),

however, it was clear whether competency of project leaders translates to projects success (Mean = 3.2, Std. dev =0.8) as shown below.

Table 4.5 Team leadership

	Mean	Std. Dev	Min	Max	Sample (N)
There is mutual support from supervisors and top management	3.8	0.9	1	5	83
Competency of project leaders translates to projects success	3.2	0.8	1	5	23
Participative leadership provides for early detection of problems, which ultimately leads to project success	4.5	1.2	1	5	23
Good team leadership is the cause of team motivation to attain laid goals with less number of internal conflicts and issues	4.2	1.1	1	5	23
Average for Mean &Std dev.	**3.9**	**1.0**			

Source: Field Data 2018

4.4.3 Team spirit

One other objective of this study was to determine the influence of team spirit on project performance. It was found that there is cohesion and unity among team members during execution of project activities (Mean = 3.6, Std. dev =0.8) and that team members sacrifices in their time to ensure project is completed on time (Mean = 3.8, Std. dev =1.1) and again there is good motivation of team members to boost team spirit and project performance (Mean = 4.0, Std. dev =1.2). However, it was not clear whether team members value their diversities and appreciate each other's professionalism (Mean = 3.1, Std. dev =0.9) as shown in table 4.6 below.

4.6 Team spirit

	Mean	Std. Dev	Min	Max	Sample (N)
Team members value their diversities and appreciate each other's professionalism	3.1	0.9	1	5	83
There is cohesion and unity among team members during execution of project activities	3.6	0.8	1	5	83
Team members willingly make sacrifices in their time to ensure project is completed on time.	3.8	1.1	1	5	83

There is good motivation of team members to boost team spirit and project performance	4.0	1.2	1	5	83
Average for Mean &Std dev.	**3.6**	**1.0**			

Source: Field Data 2018

4.4.4 Recognition and Reward

The other objective was to determine the influence of recognition and reward on road construction project performance. The findings showed that higher salary and other benefits is used to motivate teams as a way to achieve good project performance (Mean = 4.6, Std. dev =1.2) and that reward and recognition structure in projects takes recognition of team effort and individual performance (Mean = 3.9, Std. dev =1.0). It was found that it was not clear whether there is always a gratitude and appreciation to every team member after an achievement (Mean = 3.3, Std. dev =0.8), again it was not certain to determine whether being a team player gives leverage in promotion and future engagements (Mean = 3.2, Std. dev =0.9) as shown in table 4.7 below.

Table 4.7 Recognition and reward

	Mean	**Std. Dev**	**Min**	**Max**	**Sample (N)**
There is always a gratitude and appreciation to every team member after an achievement	3.3	0.8	1	5	**83**
Higher salary and other benefits is used to motivate teams; as a way to achieve good project performance	4.6	1.2	1	5	**83**
Being a team player gives leverage in promotion and future engagements	3.2	0.9	2	5	**83**
Reward and recognition structure in projects takes recognition of team effort and individual performance.	3.9	1.0	1	5	**83**
Average for Mean &Std dev.	**3.8**	**1.0**			

Source: Field Data 2018

4.5 Correlation test

This was done to determine association between independent and the dependent variables; the findings showed that all the independent variables (team trust, team leadership, team spirit, recognition and reward) have positive significant relationship with project performance in road constructions. However, team leadership and recognition and reward variables showed stronger

relations with road construction project performance (with Pearson's correlation coefficient, r >0.5, i.e. 0.621 and 0.560 respectively).

The other variables (team trust and team spirit) showed weak but positive significance (with Pearson's correlation coefficient, r <0.5, i.e. 0.347 and 0.449 respectively).In general, the relationship between these variables showed absolute significances with significance values less than 0.05 level (2-tailed) as shown in table 4.8 below.

Table 4.8 – Correlation matrix

		Team trust	**Team leadership**	**Team spirit**	**Recognition & reward**	**Project performance**
Team trust	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	83				
Team leadership	Pearson Correlation	.427	1			
	Sig. (2-tailed)	.000				
	N	83	83			
Team spirit	Pearson Correlation	.161	.183	1		
	Sig. (2-tailed)	.007	.002			
	N	83	83	83		
Recognition & reward	Pearson Correlation	.486	.206	.348	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	83	83	83	83	
Project performance	**Pearson Correlation**	**.347***	**.621***	**.449***	**.560***	**1**
	Sig. (2-tailed)	**.000**	**.000**	**.000**	**.000**	
	N	**83**	**83**	**83**	**83**	**83**

Source: Field Data 2018

4.6 Regression analysis

With this test, it was assumed that the kind of relationship that exists between independent and dependent variables is linear. To ascertain this, and to know the extent to which the predictors affects projects performance, regression test was carried out; the predictors in this case include; team trust, team leadership, team spirit, recognition/reward, while dependent variable is project performance of road construction projects. The findings are presented in table 4.9 below.

Table 4.9 Coefficients

Model		Unstandardized Coefficients		t	Sig.	Co linearity Statistics
		B	Std. Error			VIF
1	(Constant)	.199	.313	.635	.526	
	Team trust	.271	.033	8.281	.000	1.705
	Team leadership	.259	.053	4.934	.000	1.262
	Team spirit	.338	.063	5.407	.000	1.245
	Recognition & reward	.407	.078	5.221	.000	1.553
	R-Square	.588				
	Adjusted R^2	.579				
	Std. error of the Estimate	.282				
	df	4				
	F	65.656			.000	

a. Predictors: (Constant), Team trust, Team leadership, Team spirit, Recognition & reward

b. Dependent Variable: Project performance

c. With VIF being less than 10, there is no multicollinearity

From table 4.9 above, R square is 0.588 and this is a relationship between the observed and predicted values of the dependent variable. This shows that team trust, team leadership, team spirit, recognition/reward accounts for 58.8% of performance of road construction projects. The rule of thumb is that, usually an R square of more than 50% is considered as better. The findings here shows R^2 as 0.588, it means that holding all other factors constant, all the predictors in this study, influence dependent variable by 58.8%.

On the other hand, the test for the joint significant which is given by the F statistic is 65.656, with degree of freedom (df) of 4, it is statistically significant p-value 0.000 < 0.05 significance level. This implies that the independent variables; team trust, team leadership, team spirit, recognition/reward influences performance in road construction projects.

Again the table 4.9 gives the beta values (B), which are the values for the regression equation for predicting the dependent variable from the independent variable.Given linear equation; $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon_0$, where, B_0 is the constant and $B_{1,2,3,4,..k}$ are beta values, $X_{1,2,3,4,..k}$ are independent variables and ε as error term. Then substituting standardized coefficients to the equation yields the following linear equation:

$$Y = 0.199+0.271X_1+0.259X_2+0.338X_3+0.407X_4$$

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter gives summary of the study findings, the conclusions and the recommendations that the researcher provided on the influence of teamwork on performance of road construction projects in Kericho County.

5.2 Summary of the findings

The main objective of this study was to determine the effect and relationship between teamwork and road project performance. This study showed that teamwork is encouraged in road construction projects; however, effort is still required to improve the initiative and ensure that teamwork is fully implemented in construction projects. It was also found that construction teams believe that teamwork approach contributes more to good project performance.

The project performance indicators showed that the cost utilization is within the budgeted cost in most ongoing road construction projects. Nevertheless, Time Performance Index was found to indicate poor state; meaning that many road construction projects lack behind projected time schedule; in this case, more emphasis on teamwork approach would improve on the duration taken to complete the project.

Specifically, team trust was found to be one factor that contributes to project performance. The findings showed that team trust has led to teams work towards common goals. It was also found out that trust has made team members work as a unit through motivation and high team spirit and allowed team members to make decisions and resolve problems that arise during project execution.

The other objective was to determine the influence of team leadership on project performance of road constructions. The findings showed that in road construction projects, there is always mutual support from supervisors and top management and that participative leadership has provided for early detection of problems, leading to project success. It also established that a good team leadership translates to team motivation leading to achieving laid goals with less number of internal conflicts and issues.

The other element was team spirit. This study found that team spirit leads project executors to have cohesion and unity among team members during execution of project activities and again,

stimulates team members to work, sacrifice their time to ensure project is completed on time. Given the focus in this study, it was established that there is good motivation of team members in road construction; this has boost team spirit and achievement of good project performance.

The other objective was to determine the influence of recognition and reward on road construction project performance. The findings showed that higher salary and other benefits to project executors can be used to motivate teams as a way to ensure good project performance. It was also clear that reward and recognition structure in projects takes recognition of team effort and individual performance and therefore workers get compensated for good work. However, it was not clear whether there is always a gratitude and appreciation to every team member after an achievement and again it was not certain to determine whether being a team player gives leverage in promotion and future engagements.

Correlation analysis was carried out to determine the relationship between variables under study; the findings showed that all the independent variables (team trust, team leadership, team spirit, recognition and reward) had positive significant relationship with project performance in road constructions. Specifically, team leadership and recognition and reward variables showed stronger relations with road construction project performance (with Pearson's correlation coefficient, $r > 0.5$, i.e. 0.621 and 0.560 respectively). The other variables (team trust and team spirit) showed weak but positive significance (with Pearson's correlation coefficient, $r < 0.5$, i.e. 0.347 and 0.449 respectively).

Regression test was to determine the effects of the variables on project performance. The finding showed R square value as 0.588; indicating that team trust, team leadership, team spirit, recognition/reward accounts for 58.8% of performance of road construction projects. The ANOVA ascertain that this relationship is statistically significant at 0.05 significance level. Colinearity test was carried out to determine whether there was any correlation among independent variables. The Tolerance values for all the variables were greater than 0.1 while VIF values were less than 10, giving a conclusion that there was no existence of multi-colinearity in the variables.

5.3 Conclusions

Teamwork approach has proved to be efficient way of achieving good performance in projects or within organization. Teamworkis a strategy that can be implemented to boost performance, effectiveness and efficiency of work as well as individual productivityin a project. In road construction projects, team members are required to commit themselves to the project goals. They need to be well conversant with the project's objectives, and ensure values of the team are aligned towards achieving the laid objectives. Project leaders are required to state clear roles and responsibilities for each team member to avoid duplication of responsibilities.

It is also a requirement thata team leader in the project should possess good leadership skills to create a sense of unity and to bring everyone together for work. Team players are required tocooperate throughout the project and consult each other on matters that are not well stipulated. In teamwork, it is necessary to continue monitoring the progress of teams and formulate a way of assessing output of every team member to ensure continuous improvement. Construction projects allow for creativity and innovation, therefore, team members should showcase their capabilities and skills to ensure quality work as the output of the project.

An effective road construction team should have good communication skills within team groups; this is to allow members share information and to develop synergy in their work processes. It is also important to organize team members to be collaboratively involved during planning stages and early stages of the project.

It is also important to note that there are top-ranked factors that affect teamwork in construction projects; this is according to the perspectives of different people within the construction industry. These factors include the following; leadership skills, team trust, reward/recognition, goals and objectives, good communications channels, support from top management and spirit of team members.

The findings from this study leads us to concludethat truly teamwork has an effect on project success. This has concurred with the findings from other studies that indicated strong relationship between teamwork and project performance. Again, this research is to enlighten public organizations responsible for coordinating road construction projects in Kenya (e.g KURA, KeRRA, KeNHA) on importance of adopting teamwork as a major tool to improve on project performance.

5.4 Recommendations

Based on the results and findings in this research and the analytical tests carried out, the author of this research recommends the following:

It is recommended that it is necessary and important to come up with mechanism to constitute effective teams in construction projects. This can be based on evaluation of the skills of everyteam member and matching them to right tasks and responsibilities. Such evaluations of team members allow project leaders and managershave an opportunity to provide proper training, intervention, or change the combination of people chosen for the team. This will boost their capability as they work as a team, and to ensure effectiveness in the endeavor to achieve project goals.

It is recommended that it is advisable to have well defined and realistic goals, roles and responsibilities and appropriate leadership are necessary for successful construction projects. Team members are guided by the objectives and goals for the projects and therefore must be elaborative,

concise and achievable. The leadership of the teams should be suitable and competent enough to assist team members in effective decision making, ensure collaborations among team members, and lay short term objectives to guide teams work toward the overall goal.

The government must formulate policies to support team efforts in construction projects. In this way overall project performance and effectiveness can be enhanced. It is important to develop such an atmosphere where construction team members are well satisfied with their tasks, responsibilities and cooperative with each other. In this way project executors will be in position to utilize their full potential in their work assignments. It is advisable that roles and responsibilities should be well defined and assigned to qualified members.

The project leadership must encourage employees and all other players to work as a team and in various sub teams formed for short term goals. The willingness to work in teams makes the project and its environment more desirable as teamwork culture could lead to favorable commitment. Team members should treat and support each other honestly, sincerely and with respect. Communication is a very important aspect for effective teamwork that leads to project success.

5.5 Suggestions for further Research

The following are suggestions for further research:

1. There is an opportunity to advance this research by further looking at in-depth analysis of more construction projects to comprehend and to compare factors contributing towards the project performance.
2. Also it will be interesting to examine factors relating to personal traits of team members in construction project and to establish influence of these traitson project performance; this can be achieved focusing on The Big Five Personality Traits. This will help project coordinators to understand the effect of engagingpeople with varied personalities and how individuals may contribute to increase in overall effectiveness of the team members and project performance as a whole.

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APPENDICES

Appendix i : Letter of Transmittal

ZIPPORAH WAMBUI WAWERU,
P.O BOX 13066 – 20100,
NAKURU.

3RD MAY, 2018.

Dear Respondent,

I am a student at the University of Nairobi, pursuing my Masters of Arts Degree in Project Planning, and Management. As a requirement, I am undertaking my research project work to satisfy the University requirements. I am glad to invite you to participate in this survey which seeks your opinion on the***'Influence of teamwork approach on project performance: A case of Road Construction Projects in Kericho County'***

I am glad to invite you to participate in this survey which seeks your opinion on the'. The survey is part of a research project aimed at fulfilling the requirements of a Master degree in Project Planning and Management, of the University of Nairobi.

You are kindly requested to spare a few minutes of your time to complete the questionnaire by writing or selecting from the choices provided as appropriate. The questionnaire is divided into several sections. Kindly attend to all sections. Your participation as a staff member is highly valued.

Please note that the confidentiality of your response is assured.

Thank you in advance

ZipporahWambuiWaweru
Reg. No. L50/6480/2017

Appendix ii: Questionnaire

QUESTIONNAIRE FOR KERRA PROJECT COORDINATORS

Introduction

I am a student at the University of Nairobi pursuing a Master's degree in Project Planning and Management and conducting a study on**Influence of Teamwork Approach on Project Performance: A case of road construction in Kericho.**This study therefore, is a descriptive-based research looking at the contribution of teamwork approach to project performance. In particular, this study will focus on team leadership, team trust, team spirit, recognition and reward and how they affect road construction project performance in Kenya

SECTION1: DEMOGRAPHIC INFORMATION ON THE RESPONDENTS

This section is intended to collect data on your personality as my respondent. This data will assist in ensuring that all intended respondents are incorporated in my research. Kindly put a tick(✓) in the box provided.

1. What is your gender? Male [ ] Female [ ]
2. How long have you worked for KeRRA?

   0 – 5 years [ ]

   6 – 10 years [ ]

   11 – 15 years [ ]

   16 - 20 years [ ]

   Over 20years [ ]
3. What is your highest level of formal education?

   Diploma [ ]

   Bachelors Degree [ ]

   MastersDegree [ ]

   PHD [ ]

   Others. Please specify:_____
5. What is your age bracket?

   Below 25 years [ ]

   26-30 years [ ]

   31-40 years [ ]

   40-50 years [ ]

   51 years and above [ ]
6. What is your Designation? _____

SECTION II: TEAM WORK AND PROJECT PERFORMANCE

The section contains four questions. The questions show the influence of Teamwork on Project Performance. Kindly answer the questions by putting a tick (√) to represent your opinion or by a **scale of 1-5 (5-strongly agree…..1-strongly Disagree**)

1. a.Do you encourage teamwork in road construction projects?

Yes ☐ No ☐

b. If yes, Why?_____

2. Do you think teamwork approach contributes to good project performance?

Yes ☐ No ☐

b.) Kindly elaborate your answer above,

_____

_____

_____

_____

3. Using Project Performance Indicators below, rate road project performance in your County.

Project Performance Indicators	**Evaluation Criteria**		
	Poor	**Fair**	**Good**
Cost Performance Index (CPI)			
Time Performance Index (TPI)			

4. On a scale of 1-5, based on your work experience to what extent do the following teamwork factors contribute to better project performance

(Where: 1= Not significant, 2= Significant, 3= Very Significant, 4= Extremely Significant)

	1	**2**	**3**	**4**
1. Team Trust				
2. Team spirit				
3. Recognition and reward				
4. Team Leadership				
5. Team Communication				

SECTION III: TEAM TRUST

This section is intended to collect data on the influence of Team Trust on project performance.Kindly answer the following questions using the criteria given.

1. Please rate the following indicators on influence of team trust on project performance: *(Where: 1= Strongly Disagree, 2= Disagree, 3= Not sure, 4=Agree, 5= Strongly Agree)*

Statement	**1**	**2**	**3**	**4**	**5**
The teams in construction projects act cohesively with high level of cooperation					
Team trust has led to working towards common goals					

Trust has made team members work as a unit through motivation and high team spirit					
Trust allows team members to make decisions and resolve problems that arise during project execution					

SECTION IV: TEAM LEADERSHIP

2. Please rate the following indicators on influence of team leadership on project performance: Using the following scale*(Where: 1= Strongly Disagree, 2= Disagree, 3= Not sure, 4=Agree, 5= Strongly Agree)*

Statement	1	2	3	4	5
There is mutual support from supervisors and top management					
Competency of project leaders translates to projects success					
Participative leadership provides for early detection of problems, which ultimately leads to project success					
Good team leadership is the cause of team motivation to attain laid goals with less number of internal conflicts and issues					

SECTION V: TEAM SPIRIT

3. Please rate the following indicators on influence of team spirit on project performance: *(Where: 1= Strongly Disagree, 2= Disagree, 3= Not sure, 4=Agree, 5= Strongly Agree)*

Statement	1	2	3	4	5
Team members value their diversities and appreciate each other's professionalism					
There is cohesion and unity among team members during execution of project activities					
Team members willingly make sacrifices in their time to ensure project is completed on time.					
There is good motivation of team members to boost team spirit and project performance					

SECTION V: RECOGNITION AND REWARD

4. On a scale of 1-5, based on your work experience indicate to what extent you agree with the following statements regarding recognition & reward and Project performance.*((Where: 1= Strongly Disagree, 2= Disagree, 3= Not sure, 4=Agree, 5= Strongly Agree)*

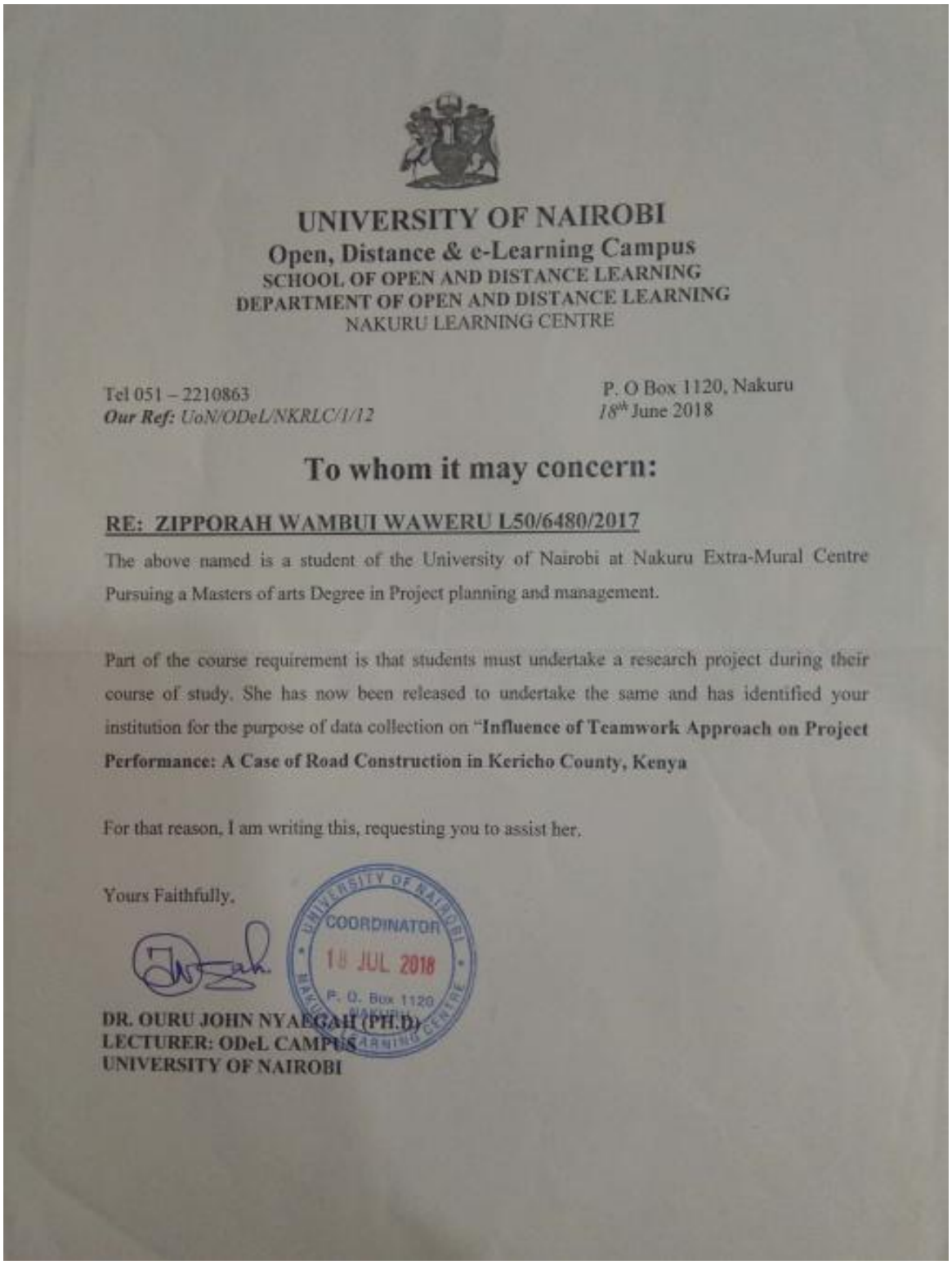
	1	2	3	4	5
There is always a gratitude and appreciation to every team member after an achievement					
Higher salary and other benefits is used to motivate teams; as a way to achieve good project performance					
Being a team player gives leverage in promotion and future engagements					
Reward and recognition structure in projects takes recognition of team effort and individual performance.					

Thank you for participating in this Survey.

INTERVIEW SCHEDULE FOR CONTRACTORS – ROAD CONSTRUCTION PROJECTS IN KERICHO

1. Have you adopted teamwork in your project? Explain your answer.
2. Do you think teamwork approach is the best way of executing project activities? Elaborate.
3. How does team leadership influence project performance?
4. Do you think team spirit is key towards achieving better project performance?
5. Do you think team trust is a factor in ensuring executions of project activities in road construction projects?
6. Is there any value of using teamwork approach in road construction projects?
7. What is the best practice to ensure use of teamwork in road construction projects?
8. What is the relationship of teamwork approach and performance of road constructions project?

Appendix iii: University of Nairobi Authorization Letter



UNIVERSITY OF NAIROBI
Open, Distance & e-Learning Campus
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN AND DISTANCE LEARNING
NAKURU LEARNING CENTRE

Tel 051 – 2210863
Our Ref: UoN/ODeL/NKRLC/1/12

P. O Box 1120, Nakuru
18th June 2018

To whom it may concern:

RE: ZIPPORAH WAMBUI WAWERU L50/6480/2017

The above named is a student of the University of Nairobi at Nakuru Extra-Mural Centre Pursuing a Masters of arts Degree in Project planning and management.

Part of the course requirement is that students must undertake a research project during their course of study. She has now been released to undertake the same and has identified your institution for the purpose of data collection on "**Influence of Teamwork Approach on Project Performance: A Case of Road Construction in Kericho County, Kenya**

For that reason, I am writing this, requesting you to assist her.

Yours Faithfully,

UNIVERSITY OF NAIROBI COORDINATOR 18 JUL 2018 P. O. Box 1120 NAKURU LEARNING CENTRE

DR. OURU JOHN NYAEGAH (PH.D)
LECTURER: ODeL CAMPUS
UNIVERSITY OF NAIROBI

Appendix v: NACOSTI Authorization Letter

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

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

Ref: No. **NACOSTI/P/18/33346/24859**

Date: **23rd August, 2018**

Zipporah Wambui Waweru
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"The influence of teamwork approach on project performance: The case of road construction in Kericho County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Kericho County** for the period ending **23rd August, 2019.**

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

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

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Kericho County.

The County Director of Education
Kericho County.

Appendix vi: NACOSTI Permit

THIS IS TO CERTIFY THAT:
MISS. ZIPPORAH WAMBUI WAWERU
of UNIVERSITY OF NAIROBI, 0-20100
Nakuru,has been permitted to conduct
research in *Kericho County*

on the topic: *THE INFLUENCE OF TEAMWORK APPROACH ON PROJECT PERFORMANCE: THE CASE OF ROAD CONSTRUCTION IN KERICHO COUNTY, KENYA*

for the period ending:
23rd August,2019

.....
Applicant's Signature

Permit No : NACOSTI/P/18/33346/24859
Date Of Issue : 23rd August,2018
Fee Recieved :Ksh 1000

.....
Director General
National Commission for Science, Technology & Innovation

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

NACOSTI

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 20315

CONDITIONS: see back page

Appendix vii: Originality Report

INFLUENCE OF TEAMWORK APPROACH ON PROJECT PERFORMANCE: A CASE OF ROAD CONSTRUCTION IN KERICHO COUNTY, KENYA

ORIGINALITY REPORT

14%	7%	3%	10%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to Regis University Student Paper	1%
2	Submitted to Middle East College of Information Technology Student Paper	1%
3	Submitted to Nottingham Trent University Student Paper	1%
4	Submitted to University of the Free State Student Paper	1%